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PORTFOLIO RISK DIVERSIFICATION, COHERENT RISK MEASURES AND RISK MAPPING, RISK CONTRIBUTION ANALYSIS AND THE SETTING OF RISK LIMITS

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Abstract

This study aims to investigate the nature and sources of portfolio risks during normal as well as abnormal market conditions. The benefits of portfolio diversification will be studied first. Portfolio risk as measured by the volatility and beta will be calculated as the number of the positions is increased until the marginal diversification benefits obtained are at its optimal. Other measures based on statistical measures such as quantiles, quantile differences and quantile ratios for central tendency and asymmetry presence and significance of extreme events of skewness and kurtosis will also be used. This study is conducted on the daily data for the period August 9, 1998 to June 30, 2003, for 25 stock markets worldwide: Australia, Brazil, Chile, France, Germany, Hong Kong, Japan, India, Indonesia, Ireland, Israel, Italy, Mexico, New Zealand, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom and United States. Based on the theory of central limit theorem (CLT) and hence jointly normal distributions, the relationship between portfolio diversification and value at risk (VaR) as a coherent risk measure is examined. Diversification benefits based on two simulation models namely: the geometric Brownian motion (GBM) and Fréchet random walk (FRW) which serve as the ideal models are also investigated.

The second part of the study focuses on the main sources of risk or risk hot spots in a portfolio using component VaR (VaR_C), incremental VaR $(IVaR)$, and delta or marginal $(DVaR)$. Finally, the portfolio risk will be monitored using a risk mapping or risk decomposition method. The risk of a given position is mapped onto a much smaller number of primary risk factors. In this study, individual country's stock index will be used as proxy for equities, government bond index and risk free rate for fixed interest, spot foreign exchange rate and forward one month, three month and one year exchange rate and gold and crude oil for commodities.

In general, the results for the tail-risk measures are similar to what has been found for the center of the portfolio risk measures and covariance plays a significant role in the assessment of the risk inherent to real portfolios based on the greater diversification benefits gained from the two simulated models, whose log-returns were generated independently. Diversification "works" well under normal market conditions.

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Introduction

Most studies of the benefits of diversification focus on portfolio risk measures that are functions of the properties of the center region of a log-return distribution. The distribution of the log-returns of an equity portfolio should be at least approximately Gaussian if the portfolio is considered diversified. This is because the consequences of the benefits of the diversification effects of a well-diversified portfolio will have "averaged" away the significance of the extreme values and extreme dependencies. Statistically, this is just another way of stating the central limit theorem for a sum of centered and normalized sums. If the portfolio is diversified and the log-returns are approximately jointly Gaussian, the variance/covariance VaR forecast is a coherent risk measure. In general, even if the returns are fat-tailed, there will be diversification benefits, justifying the use of the simple model to implement VaR and expected shortfall estimators to be implemented using the historical risk measurement method. The expected shortfall is, in general a coherent risk measure, but the historical VaR method may not be coherent. This study concerns an empirical analysis of the statements and concepts just mentioned. Specifically, the analysis concerns the quantification of the extent and nature of the risk reduction arising as a consequence of the effects of diversification on a number of different categories of equity portfolios. The risk reduction will be measured using both an unexpected and an exceptional (or extreme) risk metric, which were the value at risk (VaR) and the expected shortfall, respectively. Two simulation models will be used as the reference models namely: Fréchet random walk (FRW) and geometric Brownian motion model (GBM).

As an extension to the results presented, the empirical risk mapping experiment will be investigated, and risk mapping is the next step for portfolio with extremely large numbers of positions from numerous financial markets in numerous different country. The idea is risk mapping may be able to simplify the risk measurement process for portfolios with extreme large numbers of position, where the position may be changing often. The analysis is static, implying that the effects of liquidity changes and portfolio composition changes will not be considered.

PART ONE
LITERATURE REVIEW

A review of the literature relating to portfolio diversification, coherent risk measures, risk mapping and the setting of risk limits is provided in Part one. Examining the nature and the sources of portfolio risks during normal and abnormal market conditions are the focuses of this thesis. The literature review creates the context within which these areas of the finance literature have developed. Although the principles behind portfolio diversification were firmly established in the finance literature in the 1950s, it was not until Grubel (1968) that diversification in an international context was formally considered. Chapter 1 reviews the early literature relating to portfolio diversification in an international setting and the effects of the increasing integration of world financial markets. The October 1987 global stock market crash highlighted for many, the extent to which world equity markets had become increasingly integrated and the merits of international diversification given this comovement and the relative transaction costs. Chapter 2 considers the assumption of normal distributions of returns underlying stock prices and the use of linear VaR models as opposed to other VaR models such as historical VaR or Monte Carlo simulations. Chapter 3 considers the various approaches to selecting risk factors and risk mapping and the importance of setting risk limits as a supplement to the one number VaR . This is useful as then institutional investors and international equity investors can actively use it for portfolio and risk management purposes. Besides, VaR itself has serious fundamental flaws. It is based on volatilities and correlations that can work in normal market conditions but break down in times of market crises.

Chapter 1: Merits of International Diversification

The issue of portfolio diversification in world equity markets became prominent with the article of Grubel (1968). Chapter 1 reviews some of the important articles to appear in the early literature; particularly the benefits of domestic diversification using naïve diversification, the establishment of the necessary and sufficient conditions for ascertaining gains from portfolio diversification in an international setting and the effects of an increasingly globalized world. The relationship between diversification and coherent risk measures is also briefly discussed.

1.1 Benefits of Domestic Diversification Using Naïve Diversification

Naïve or simple diversification implies that an equal proportion of wealth is allocated to each security in the portfolio. Naïve diversification can be defined as "*not putting all your eggs in one basket.*" Naïve diversification ignores the covariance between securities. In general, diversification works best when the asset exhibit zero or low correlations among each other. Also diversification works well when there are a number of short and long positions.

For a portfolio composed of n securities, $w_i = 1/n$ for $i = 1,2,...,n$, which is due to the equal weight assumption inherent to naïve diversification (Elton, Gruber, Brown and Goetzmann, 2003, p. 51-61; Francis, 1991, sections 9-1 through 9-3; and Francis and Archer, 1979, section 9.1). This implies that the variance of the log-returns of the portfolio can be rewritten as follows:

$$VAR_{t_0}[R(t)] = \sum_{i=1}^{n}\sum_{j=1}^{n} w_i w_j COV_{t_0}[r_i(t), r_j(t)]$$

$$= \frac{1}{n^2}\sum_{i=1}^{n}\sum_{j=1}^{n} COV_{t_0}[r_i(t), r_j(t)]$$

$$= \frac{1}{n^2}\left(\sum_{i=1}^{n} VAR_{t_0}[r_i(t)] + \sum_{i=1}^{n}\sum_{j=i+1}^{n} COV_{t_0}[r_i(t), r_j(t)]\right)$$

noting that $VAR_{t_0}[r_i(t)] = COV_{t_0}[r_i(t), r_i(t)]$.

Now let the following relationships hold for the variances and covariances:

$$VAR_{t_0}[r_i(t)] < VAR$$

for $i=1,2...,n$ and

$$COV_{t_0}[r_i(t), r_j(t)] < COV$$

for $i=1,2,...,n$ and $j=i+1,2,...,n$; where VAR and COV are bounded positive constants.

$$VAR < \infty \text{ and } COV < \infty,$$

respectively. VAR and COV may be viewed as the average variance and average covariance. First, the case where $COV = 0$, which implies the log-returns of the n securities are uncorrelated:

$$VAR_{t_0}[R(t)] = \frac{1}{n^2}\sum_{i=1}^{n} VAR = \frac{1}{n} VAR$$

As the number of securities n increases, i.e. $n \to \infty$;

$$VAR/n \to 0, \text{ implying } VAR_{t_0}[R(t)] \to 0$$

This implies that the portfolio variance approaches zero is there are enough uncorrelated assets. If $COV \neq 0$, which is the case for correlated assets and using these relationships:

$$VAR_{t_0}[r_P(t)] < \frac{1}{n^2}(nVAR + n(n-1)COV)$$

or

$$VAR_{t_0}[r_P(t)] < \frac{1}{n}(VAR + (n-1)COV).$$

As the number of securities n increases, i.e. $n \to \infty$;

$$VAR/n \to 0,\ (n-1)/n \to 1 \text{ and } (n-1)COV/n \to COV.$$

One aspect of the interpretation of this comment is that the cumulative contribution of the variance terms becomes negligible. The sum of the variance terms is referred to as the firm-specific risk or diversifiable risk. Another aspect of this comment is that the cumulative of the covariance terms does not become negligible. The cumulative effect of the covariance terms is referred to as the market-specific risk or nondiversifiable risk.

Rearranging the above expression for the value of the portfolio illustrates the effects of diversification:

$$VAR_{t_0}[r_P(t)] < \frac{1}{n}(VAR - COV) + COV$$

The first term represents $1/n$ times the difference between the average variance of the log-returns of the individual securities VAR and average covariance of the log-returns of the individual securities COV. The first term is reduced as securities are added to the portfolio, which illustrates the effects of diversification. The second term represents average covariance of the log-returns of the individual securities COV. The minimum portfolio variance for correlated assets may be obtained for portfolios with very large numbers of positions, and is equal to the average covariance between all the individual securities (Dalle Molle, 2003).

Naïve diversification using 15 to 20 randomly selected stocks can reduce the risk of a portfolio by approximately 50 percent (on the average). The diversification benefits with respect to risk reduction of adding more stocks is insignificant after 15 to 20 stocks have been randomly included in a portfolio. This observation is referred to as superfluous diversification. The following table illustrates the effects of diversification for United States (U.S.) equities listed on the New York Stock Exchange (reproduced from Elton, Gruber, Brown and Goetzmann, 2003, p. 59).

Table 1.1 – Portfolio Diversification Effects	
Number of Securities	**Expected Portfolio Variance**
1	46.619
2	26.839
4	16.948
6	13.651
8	12.003
10	11.014
12	10.354
14	9.883
16	9.530
18	9.256
20	9.036
25	8.640
30	8.376
35	8.188
40	8.047
50	7.849
75	7.585
100	7.453
150	7.321
200	7.255
250	7.216
500	7.137
1000	7.097
Infinity	7.058

Note that the average equity variance was 46.619 and the average covariance between the equity was 7.058.

1.2 Comovements between World Equity Markets

In this section the necessary condition for ascertaining gains from portfolio diversification in an international setting is considered. The necessary condition is that the correlation coefficients between world equity markets must be less than the correlation coefficients between domestic assets – otherwise one can obtain the risk-reduction benefits of portfolio diversification by investing in the domestic market alone. Grubel (1968) laid the theoretical foundations for portfolio diversification in an international setting. Although Markowitz (1952) and Sharpe (1964) had clearly established the tenets of portfolio theory and developed selection techniques for portfolio optimization, it was not until Grubel (1968) that international diversification

were formally considered in the literature. Grubel (1968) highlighted that those investors who did not consider foreign assets were ignoring a potentially important source of low correlation.

Grubel (1968) used the special case of a two-country two-asset investment model, where as long as less than perfect correlation exists between the two countries, diversification of investment will benefit investors. Grubel's finding offered nothing particularly new relative to portfolio optimization except that it highlighted the importance of considering international assets. Further, the outcome of the special case is unlikely to hold when there is more than one domestic asset and diversification internally is an option. Grubel's empirical study examined the potential gains to U.S. investors from international diversification which he found to be potentially large. Grubel's investigation of portfolio diversification provided a descriptive explanation for the need for continued international capital flows.

Subsequent authors starting with Levy and Sarnat (1970) looked at international portfolio diversification normatively. Levy and Sarnat (1970) used efficient frontiers and the market equilibrium model developed by Litner (1965) and Sharpe (1964) to determine the proportion of investment in each of the various markets in their sample, at different interest rates. Levy and Sarnat (1970) were able to clearly illustrate the benefits accrue to the U.S. investor for diversifying outside the domestic market. However, they added that there were only marginal benefits for moving from a U.S. stock only portfolio to one containing stocks from high income, common market or Western European countries. Only when the U.S. investor diversified to include countries such as Japan and South Africa and the developing countries of South America and Asia that a significant improvement in the efficient frontier resulted. These countries tend to have lower correlations with the U.S. market, and thus are able to provide the benefits of international diversification to the investor.

Grubel and Fadner (1971) pointed out two important influences not encountered by U.S. assets which might lead to lower inter-country correlation coefficients and make foreign assets attractive to U.S. portfolio holders. First, returns on foreign assets are influenced by business cycles, natural and man-made catastrophes and government policies whose effects are limited to or strongly felt in the economies of the affected

countries. Second, the capital value changes of assets caused by exchange rate variation influence the variance of returns on foreign assets. Using the *ex post* variance-covariance matrices of returns for industry sub-indices from U.S., United Kingdom (U.K.), and West German stock indices, Grubel and Fadner (1971) attempted to measure the significance of those two factors. They discovered that the pairwise inter-country correlation coefficients were positively low and lower than intra-country coefficients. Solnik (1974) also revealed that inter-country differences in business cycles enhance international portfolio diversification. Solnik (1974) examined the level of risk reduction as more stocks are included in a portfolio. For portfolios that contain assets from outside the domestic market, the risk reduction was greater than for portfolios that contain only domestic assets. Even after accounting for exchange rate fluctuations, the risk was still less for portfolios that contain foreign assets.

Implicit in these early studies, is the hypothesis that international diversification will lead to larger gains than ordinary 'pure diversification' gains as a result of increasing the universe of available securities within a single country. The early studies can also be summarized by their focus on the gains for foreign market diversification from a U.S. investor perspective. Lessard (1974) summarized the early tests as:

> "The early tests of Grubel (1968) and Levy and Sarnat (1970) relied on low correlations between the national markets and the performances of *ex post* efficient internationally diversified portfolios to establish these greater gains. However, the low correlations among markets may or may not indicate large potential gains relative to domestic diversification depending on the correlations among groups of stocks in each market and the *ex post* efficient portfolios are, at best, indicative of gains." (p. 379).

Research by Agmon (1972) and Lessard (1976) examined the concept of segmented versus integrated capital markets. Lessard (1973, 1974) highlighted the difference between gains from domestic versus inter-country portfolio diversification alluded to above. These two areas contributed a new angle to portfolio diversification in an international setting and were likewise important in developing literature in this area. They are considered below.

Agmon (1972) highlighted that the literature up until that point had considered national capital markets on a segmented markets approach, where national capital markets are treated as separate entities, almost independent to each other like Grubel's two-country, two-asset model. As such, one might naturally assume low correlation

coefficients between markets. Agmon (1972) noted that "different currency areas separated political organizations and trade barriers have been given as *a priori* evidence for the segmentation of the international capital market." (p. 839). Agmon (1972) argued that the alternative hypothesis, that prices of capital assets in the global capital market behave as if there is one multinational perfect capital market should also be considered and that an examination of the behavior of capital asset prices reveal that the price behavior is consistent with the one market hypothesis.

In terms of Grubel's two-country, two-asset framework, Agmon (1972) argued that, while still important, the interesting question relates to how free trade, deregulation between two countries impact on the composition of investment portfolios. This is an issue that could not be examined by Grubel (1968) as the full risk-return profile for each of the markets is not captured by the market index used in his study. Agmon (1972) emphasized that while it is correct in terms of Grubel's theoretical two-country, two-asset world to look at portfolio diversification in terms of correlation, the empirical analysis conducted by him was based on market indices which comprised of many shares and thus are only close approximations to diversified portfolios. In comparing two portfolios, domestic and foreign, the relevant measure is a function of the covariance between the return of any given asset and the return on the investor's portfolio. It may be that, even in situations like the one presented by Grubel (1968), investors cannot benefit from diversification between countries.

Agmon (1972) disagreed with Grubel's revelation that, given equity markets are segmented, correlation coefficients substantially less than one between any index of non-U.S. equity markets and the U.S. market index would give U.S. investors potential welfare gains from international diversification, the benefits accruing once the barriers among equity markets were removed. Because composite market indices do not capture all the possibilities for diversification within a local market, the fact that two indices are weakly correlated does not necessarily imply the superiority of international diversification over internal diversification. Consequently, one cannot be sure that internal diversification would not give the same (or better) efficient sets. The one market hypothesis may have an advantage here since it implies that all the potential gains from inter-country and internal diversification are already reflected in the current prices of capital assets traded on the world market. Using individual stock returns from

four countries, Agmon (1972) outlined a framework of a single equity market and demonstrated that price behavior in these countries was consistent with the single market hypothesis. In spite of the barriers that exist in multinational equity markets, there was a strong relationship among the four equity markets. In particular, Agmon (1972) noted that the price movement in the majority of German shares resembled U.S. shares. Agmon (1972) highlighted the importance of not simply accepting the segmented markets hypothesis.

McDonald (1973) also cautioned the need in interpreting the studies of Grubel (1968) and Levy and Sarnat (1970).

> "In the context of portfolio choice these results must be interpreted with caution, as one cannot demonstrate with *ex post* returns on market indices alone the extent to which international diversification is desirable. The important question is whether efficient (*ex ante*) multinational portfolios of individual securities dominate efficient portfolios constructed from stocks in a single country, and on this issue the evidence is limited." (pp. 1161-1162).

McDonald (1973) argued that the issue also depends on the effective degree of integration of the world's equity markets. McDonald (1973) suggested reality falls somewhere between the two hypotheses discussed by Agmon (1972): the fully-integrated one-market hypothesis; and the fully-segmented market hypothesis, because of impediments in multinational investment. In the former, the capital asset pricing model $(CAPM)$ of capital market equilibrium would include portfolios of domestic common stocks from a number of nations lying along a common capital market line; for the latter, one would expect a unique capital market line in each national market.

> "In fully-integrated markets, a portfolio which purchased common stocks in a second country would gain only the 'pure diversification' advantage of access to a larger part of the total universe of securities. The segmented –market hypothesis implies potential advantages from international investment beyond those associated with pure diversification, as more favorable ratios of expected return to non-diversifiable risk may be available in foreign markets." (McDonald, 1973, p.1162).

McDonald (1973) used the investment performance of French mutual funds as examples of portfolios diversified outside the domestic market and discovered that the funds generally produced superior risk-adjusted returns than funds invested only in domestic assets.

Lessard (1976) also examined the issue relating to segmented versus integrated markets. The following passage captures the importance of segmented versus integrated markets in establishing the theory of portfolio diversification in an international context.

> "The low correlations between the country factors represent the key to gains from international diversification. The magnitude of these gains will depend, however, on whether markets are segmented or integrated internationally. In the former case, assuming the validity of the capital asset pricing model, prices and expected returns are determined by the undiversifiable risk of each security in the context of the appropriate national portfolio. In the latter, prices and expected returns are determined by the undiversifiable risk of each security in the context of the world portfolio. With fully integrated markets, the advantage to international diversification is a pure diversification effect, a reduction in the non-systematic risk of the portfolio. With fully segmented markets gains might be even greater, since prices would adjust to reflect the fact that some previously undiversifiable risk was becoming diversifiable." (Lessard, 1976, p.34).

Unfortunately, it is very difficult to actually determine which of the two conflicting theories most accurately describes portfolio diversification in an international setting. The reality lies somewhere between the two extremes.

Lessard (1973) studied the communality among returns within individual countries relative to the communality across countries. Using an Investment Union (IU) approach for four Latin American countries, multivariate analysis of the return structure for individual stocks was used to investigate the likelihood of greater gains for inter-country diversification over domestic diversification. For gains from inter-country diversification to be greater, two important conditions must be satisfied. Firstly, returns within each country must share a common element of variance, and secondly, the common elements for each country must be largely independent of those from the other countries. Using principal component analysis, Lessard (1973) concluded:

> "...that even though the principal components for each country are not absolutely independent, it is possible to explain an average of 93 per cent as much variance for each country as is explained by the principal components with four completely *independent* factors." (p. 625).

This is an important finding as it again highlights the benefit of inter-country diversification over domestic diversification. It shows that while the benefits of domestic diversification are limited due to the common trend in stock returns, potential benefits are much greater by diversifying outside the domestic market because common trends are much harder to find between countries. Lessard (1973) attributes this to different levels of economic activity at different times and the different monetary and

fiscal policies of different governments. Though different methodologies were applied, Lessard's findings are consistent with what McDonald (1973) found for French mutual funds.

Lessard (1974) studied the benefits of diversifying outside the domestic market in contrast to domestic diversification by considering the stochastic process generating returns. Lessard (1974) highlighted that in previous studies which have used a *CAPM* market model, national markets have been found to be characterized by a strong market factor consistent with a single-factor stochastic process. Because of the linkages between national markets, one would expect some relationship between market factors in different countries. However, Lessard (1974) found that only a small proportion of the variance of national portfolios is similar in an international context. Lessard (1974) demonstrated the considerable risk reduction available through portfolio diversification in an international setting.

The literature reviewed in this section was important in establishing portfolio diversification in an international setting. Grubel (1968), Levy and Sarnat (1970), Grubel and Fadner (1971) and Solnik (1974) all highlighted that lower correlation coefficients between national equity markets meant that additional benefits were available to investors who diversified outside the domestic market. Agmon (1972), McDonald (1973) and Lessard (1976) looked at the segmented versus integrated market hypothesis, providing a context in which the early studies of portfolio diversification in an international context should be examined. They showed that it is essential to consider the assumptions being made in testing the benefits of portfolio diversification in an international setting. Lessard (1973, 1974) provided further evidence to support the notion of additional benefits offered by portfolios diversified outside the domestic market, over portfolios with domestic assets only.

1.3 Integration of World Equity Markets

The fundamental rationale for international portfolio diversification is that it expands the opportunities for gains from portfolio diversification beyond those that are available through domestic investment. However, if international stock market correlations are higher than normal as found in empirical literature (refer to section 1.2), then

international diversification will fail to yield the promised gains and correlation breakdowns will occur. This is especially true during times of crises when the market is in stress with low liquidity. In this section the worldwide impact of the 1987 stock market crash, the 1997 Asian crises and the long-term linkages between equity markets using the Vector Autoregression (VAR) technique are examined. It will be interesting to see to what extent globalization has impacted on the linkages between equity markets. If strong linkages between markets are found then the rationale for diversifying outside the domestic market to benefit from risk reduction through portfolio diversification becomes questionable.

The October 1987 stock market crash attracted reasonable interest not only in the academic literature, but also from regulatory authorities due to its worldwide scope. The findings in the early literature revealed low comovement between world equity markets. The 1987 crash raised the obvious question of whether world equity markets had become more integrated? Table 1.2 shows that prices in October 1987 dropped all around the world.

Table 1.2

STOCK PRICE INDEX PERCENTAGE CHANGES IN MAJOR MARKETS: CALENDER YEAR 1987 AND OCTOBER 1987

	Local Currency Units		U.S. Dollars	
Countries	**1987**	**October**	**1987**	**October**
Australia	-3.6	-41.8	4.70	-44.9
Austria	-17.6	-11.4	0.70	-5.8
Belgium	-15.5	-23.2	3.1	-18.9
Canada	4.0	-22.5	10.4	-22.9
Denmark	-4.5	-12.5	15.5	-7.3
France	-27.8	-22.9	-13.9	-19.5
Germany	-36.8	-22.3	-22.7	-17.1
Hong Kong	-11.3	-45.8	-11.0	-45.8
Ireland	-12.3	-29.1	4.7	-25.4
Italy	-32.4	-16.3	-22.3	-12.9
Japan	8.5	-12.8	41.4	-7.7
Malaysia	6.9	-39.8	11.7	-39.3
Mexico	158.9	-35.0	5.5	-37.6
Netherlands	-18.9	-23.3	0.3	-18.1
New Zealand	-38.7	-29.3	-23.8	-36.0
Norway	-14.0	-30.5	1.7	-28.8
Singapore	-10.6	-42.2	-2.7	-41.6
South Africa	-8.8	-23.9	33.5	-29.0
Spain	8.2	-27.7	32.6	-23.1
Sweden	-15.1	-21.8	-0.9	-18.6
Switzerland	-34.0	-26.1	-16.5	-20.8
United Kingdom	4.6	-26.4	32.5	-22.1
United States	0.5	-21.6	0.5	-21.6

Reproduced from Kamphuis, Kormendi and Watson (1989, p. 37).

The Asian turmoil of 1997 erased almost three-fourths of the dollar capitalization of the equities markets in Indonesia, Korea, Malaysia, the Philippines and Thailand. By the end of 1997, many loans became non-performing and the crisis spread through Southeast Asia after the Thai government abandoned its support of the baht as

exhibited by these percentage declines in the foreign exchange rates of a number of Southeast Asia countries: the Korean won fell 47.44 percent, the Indonesian rupiah fell 55.9 percent, the Malaysian ringgit fell 34.8 percent and the Philippine peso fell 28.3 percent. The Korean companies: Hanbo Steel Group and the Kia Car Company both went bust. Many of the top ten banks in the region became technically insolvent. The Hong Kong investment bank Peregrine Investments filed for bankruptcy with debts of US$400 million (Dalle Molle, 2003). The presence of contagion or inter-dependence among economies of a certain region becomes important with the diminishment of the advantages to investors of international diversification.

Jeon and Von Furstenberg (1990) argued that the increasing comovement between equity markets might be the result of two things. It may be caused by the decreasing regulation of world financial markets and the resultant increase in integration which has led to an increase in the efficiency with which capital is allocated and news is processed worldwide. Alternatively, world equity markets may just be reacting increasingly to each other even if there are no news developments of global economic significance that would account for such comovement. Regardless of the explanation, if markets are indeed subject to greater comovement, then the benefit of diversifying outside the domestic market will be reduced. Jeon and Von Furstenberg (1990) studied the changes in price relations among the world's major stock markets that might have been precipitated by the crash of October 1987.

Using the Vector Autoregression (VAR) technique, Jeon and Von Furstenberg (1990) focused on the correlation of daily price movements from 1986 to 1988 for the New York, Tokyo, London and Frankfurt stock markets. The 35-month period is divided into two sub periods (January 6/7, 1986 to October 13/14, 1987, and October 21/22, 1987, to November 24/25, 1988) to study whether there have been changes in interrelationships among stock prices in the major world equity markets since the stock market crash of October 1987. Their findings are worth noting despite the short time study period and the small sample. They discovered that the extent of international comovement in stock indices has increased significantly since the 1987 October stock market crash.

Espitia and Santamaria (1994) also used the VAR technique to examine the linkages between world equity markets. Using daily data during the period of 1987 to 1992, their sample consisted of indices for the stock exchanges of Japan, Spain, Italy, Germany, France, U.K. and the U.S.. The early studies of Grubel (1968) and others argued that diversification reduces risk without sacrificing expected return but Espitia and Santamaria (1994) emphasized that to justify this argument, a prerequisite is needed: that is, capital markets must be independent in the process of price formation. If the markets move in parallel, then the opportunities for diversification are eliminated. The transmission of shocks in one market to other markets implies that linkages between markets exist which might reduce the benefits of international portfolio diversification. They found that diversification outside the domestic market does not appear to have an excessive economic rationale. Only if diversification is implemented by choosing stocks whose differential characteristics give them a specific behavior relative to the local stock market on which they are quoted will there be some use in such diversification. They also found that the effects of a shock to the New York market last longer in the period from 1987 to 1992 (up to four days) than in the 1980 to 1985 period (two days). Like Jeon and Von Furstenberg (1990), this finding illustrates that the comovements of the markets have increased.

1.4 Coherent Risk Measures and Value At Risk (VaR)

Coherent risk measures refer to risk measures such as the expected shortfall, which is the expected loss given a loss greater than VaR occurs. Artzner, Delbaen, Eber and Heath (1999) define a risk measure as been coherent if it satisfies the following conditions i.e. letting a set V be real-valued random variables and a function

$\rho: V \to \Re:$

1) Translation invariance: adding cash to the portfolio decreases its risk by the same amount. This property is intuitive, only risk is measured in terms of the final net worth rather than changes in value i.e. $X \in V, \Rightarrow \rho(X+a) = \rho(X) - a$.

2) Sub-additivity: the risk of the sum of sub-portfolios is smaller or equal than the sum of their individual risks, in other words merging of portfolios should not create additional risk. Been sub-additive ensures that a risk measure behaves reasonable when aggregating positions. Sub-additivity could also be a matter of concern for regulators, where firms might be motivated to break up into affiliates to satisfy capital requirements. i.e. $X,Y,X+Y\in V\Rightarrow\rho(X+Y)\leq\rho(X)+\rho(Y)$.

3) Positive homogeneity of degree 1: if the size of every position in a portfolio is doubled, the risk of the portfolio should be twice as large i.e. $X\in V,h>0,hX\in V\Rightarrow\rho(hX)=h\rho(X)$.

   Note that this rules out liquidity effects associated with portfolio that have large amounts in any given individual position.

4) Monotonocity: if losses in portfolio A are larger than losses in portfolio B for all possible risk factor return scenarios, then the risk of portfolio A is higher then the risk of portfolio B i.e. $X\in V,X\geq 0\Rightarrow\rho(X)\leq 0$.

Properties (2) and (3), which refer to sub-additivity and homogeneity, respectively, imply that the convexity of the risk measure ρ and this corresponds to risk aversion on the part of regulators/supervisors.

Generally, VaR is not regarded as a coherent risk measure even though it satisfies the properties of translation invariance, positive homogeneity and monotonocity. According to Artzner, Delbaen, Eber and Heath (1999), this is because: "

a) VaR does not behave nicely with respect to the addition of risks, even independent ones, thereby creating severe aggregation problems.

b) The use of VaR does not encourage and, indeed, sometimes prohibits diversification because VaR does not take into account the economic consequences of the events, the probabilities of which it controls." (p. 218).

In short, VaR does not satisfy the sub-additvity property. There are situations where a portfolio can be split into sub-portfolios such that the sum of the $VaRs$ of the sub-portfolios is smaller than the VaR of the total portfolio. This may cause problems if the risk-management of a financial institution is based on VaR limits for its individual trading books. On this point, Artnzer, Delbaen, Eber and Heath (1999) argued that if quantiles were computed under a distribution for which all prices are jointly normally distributed which is discussed in more detail in section 2.1, then VaR is a coherent risk measure since the quantiles do satisfy the sub-additvity condition requiring probabilities of exceedence to be smaller than 0.5 i.e. $\sigma_{X+Y} \leq \sigma_X + \sigma_Y$ for each pair of random variables. Since for a normal random variable X, the VaR is:

$$VaR_\alpha(X) = -(E_p[X] + \Phi^{-1}(\alpha) \cdot \sigma_p(X))$$

with Φ the cumulative standard normal distribution and since $\Phi^{-1}(0.5) = 0$, the sub-addivity condition is met.

In fact, if one does not intend to aggregate risks computed by independent units but rather to allocate risk, then VaR being coherent is unnecessary because one can use the incremental VaR or $IVaR$ (Mina and Xiao, 2001).

1.5 Conclusions

If world equity markets are at least partially integrated, there will be some incentive for investors to diversify outside the domestic market, depending on the comovement between assets in the domestic market. The increasing integration of world equity markets however tends to offset these incentives to diversify outside the domestic market. In the first section, the finding in the early literature that markets are partially integrated was confirmed.

The Vector Autoregression (VAR) methodology is suitable for testing the transmission mechanism between equity markets and capturing the linkages and efficiency between markets. Studies that have employed the VAR technique were reviewed in the second section. The results of these studies have generally found significant linkages between equity markets which mean comovement between these markets is greater than the early literature suggests. The increasing integration of equity markets might explain this. The evidence from testing in this section questions the rationale for investing outside the domestic market to reduce risk in the portfolio.

The properties of coherent risk measures as defined by Artzner, Delbaen, Eber and Heath (1999) is also reviewed namely: translation invariance, sub-additivity, positive homogeneity and monotonocity. Based on these properties, it was demonstrated that VaR is not a coherent risk measure as it violates the condition of sub-additvity. Except if diversification under the assumption of jointly normal distribution of returns works, then only then VaR is a coherent risk measure suggesting the property of sub-additivity is met. VaR been sub-additive is equivalent of saying diversification never increases the level of risk.

Chapter 2: The Assumption of Normal Distribution and the Use of Linear VaR Models

The normal distribution has been widely used since the 18th century to model the relative frequency of physical and social phenomena. The use of normal distributions can be justified in theory as well as in practice. Chapter 2 looks at the justifications for the use of normal distributions of returns inherent in stock prices both theoretically and in practice. As a result of this justification, the use of linear VaR is appropriate for calculating market risk and this is the focus of the second section. Many researchers discuss various VaR methodologies: analytic VaR, historical VaR, simulation VaR. Yet, few papers say how risk managers should use the VaR numbers to analyze portfolio risks and how such analysis relates to risk management or help risk managers to better implement risk management strategies. In short, the impact of changes in individual positions on the overall VaR requires evaluation. In the last section, the various ways to improve VaR: incremental VaR $(IVaR)$, component VaR (VaR_C) and delta or marginal VaR $(DVaR)$ are reviewed and defined in detail in section 5.5. Absolute and marginal risk contributions, retained risk ratios, and relationship between absolute risk contributions and capital allocation will also be discussed.

2.1 Justifications for Normal Distribution: In Theory and In Practice

2.1.1 The Capital Asset Pricing Model and the Random Walk Hypothesis

The theoretical development of the capital asset pricing model $(CAPM)$ presumes that security returns are jointly normally distributed. It also happens that one form of the efficient market hypothesis, the random walk hypothesis, implies that stock returns must be independent over time and characterized by identical (normal) distributions. Given the weight of this theoretical assumption, it is not a surprise that many empirical

researchers examined actual security returns. Most of the early work though was strongly supportive of the normality assumption, but the results were not complete. Fama (1965) showed that security returns are best characterized by the stable Paretian distribution – which is similar to the normal distribution, but has "fatter" tails and less probability mass in the center, peaked region. Blattberg and Gonedes (1974) concluded that security returns are best characterized by a Student distribution, which is also stable, symmetrical distribution with fat tails and compressed peak. Finally, Kon (1984) surmised that a mixture of normal distributions is a better explanation of observed return distributions than any single distribution model alone. The key point in all three studies is that security returns are approximately normally distributed, and the deviations from normality exhibit a specific type (fat tails, compressed peak).

2.1.2 The Central Limit Theorem

Another theoretical justification for normal distribution is given by the central limit theorem (CLT) or limiting distribution of averages. The CLT states that the distribution of a properly normalized and centered sum of a large number of independent and identically distributed (IID) variables is approximately normal. Modeling the price evolution of a risk factor as a series of successive shocks and applying to the initial price implies that CLT can be applied to natural logarithm of the returns. The argument is that if a process is additive-reflecting the combined influence of multiple random occurrences - the result is likely to be approximately normal. Let X be an $n-$dimensional random vector with IID components X_i. It does not matter what their common distribution is as long as its mean μ and standard deviation σ exist. Let $\overline{X}_n$ be the random variable equal to the average of the X_i. Accordingly, the normalized average:

$$\overline{X}_n^* = \frac{\overline{X}_n - \mu}{\sigma / \sqrt{n}}$$

has mean 0 and standard deviation 1. The central limit theorem tells us $\overline{X}_n^*$ is approximately $N(0,1)$. Specifically, it states that for any constant x,

$$\lim_{n\to\infty} \Pr(\overline{X}_n^* \leq x) = \Phi(x)$$

where $\Phi(x)$ is the cumulative distribution function (CDF) of the standard normal distribution (Embrechts, 2000).

2.1.3 $N(0,1)$ Properties

A practical justification for the normal distribution is the simplicity of its calibration. The univariate normal distribution can be described by two parameters that are easy to comprehend: the mean and the standard deviation. Having a mean a zero for this type of distribution is reasonable since the expected change in portfolio value over a short holding period is almost always close to zero.

In hindsight, the justification of the jointly normal distribution of returns enables one to use the linear VaR models as opposed to non-linear approaches and at the same time drawing on the properties of that distribution to calculate the probability of loss. In this manner, it is said to convey the same information as the standard deviation, but on a different scale. Among the properties of the normal distribution is that 67 percent of returns will fall within one standard deviation around the mean, while 33 percent will lie outside it. Since normal distributions are symmetric and the only concern is with the loss (the left tail of the distribution), losses in excess of one standard deviation will occur 16.5 percent of the time.

2.2 Linear VaR Models: Variance/Covariance VaR

The variance/covariance VaR $(VAR/COV\ VaR)$ or more commonly known as analytic VaR entails the use of historical volatilities and correlations to derive the market risk of a portfolio. This approach requires the following steps: apply

a system of risk decomposition to reduce the portfolio to identified risk factors, obtain the historical volatilities of individual factors and correlations between risk factors from an external source like JP Morgan RiskMetrics^{TM} or calculate them directly from historical data, scale the historical volatility by the number of standard deviation consist of confidence level desired, and calculate the VaR by applying the volatilities and correlation to the decomposed risk factors. In practice, $VAR/COV\ VaR$ is generally used with delta based measures of portfolio sensitivity although in theory it is feasible to use full revaluation approaches. The advantages of analytic VaR include: the ease of application of the technique, its capacity to be used to analyze complex transactions within a simple framework, computational ease and simplicity, although the size of the correlation matrix can become large and unwidely. This problem is insignificant as this study also uses risk mapping: using proxies to represent actual positions.

The disadvantages of $VAR/COV\ VaR$ include: the need to make a number of statistical assumptions such as assuming that the future distribution of changes in the risk factors is normal and assuming stationarity of the volatility and correlation estimates, inability to accurately capture the risk of options, difficulty of incorporating second order risk factors such as gamma (convexity risk), vega (volatility risk) and theta (the impact of time decay) and the process of scaling the risk factor over the risk period by taking the daily VaR estimate and multiplying it by the square root of its risk horizon may not accurately capture the risk.

The choice between the analytic VaR, historical VaR, and simulation VaR is dictated by a consideration of a mixture of the following factors: coverage of instruments, accuracy and tractability of risk measures, including statistical assumptions underlying approach, implementation requirements covering valuation models, risk decomposition and data requirements, systems requirements covering information technology issues, and ease of communicability of concept and results to users (Das, 1998, p. 604). $VAR/COV\ VaR$ uses risk composition and therefore is capable of handling most traded instruments. The major issue is the

assumptions underlying VAR/COV VaR of a normal distribution of past asset returns. Non-realisation of the assumption may significantly mis-estimate risk and the main objective of risk management models is to measure losses in the tails. The emergence of evidence that markets are not consistent with normal returns or lognormal price stochastic processes imply that extreme outliers may occur significantly more often (more of the outcomes are located in the tails rather than toward the center of the distribution) than predicted by a normal distribution. The problem in this regard is that while markets on the whole may be consistent with normal distribution it is these outliers that create the most significant levels of risk for the portfolio. Consequently, failure to adequately capture them may reduce the value of the risk estimates in the situation where they are most needed. Historical VaR and simulation VaR will provide robust estimates, irrespective of whether the portfolio contains significant optionality, provided either the historical period is representative or the stochastic process used to generate simulation paths is reasonably tractable and sufficient numbers of paths are used. The Basle Committee (BIS) Guidelines do not recommend any particular form of VaR model instead suggest the use of separate stress testing to measure risk that might not be captured by the models. Back testing to test and improve risk management systems is recommended.

2.3 Hot Spots, Incremental VaR, Component VaR and Delta VaR

JP Morgan's RiskMetrics™ (1995) and many other early researchers have provided analytical methodologies for assessing VaR, but the question of what one can do to reduce VaR has been historically neglected. Studies in these areas were mainly by Garman (1996), Litterman (1996, 1997) and Dowd (1998). Before discussing the empirical literature, the reasons for knowing such information are discussed. Knowing the ways to improve VaR enables investors/supervisors/regulators to:

1) Ascertain the impact of a potential asset purchase or disposal on portfolio VaR

2) Identify hot spots or major sources of overall risk exposure in the portfolio

3) Adjust returns based on information received

4) Enable position limits to be monitored

5) Performance evaluation of individual traders and asset managers

6) Permits appropriate allowances for the risks associated with individual asset positions and

7) Determine internal capital requirements

Garman (1996) introduced a new mechanism which he called the $DelVaR$ (which is same as delta VaR in this study) to improve the original VaR forecast. By defining the following variables:

1) P as the existing institutional portfolio of trades
2) A_i as the portfolio consisting only of the ith candidate trade, for $i=1,2,...,n$;
3) $p=m(P)$ is the vector of cashflow amounts where $m()$ is a cashflow mapping function, and the index set of the resulting vector is the set of vertices;
4) $a_i=m(A_i)$ is vector of cashflow amounts for the ith candidate trade; and
5) Q is a variance-covariance matrix scaled by the square of the VaR probability standard deviations

Based on the above, the VaR is:

$$VaR \equiv v = \sqrt{p'Qp}$$

where prime is the transpose. After the ith candidate trade is added to the existing portfolio, a new evaluation of the VaR of the augmented portfolio $R_i = P + A_i$ is:

$$w_i = \sqrt{r_i' Q r_i}$$

where $r_i = m(R_i)$ is the augmented portfolio's cashflow map.

Garman's idea of VaR improvement is by examining the difference $(w_i - v)$. If the quantity is negative, the candidate trade will improve institutional VaR. The reverse is also true.

Garman (1997) developed another way of improving the VaR forecast based on $DVaR$ (what Garman (1997) refer delta VaR as). This is the $CVaR$ (what Garman (1997) refer component VaR as) based on three properties: if components partition the portfolio, then $CVaR$ is same as diversified VaR, how the portfolio will change if a given component was deleted and components that act as hedges against the rest of the portfolio will have a negative $CVaR$. In his study, Garman (1997) extended the $CVaR$ to include another theorem called additivity. For any cashflow map:

$$p' \cdot DVaR(p) = p' \cdot \frac{Qp}{\sqrt{p'Qp}} = \frac{p'Qp}{\sqrt{p'QP}} = VaR(p) \qquad \text{(additvity)}$$

Definitions for the variables are same as Garman (1996). The inner product of the cashflow map and its corresponding $DVaR$ is its VaR. This theoretical relationship between VaR function and its gradient underpinning the additivity properties is the basis of Garman's $CVaR$. Let the cashflow map p come from the component cashflow maps:

$$p=\sum_{i=1}^{N} p_i$$

where N is the number of components. Then from the additivity equation:

$$VaR(p)=p'\cdot DVaR(p)=\sum_{i=1}^{N}\{p_i'\cdot DVaR(p)\}$$

Assuming the $CVaRs$ are those terms on the right hand side of the last equation above, the first property is satisfied. By Taylor series expansion used in Garman (1996), Garman (1997) proved the other two properties are satisfied too. $CVaR$ is:

$$CVaR=p_i'\cdot DVaR(p)\ .$$

Dowd (1998) proposed another way to improve VaR : $IVaR$. His approach works by letting:

$$IVaR=a\alpha^2\sigma_{A,p}W^2/VaR^{old}$$

where the $IVaR$ is expressed in terms of the old portfolio VaR , the size of the new asset position (a) , the size of the old portfolio (W) , the VaR confidence parameter (α) and the covariance $(\sigma_{A,p})$. Substituting the old portfolio VaR using:

$$VaR^{old}=-\alpha\sigma_p W\ ,$$

$IVaR$ is:

$$IVaR\approx -aW\alpha\sigma_{A,p}/\sigma_p=a\beta_{A,p}VaR^{old}$$

where $\beta_{A,p}\approx\sigma_{A,p}/\sigma_p^2$ is the new asset's portfolio beta. $IVaR$ becomes the relative size of the new position (a) times the asset's portfolio beta $(\beta_{A,p})$ times the old portfolio VaR .

Garman, Aragones and Blanco (1999) proposed a new methodology known as the sector approach to break down the VaR of an Asian emerging market portfolio in its components and determine the contribution to risk of each position in the portfolio. According to them, most of the VaR systems analyze equity risk using a single stock market index for each country, which forces them to aggregate risk excessively, and offers an incomplete picture of the risk profile of the portfolio as both sector risk, and specific risk are not being taken into account. They outlined some of the uses of $DVaR$ and $CVaR$ to break down the risk of an international equity portfolio and showed that VaR is a powerful tool to measure and manage risk. Using stock market sectors as risk factors for the analysis, Garman, Aragones and Blanco (1999) identified the way in which the different sectors of each country contribute to the total diversified market risk; the ones that act as natural hedges within the portfolio and how risk may be altered by restructuring the portfolio. Their portfolio consisted of positions in four different countries: Malaysia, Singapore, Taiwan and Thailand and three industry sectors: banking, industry and construction with equal weightings in each sector. Their findings were that Singaporean construction index and the Malaysian construction and bank indexes had the highest $DVaRs$ or where the market "hot spots" are. By increasing (decreasing) their position in these indexes, investors would obtain the largest gain (reduction) in diversified VaR . From the $CVaR$, foreign exchange risk is the main contributor to overall VaR (33%) with industry sector contributing only 16.4% of the overall diversified VaR . When they decomposed the risk by countries, their study revealed that positions in Malaysian equities contributed to more than half of the portfolio's diversified risk, while the positions in Taiwanese equities acted as a natural hedge for the portfolio.

2.4 Risk Contributions

2.4.1 Absolute and Marginal Risk Contributions

A risk contribution measure is the post-diversification risk that is retained by a facility, a position, a portfolio or sub-portfolio transactions, whereas the standalone risk of a

portfolio is intrinsic or specific to a facility or position and pre-diversification effects. The standalone risk is a function of the volatility or dispersion of a single facility of an obligor, an individual position in a portfolio, or a single sub-portfolio of a reference portfolio. A risk contribution measure is always defined relative to a facility or position and a reference portfolio. The determination of the risk contribution, independent of the actual source of the risk, requires the loss distribution. Market and credit risk contributions are functions of the loss volatility or the portfolio credit risk capital, respectively. In the case of a multivariate Gaussian loss distribution, the loss volatility is a function of the standard deviation of the loss distribution. The risk contributions of a portfolio are the basis of capital allocation systems and the basis of risk-adjusted performance measurement systems. Risk contribution metrics always refer to the individual facilities of an obligor or counterparty, the individual positions in a portfolio, or sub-portfolios of a reference portfolio. The form of a risk contribution metric depends on the form of the overall portfolio risk to which it is contributing. Risk contributions can be of two forms:

1) **Absolute Risk Contributions**

Absolute risk contributions are allocations of a portfolio's risk to the existing individual facilities, positions, or sub-portfolios that are embedded in the correlation structure of the portfolio. That is, absolute risk contribution is a function of the covariance of the random loss of an existing individual facility or position in a portfolio with the overall random loss aggregated over the entire portfolio including the position of interest, divided by the volatility of the aggregated random portfolio loss. The absolute risk contribution captures the risk of a given facility or position given that a fraction of this facility's standalone risk has been diversified away due to its correlations with the other facilities in the other portfolios. The absolute risk contribution metric depends on the dependence relationship between the new facility or position and the current portfolio, and is basically the undiversifiable risk of a portfolio that is attributable to a given positions and is also referred to as the component risk contribution to a portfolio. The absolute risk contributions can be used to allocate risk capital; capital allocations are functions of the absolute risk contributions, and are inputs to the risk-adjusted performance measurement process. The overall portfolio risk is the arithmetic sum of the absolute risk contributions, since the allocated risks must reconcile the overall risks. Note this is true if the

original risk measure is a coherent risk measure. Absolute risk contributions are ex-post risk measures once the facilities are part of the portfolio since they only consider the risk of the existing portfolio. The absolute risk contributions can also be used in risk-based performance measurement. Ex-post risk-adjusted performance measures based on absolute risk contributions allow for the comparison of the risk-return profiles of the facilities or sub-portfolios (Bessis, 2002, Chapter 51).

2) **Marginal Risk Contributions**

Marginal risk contributions or *relative risk contributions* or *incremental risk contributions* are the risk changes with, and without an additional unit of exposure, a facility, a position or sub-portfolio of facilities (The term incremental risk contribution will be used in the latter parts of this section). That is, the marginal risk contribution refers to the change in the volatility of the portfolio loss distribution when a new facility or position is added to a portfolio. That is marginal risk contribution assess the risk of a portfolio with and without the position in the portfolio. The marginal risk contribution is the marginal change in the volatility of the portfolio loss distribution when a new position in under consideration for addition into an existing portfolio. This implies that marginal risk contributions are the relevant measures when considering decisions to add or remove a position or sub-portfolios, or pricing new transactions according to it incremental risk contribution to the overall risk of a portfolio.

The arithmetic sum of the marginal risk contribution is not equal to the overall portfolio risk. The marginal risk contribution arising from the addition of a new position or facility on the volatility of the portfolio loss distribution will differ from the corresponding marginal contribution to capital. If the changes in the portfolio do not significantly affect the capital to portfolio loss volatility multiplier, the marginal risk contribution of the volatility of the portfolio loss distribution multiplied by this ratio may be used as a proxy for the corresponding marginal contribution to capital. This situation usually persists for large portfolios. The marginal risk contributions are ex-ante measures of risk since they apply to transactions which are being considered for addition to the portfolio, and therefore, are relevant for pricing. This implies that marginal risk measures may be used as a basis for making incremental portfolio decisions and for risk-based pricing. They address the question of how risk

capital would be required to support a new facility or positions that is under consideration for inclusion into the portfolio. Pricing using marginal risk contributions allows for the revenues of an additional new facility or position to a portfolio to be equal to the target hurdle rate of return times the marginal risk contribution measure of the new facility or position. This also ensures that the target portfolio rate of return on capital remains equal to minimum hurdle rate of return. A limitation of the use of marginal risk contributions is that their values are a function of the order that positions are added to the portfolio. Pricing decisions based on the marginal risk contributions will charge customers a mark-up that is equal to their risk contribution times the target return on capital. The resulting mark-up will remain in-line with the target return when new facilities or positions are added to the portfolio (Bessis, 2002, Chapter 52).

In summary, the key distinction between absolute and marginal risk contribution metrics is that absolute risk contribution measures are best-suited for use in the ex-post process of risk capital allocation and marginal risk contribution measures are best-suited for use in the ex-ante risk-based pricing decisions. That is, the absolute risk contributions are ex-post measures that measure the risk contributions to a portfolio of an existing set of positions, whereas marginal risk contributions are ex-ante measures that measure the risk contributions to a portfolio with and without a position that is under consideration for addition to the portfolio. Absolute risk contributions facilitate the allocation of risk capital to existing positions or facilities and to set up positions risk limits. The use of absolute risk contributions allow for capital to be allocated such that the total capital allocated is equal to the sum of the capital allocated to the individual positions. Also risk limits for an existing portfolio can be set in terms of capital, and compared to the capital usage of each sub-portfolio. The use of marginal risk contributions are used in risk-based pricing and ensure that the portfolio return realizes at least a minimum target level.

Marginal risk contributions to the volatility of the portfolio loss distribution will be lower, in general, than the corresponding absolute risk contributions to the volatility. Marginal risk contributions to the risk capital of a portfolio can be higher or lower, in general, than the corresponding absolute risk contribution to risk capital. The marginal risk contribution of a given position is always less than or equal to the corresponding absolute risk contribution, which in turn, are always less than or equal to the corresponding standalone risk. Credit risk systems sometimes use marginal risk

contributions, including JP Morgan's CreditMetrics, while others such as KMV Portfolio Manager use absolute risk contributions. Again the difference between absolute and marginal risk contributions is insignificant for large portfolios.

The simplest risk contribution metric are the contributions to the volatility of the portfolio loss distribution. Given that the common approach to express risk capital as a multiple of the volatility or high quantile of the portfolio loss distribution, absolute risk contribution measures may be converted into risk capital allocations using the same scaling factor. A benefit of using absolute risk contribution measures is that sum of risk capital allocations of the individual facilities or positions is equal to the risk capital allocation for the entire portfolio, since properly scaled absolute risk contributions will add up to the volatility of the portfolio loss distribution (Dalle Molle, 2003).

2.4.2 Retained Risk Ratios

The absolute risk contribution of a given position is proportional to the corresponding standalone risk. The ratio of the risk contribution of a given position to the volatility of the loss distribution for the position is less than or equal to one. This ratio is referred to as the *retained risk ratio* or *diversification ratio*, represents the extent of the diversification effects at the position level in an existing portfolio, and represents the risk retained with a portfolio as percentage of the standalone risk of an individual position. The retained risk ratio for a coherent risk measure represents the level of undiversified risk of a given position relative to an existing portfolio:

$$\begin{aligned}\eta_i &= \frac{CVaR_i}{SVaR_i} \\ &= \frac{\rho_{r_i,R} \cdot SVaR_i}{SVaR_i} \\ &= \rho_{r_i,R}\end{aligned}$$

for $i=1,2,...,n$ and where $SVaR_i$ and $CVaR_i$ are the standalone VaR and component for the $i-th$ asset S_i, respectively, for $i=1,2,...,n$ and $\rho_{r_i,R}$ is the linear correlation coefficient between the log-returns $i-th$ asset $r_i(t)$ and the log-

return on the portfolio $R(t)$ for $i=1,2,...,n$. η is always less than or equal to one since the risk contributions are measures of post diversification, i.e. after the portfolio have been formed. That is the component VaR is always less than or equal to the standalone risk. Note that a retained risk ratio η_i for the $i-th$ position depends on the entire correlation structure of the portfolio. This implies that higher (lower) the ratio η_i, the higher (lower) will be the undiversifiable risk of the $i-th$ position. A low (high) value of the retained risk ratio indicates which position (or positions) should have their weights increased (decreased) in order to increase the extent of diversification of an existing portfolio. Note that for a portfolio, the retained risk ratio is the ratio of the aggregate volatility of the portfolio loss distribution to the sum of all the individual volatilities of the individual position loss distributions.

Note that if $\rho_{r_i,r_j}=0$ for $i=1,2,...,n$ and $j=i+1,i+2,...,n$, $\rho_{r_i,R}$ is equal to

$$\rho_{r_i,R}=\frac{\sigma_{r_i}}{\sigma_R}$$

for $i=1,2,...,n$ and the absolute risk contribution or component VaR becomes:

$$CVaR_i=\frac{\sigma_{r_i}}{\sigma_R}\cdot SVaR_i$$

for $i=1,2,...,n$ and the diversifiable risk ratio becomes:

$$\eta_i=\frac{CVaR_i}{SVaR_i}$$

$$=\frac{\sigma_{r_i}}{\sigma_R}\cdot SVaR_i\cdot\frac{1}{SVaR_i}$$

$$=\frac{\sigma_{r_i}}{\sigma_R}$$

for $i=1,2,...,n$ (Bessis, 2002, p. 645-646 and Dalle Molle, 2003).

2.4.3 Absolute Risk Contributions and Capital Allocation

Recall that capital allocation attempts to allocate both credit and market risks to the business units and transactions from which they were originated. Capital allocation provides both top-down and bottom-up links to the port-diversification risk of a financial institution and its transactions. These links are not straightforward since the arithmetic sum of the standalone risks does not equal the overall portfolio risk, unless the individual facilities or positions are uncorrelated. Capital allocation through the use of absolute risk-contribution metrics allows for the overall risk to be decomposed and mapped to its sources. This decomposition allows for the reconciliation of the allocated risks with the overall risk. Absolute risk-contribution metrics are the appropriate metrics when allocating capital to already existing or ex-post risks.

Using a risk contribution approach to capital allocation allows for the decompositions and aggregation of risk contributions according to any criteria conditioned that the individual transaction risk contributions are available. The criteria may be transactions by business unit geographical region, product type or counterparty. For coherent risk measures; properly-scaled absolute risk contribution measures of the individual facilities or positions sum to the overall portfolio risk measure, post-diversification effects, which makes them a convenient basis for determining risk capital allocations to the individual facilities or positions. The implication of this is that through the use of a risk contribution approach to capital allocation different risk allocations, such as credit and market risks, may be made as a function of individual facilities or positions. This implies that different (subset) risk allocations may be made relative to the different business units for customer is transacting with multiple business units of a firm. Also different (subset) risk allocations may be made for customers whose market transactions create both credit and market risk exposures for different business units of a firm (Bessis, 2002, p. 540).

2.4.4 Marginal Risk Contributions and Risk-Based Pricing

Risk-based pricing with an ex-ante perspective of risk decisions is possible through the use of marginal risk-contribution metrics, which allows for the portfolio return to be in-line with the overall target return. Marginal risk-contribution metrics are the appropriate

metrics when attempting to price potential or ex-ante risks. Recall that the objective of risk-based pricing is to ensure that a minimum target return on capital is in-line with that expected by shareholders. A hurdle rate serves as the benchmark return for risk-based pricing and for determining whether value (or wealth) was created or destroyed in a Shareholders' Valued-Added (SVA) context. The hurdle rate can be the target rate of return on existing equity or the target return on economic capital. One should set the hurdle rate to the average risk-adjusted return on the portfolio if it is higher than the minimum benchmark (Bessis, 2002, p. 540).

2.5 Conclusions

Chapter 2 examines firstly the validity of the assumption of jointly normal distribution implicit in stock returns using both the theories of capital asset pricing model $(CAPM)$, the strongest form of market efficiency that of the random walk hypothesis, the central limit theorem (CLT) and the $N(0,1)$ properties. The linear VaR model of variance/covariance VaR $(VAR/COV\ VaR)$ based on normal distribution of returns is also discussed. Derivatives can create complex, and highly non-linear payoffs, however they are often not the primary source of risk in a portfolio. Much attention has been devoted by risk managers to develop firmwide systems to aggregate information. Little has been said on how to use that information to obtain a deeper understanding of comprehensive risk: the hot spots, the main hedges. Garman (1996, 1997), Litterman (1996, 1997), and Dowd (1998) were the early researchers in these areas. By decomposing the VaR forecast into $DVaR$, VaR_c and $IVaR$ respectively, these researchers enable risk managers to gain a better understanding of risk and allow relationship to be made between these statistical measures and portfolio risk management. Discussions on risk contributions are also presented.

Chapter 3: VaR , Risk Factors and the Need for Risk Decomposition

Using VaR to estimate market risks necessitates either tracking the volatilities or correlations between the price changes on individual instruments of a series of defined risk factors. This would require information on a very large number of individual instruments. In Chapter 3, the problems of linear VaR models or variance/covariance VaR $(VAR/COV\ VaR)$ and hence the need for risk decomposition are examined first. Sometimes risk decomposition is referred to as risk mapping (JP Morgan RiskMetrics^{TM} 1995) or cash flow mapping or cash flow shredding. Next, the process of mapping is discussed in brief. Then, the two main approaches: JP Morgan Risk Metrics^{TM} and Basle Committee (BIS), to the risk factors selection mainly linear risk factors are outlined and a brief discussion on non-linear risk factors is also included.

3.1 Limitations of Variance/Covariance VaR

When the number of assets becomes large, the estimation of the variance/covariance matrix becomes difficult, since the number of covariances increase geometrically as the number of assets increases linearly i.e. $n*(n-1)/2$ or a total of $n*(n+3)/2$ parameters. Problems in this estimation procedure may cause the portfolio VaR figure to become negative and the estimates of the covariances may not be statistically significant, i.e. very imprecise. Besides, if the underlying risk factors are closely correlated, there is the problem of near collinearity where the covariance matrix may not be full rank and for a number of the positions in the portfolio, there may not be sufficient data.

Flexibility is also an issue. Where estimation of market risk is instrument specific, new products would require individual price volatilities and correlations to enable the market risk to be measured. In practice, this may be very difficult particularly where

the instruments are not liquid and the establishment of the volatilities and correlations are more difficult. Because it allows restatement of any one product in terms of established risk factors, the process of risk decomposition greatly increases the flexibility of this framework in accommodating non-standard transaction and innovations.

3.2 The Risk Mapping Process

One approach to reducing the computational requirements is to identify a limit number of risk factors and relating the price changes or returns of a single asset to changes in the market risk factors. The use of a limited number of risk factors is relevant in the characterization of the changes in the value of a financial instrument if these factors are correlated and even for large portfolios will reduce the computational requirements as well as facilitating efficient calculation of market risk especially for large portfolios. In short, the reduction of the dimensionality of the estimation procedures is possible by focusing on market risk factors rather than of risk position. One common approach used in simplifying/approximating the estimation of variance/covariance matrix of portfolios with large number of diverse instrument is to decompose or map the instruments in the portfolio into primitive or atomic components, i.e. risk factors.

The process of mapping generally involves three stages. The first is to construct a set of benchmark instruments or factors and collect data one their volatilities and correlations. The benchmark instruments might include key bonds, equities, commodities, and so on discuss in more detail in section 3.3. Having established a set of core instruments or factors and collected the necessary data, the next step is to derive synthetic substitutes for each instrument held, made up of positions in the core instruments. This synthetic substitution is the actual mapping. The final stage is to calculate VaR using the mapped instruments instead of the actual instruments held (Dalle Molle, 2003).

3.3 Approaches to Selection of Risk Factors

Risk factors are typically instruments or factors that serve as proxies for the sources of changes in the distributions of price and rate movements such that the high-dimensionality and related problems are overcomed.

The best known approach is the one used by JP Morgan RiskMetrics™ (1995) which uses the following set of core instruments:

1) Equity positions: represented by equivalent amounts in terms of equity indices in each of the core currencies as well as the individual stock prices. In their study, they used country indices in 27 markets and individual stocks on beta.

2) Fixed-income positions: represented by combinations of cash flows of a limited number of specified maturities in a given currency. Positions could also be differentiated by their credit standing such as government securities which is free of default risk while non-government is not. Used data for 7-10 buckets of government yield curves in 16 markets, 4 buckets money market rates in 27 markets, 4-6 buckets in swap rates in 18 markets.

3) Foreign exchange (FX) positions: represented by the relevant amounts in terms of a certain number of 'core' currencies, and FX forward positions are mapped as equivalent fixed-income positions in their respective currencies.

4) Commodity positions: represented by amounts of selected standardized futures contracts traded on organized exchanges. Used 80 volatility series on 11 commodities (spot and term).

JP Morgan RiskMetrics™ (1995) uses a broad set of core instruments to be able to map a correspondingly broad range of different positions. As most users of VaR have more specialized portfolios, they can choose to work with some subset of the JP Morgan RiskMetrics™ (1995) core instruments to reduce dimensionality problems and speed up calculations.

The other alternative is the Basle Committee (BIS) in its Market Risk Guidelines:

1) Fixed Income – represented by cash flows allocated to a number of shape. The credit risk of fixed income securities will be captured through the use of a minimum of two yield curves, namely, a risk free government curve and a credit adjusted yield curve. At minimum 6 time buckets is needed.

2) Currency – represented by the relevant currency cash flows and the individual currency pairings.

3) Equity – represented by the cash flows in the relevant currency of the position. At a minimum, the risk factor should be related to market wide movements in the relevant equity market, based on the equity market index, with individual stock positions being captured by utilizing the beta of the stock. Depending on the nature of the trading position and the risks assumed, more extensive risk factors ranging from sector indexes to risk factors for individual stocks – may be required. The risk factors should encompass the stock specific risks such as the exposure to changes in dividend payments and changes in the stock's beta.

4) Commodities – represented by cash flows in the currency of trading (usually US$) in the commodity. Risk factors should encompass both the directional price risk and risks of changes in convenience yields.

Note that all the above are linear derivatives. Applying linear VaR techniques to quantify the risk of options or portfolios containing options creates difficulties. These difficulties arise from a number of sources: the price movements of options are non-linear, i.e. for a given change in the asset price the price change of the option is not constant, the impact of changes in volatility on the price of options (the option's vega risk) and the impact of time decay on the price of the option (the option's theta risk). There are several possible approaches to the calculation of VaR for options. These approaches include the delta based method, the delta method incorporating adjustments for gamma, vega and theta and simulation approaches.

3.4 Conclusions

In Chapter 3, the idea of using a small number of building blocks to map a great many different instruments and some element of financial engineering theory are discussed. Mapping is relatively straightforward when the returns on the instruments or portfolio returns are linear or nearly linear functions of the underlying risk factors implying the use linear VaR models or variance/covariance VaR $(VAR/COV\ VaR)$ based on risk decomposition will suffice and reasonable results can be obtained because of the linear risk factors in spite of the fact that mapping involves approximation. When payoffs are nonlinear as in options, non-linear VaR models: simulation approaches such as Monte Carlo are required. The two approaches by JP Morgan RiskMetrics^{TM} (1995) and Basle Committee (BIS) of risk factors' selection are unveiled: their proxies for equities, foreign exchange, fixed interest and commodities. All of which are linear.

PART TWO
DATA & METHODOLOGY

Part two provides both a description of the data and methodologies to be used in the empirical analysis in this study. Chapter 4 describes the stock and exchange rate data used for the 25 countries in the study. The different time zones in which the markets trade are presented and the implications of non-synchronous trading discussed. The markets are also classified as 'emerging' or 'developed' to aide in the analysis of the results in Part three. Also, the basis on which the risk factors as proxies to represent the actual positions will be examined. Chapter 5 discusses the Markowitz model or the mean-variance theory as well as VaR and a combination of Garman (1996, 1997), Litterman (1996, 1997), and Dowd (1998) approaches to VaR to measure portfolio diversification benefits and identify the main sources of risk of the portfolio or 'hot spots'. Other statistics include measures of central tendency i.e. quantile functions and asymmetry measures of skewness and kurtosis will also used. Chapter 6 describes the risk mapping procedure using a factor model. The risk mapping process will be limited to linear-factor sensitivities through the use of a multi-factor model. The basic difference between the multi-factor model that will be used and the arbitrage pricing theory model is that the latter requires additional constraints on the portfolio weights and log-returns of the portfolio that eliminate the possibility of arbitrage opportunities.

Chapter 4: Data Description

In Chapter 4 the data set used for the empirical testing in this study is introduced. The stock data for the countries included in the study will be introduced and the exchange rate data used to transform the stock data into U.S. dollars will also be described. Because the markets in this study do not all open and close simultaneously, consideration needs to be given to the non-synchronous nature of the stock market data. For this reason the open and closing times of each of the markets is presented in common Greenwich Mean Time (GMT). Establishing the order in which markets trade enhances the understanding of the results in the empirical analysis. The 25 markets included in this study can be classified as either 'emerging' or 'developed' markets. Classifying the markets aides the understanding of the results from this study. Finally, it is common with stock data to take the natural logarithm of the levels data and to take first differences also. The rationale for this transformation is briefly discussed.

4.1 Raw Data

The data for the stocks were collected using DataStream and the criteria was based on market capitalization from highest to lowest both for countries selection and stocks selection in the respective countries. Due to the lack of data for 25 stocks and exchange rates, certain countries were not used including China, Malaysia, Philippines, Russia, Argentina, Luxembourg even though they are big players in the world financial markets. This sample is thought to be a good representation after all the study by Solnik (1965) showed that an American investor holding a portfolio of 20 securities will only reduce his risk by another three percent if he adds another 50 different securities to his portfolio. Is the extra three percent risk reduction worth the extra transaction costs? By default, the daily closing prices is used for all equities.

The time period chosen for the study is August 9, 1998 through to the value date June 30, 2003. Regulators such as the Basle Committee (BIS) require the risk forecast to be somewhere between 250-253 trading days which meant that weekends and non-trading days such as holidays have been accounted for. The data set incorporates 1255 daily observations. This sample period was chosen for a number of reasons. The aim was to

incorporate data as recently as possible so that the recent volatility that has occurred in world markets could be captured and thus the degree of relevance of portfolio diversification in this increasingly globalized world. Other reasons include that the long-run risk dynamics may not be easily understood and thus making them difficult to model properly and also longer sample periods may potentially violate the assumption of IID observations due to regime changes such that old information may no longer be relevant in the current regime. Statistically, even with reasonable samples of time series data, it is unlikely that there are sufficient degrees of freedom to accurately discriminate between individual sources of risk.

An important risk facing investors seeking to diversify outside the domestic market is exchange rate risk. If an investor in foreign securities does not protect themselves against exchange rate fluctuations, they are effectively speculating on currency fluctuations. By using local currency data, the exchange rate risk for investors is effectively ignored. If investors hedge their currency exposure, local currency data is sufficient. Given that the expense of hedging may rule it out for many investors, exchange rate adjusted data is considered. Therefore, the empirical testing is conducted on exchange rate adjusted data which is transformed into U.S. dollars so that exchange rate risk is considered. The U.S. dollar was chosen because of its dominant position in international trade and investment. Daily exchange rates for each of the 24 remaining countries against the U.S. dollar were used to transform the stock data into a common currency. Table 4.1 shows the exchange rate data that was used in this study.

Table 4.1 EXCHANGE RATE DATA	
Country	**Exchange Rate**
Australia	US $ to Australian $
Brazil	US $ to Brazilian Real
Chile	US $ to Chilean Peso
France	US $ to Euro
Germany	US $ to Euro
Hong Kong	US $ to Hong Kong $
India	US $ to Indian Rupee
Indonesia	US $ to Indonesian Rupiah
Ireland	US $ to Euro
Israel	US $ to Israeli Shekel
Italy	US $ to Italian Lira
Japan	US $ to Japanese Yen
Mexico	US $ to Mexican Peso
New Zealand	US $ to New Zealand $
Singapore	US $ to Singapore $
South Africa	US $ to South African Rand
South Korea	US $ to South Korean Won
Spain	US $ to Euro
Sweden	US $ to Swedish Krona
Switzerland	US $ to Swiss Franc
Taiwan	US $ to Taiwan New $
Thailand	US $ to Thai Baht
Turkey	US $ to Turkish Lira
United Kingdom	US $ to UK Pound

4.2 Market Opening and Closing Times

Table 4.2 presents the market opening and closing time in Greenwich Mean Time (GMT). Because the 25 countries included in this study are in different time zones and do not all have the same trading hours, the markets do not simultaneously open and close. Non-synchronous trading can cause problems in some of the empirical testing

carried out in this study such as in the estimation of the portfolio's variance-covariance matrix and this affects values obtained. The empirical analysis is generally aided by establishing the order in which equity prices are updated so that it can be taken into account where necessary after all close-to-close returns data is being used.

Table 4.2

MARKET OPENING AND CLOSING TIMES

Country	Index	GMT
Australia	Australia SE All Ordinary	00:00 – 06:00
Brazil	BOVESPA	13:00 – 20:00
Chile	IGPA	12:30 – 20:30
France	CAC40	07:00 – 18:00
Germany	DAX	08:00 – 16:30
Hong Kong	Hang Seng	02:00 – 04:30 06:30 – 07:30
India	BSE 200	04:30 – 10:00
Indonesia	Jakarta SE Composite	02:30 – 05:00 06:30 – 09:00
Ireland	Ireland SE Overall (ISEQ)	08:00 – 16:30
Israel	Israel TA 100	09:30 – 14:00
Italy	Milan MIB 30 Index	08:10 – 16:25
Japan	Nikkei 225 Stock Average	00:00 – 02:00 03:30 – 06:00
South Korea	Korea KOSPI 200	00:00 – 03:00 04:00 – 06:00
Mexico	Mexico IPC (BOLSA)	14:30 – 21:00
New Zealand	New Zealand SE 40	22:00 – 04:00
Singapore	Singapore All – Sing Equities	01:00 – 04:30 06:00 – 08:00
South Africa	JSE All Share 40	07:00 – 15:00
Spain	IBEX 35	08:00 – 16:30
Sweden	Sweden SFX	08:30 – 16:30
Switzerland	Swiss Index	08:00 – 16:30
Taiwan	Taiwan SE 100	01:00 – 04:00
Thailand	Thailand SE Finance & Securities	03:00 – 05:30 07:30 – 09:00
Turkey	ISE National 100	07:30 – 10:00 12:00 – 02:30
United Kingdom	FTSE 100	08:00 – 04:30
United States	Dow Jones Composite	14:30 – 21:00

4.3 Emerging and Developed Markets

The countries used in the study can be classified as an 'emerging' market while other markets are clearly 'developed' or 'matured' markets. The classification of markets as being either 'emerging' or 'developed' can aide in the interpretation of the results from the empirical testing. It should be noted that emerging markets tend to be less correlated with the rest of the world because of the high growth rates that characterize them. This is an attraction for investors seeking to diversify internationally. It will be interesting to see if the linkages between the 25 countries reflect what has been observed of emerging markets. Richards (1996) used the International Finance Corporation's (IFC) classification criterion to determine emerging and developed markets. The IFC includes emerging markets those stock markets in countries or territories with income levels that are classified by the World Bank as low or middle income.

Using the IFC classification, the 25 countries are divided into emerging or developed markets (refer to Appendix Y). The only respect though with which this classification differs to those used in some other studies is the inclusion of Singapore and Hong Kong as developed nations. Because of their natural association with Asian emerging markets, location and people, a number of studies have tended to categorize these markets as emerging. As the World Bank classification on income levels suggest, these markets are not emerging and are in fact developed nations. If Singapore and Hong Kong were to be classified as emerging, then one might naturally question the classification of New Zealand as "developed".

4.4 Data Transformation

Following the convention used in much of the empirical testing of stock market data and Fama's methodology, the stock price levels will transformed by taking the natural logarithm of the raw data i.e. the continuously compounded rates of return. Further, stock return relatives will be taken as the first differences of the transformed data, calculated using the following formula:

$$R_j(i)=\ln\left(\frac{S_j(i)}{S_j(i-1)}\right)$$
$$=\ln\left(S_j(i)\right)-\ln\left(S_j(i-1)\right)$$

for $i=1,2,...,250$ and $j=1,2,...,25$ in the estimation procedures, where $S_j(i)$ for $i=1,2,...,250$ and $j=1,2,...,25$ represent the 25 financial variables i.e. positions in equities. $S_j(i)$ is the value of the stock j on day i and $S_j(i-1)$ is the value of the stock j on day $i-1$. Each R_j can be viewed as the difference in the natural logarithms of S_j at two time points and this is why R_j is referred to as the log-returns. The natural logarithm is used in empirical testing where the assumption of normality in the data is a requirement for the test.

> "A variable is said to be lognormally distributed if the natural logarithm of the variable is normally distributed. This is an intuitively appealing model of the distribution of security price relatives because, if the price rises the price relative will be greater than one, whereas if the price falls, the price relative will be less than one, but it cannot be negative." (Watsham and Parramore, 1997, p. 40).

There are however several circumstances where doing this simple calculation will be inappropriate to use which is not included in this study, and they are: dividend announcements, and any change in the number of shares whether through a share split, a bonus issue or other.

> "Stock splits are handled as follows: if a stock splits two for one on day t, its actual closing price on day t is doubled, and the difference between the logarithm of this doubled price and the logarithm of the closing price for day $t-1$ is the difference for day t. The first difference for day $t+1$ is the difference between the logarithm of the actual closing price on day $t+1$ and the logarithm of the actual closing price on day t, the day of the split." (Fama, 1965, p. 46).

Dividends were dealt with in a similar manner, the day of the dividend goes *ex dividend* theoretically it should go down by the amount of the dividend. To make up for this, the

return calculated from the switch from *cum dividend* to *ex dividend,* the dividend is added to the *ex dividend* day's price.

4.5 The Basis for Risk Factors' Selection

In this study, the risk factors were selected based on the approach proposed by the JP Morgan RiskMetrics™ (1995) as it is the best known approach available. As most users of VaR have more specialized portfolios, only a subset of the JP Morgan RiskMetrics™ (1995) core instruments is chosen which helps again to reduce dimensionality problems and speed up calculations. Non-linear positions or positions that include options likewise have been excluded. Data were again obtained from DataStream and for the same period August 9, 1998 to June 30, 2003. Refer to Table 4.2 and Table 4.1 for equity index and spot foreign exchange rates.

Table 4.3

FIXED INTEREST – BOND INDEX, RISK FREE RATE OR CLOSE ESTIMATES

Country	Bond Index*	Risk Free Rate
Australia	CGBI Australia All Mats. (E)	Australia Bond Yield 10 Year – Middle Rate
Brazil	CGBI ESBI Brazil	Brazil CDI – Middle Rate
Chile	CGBI ESBI Chile	Chile Infl. Adj. Notes + Coupon 8 Year – Middle Rate
France	MSCI France	France Treasury Bill Tender 13wk (THB) – Middle Rate
Germany	CGBI German All Mats. (B)	Germany Government Bond 10 Year – Red. Yield
Hong Kong	CGBI ESBI Hong Kong	Hong Kong AA Notes 5 Year – Red. Yield
India	None	India T-Bond 10 Year
Indonesia	CGBI ESBI Indonesia	Indonesia Lending 1 Year – Middle Rate
Ireland	CGBI Irish All Mats. (E)	Ireland Interbank 3 Month – Offered Rate
Israel	CGBI ESBI Israel	None
Italy	CGBI Italy All Mats. (E)	Italy T-Bill Gross 12 Month
Japan	CGBI Japan All Mats. (E)	Japan Government Bond Series 10 Year – Red. Yield
South Korea	CGBI ESBI South Korea	Korean Treasury Bond 10 Year – Red. Yield
Mexico	CGBI ESBI Mexico	Mexico Cetes 91 Day Closing – Middle Rate
New Zealand	CGBI N. Zealand All Mats. (E)	New Zealand Government Bond 10 Year – Red. Yield
Singapore	MSCI Singapore Dollarswap	Singapore T-Bond Yield 10 Year
South Africa	CGBI ESBI South Africa	Government Average Bond Yield: 5-10 Years
Spain	MSCI Spain	None
Sweden	CGBI Swedish All Mats. (E)	Sweden Bond Yield Government 10 Year – Middle Rate
Switzerland	MSCI Switzerland	Switzerland Bond Yield Government 10 Year – Middle Rate
Taiwan	Lehman Asian Pacific Taiwan	Taiwan Money Market 90 Day – Middle Rate
Thailand	CGBI ESBI Thailand	Thailand Prime Offered (BOT) – Middle Rate
Turkey	CGBI ESBI Turkey	Turkey Interbank 1wk – Middle Rate
United Kingdom	CGBI U.K. All Mats. (E)	UK Government Bond Series 10 Year – Red. Yield
United States	CGBI U.S. All Mats. (E)	US Government Bond Series 10 Year – Red. Yield

* Bond index represents total return index

Table 4.4

FOREIGN EXCHANGE – 1 MONTH, 3 MONTHS AND 1 YEAR FORWARD RATES

Country	1 Month	3 Months	1 Year
Australia	Y	Y	Y
Brazil	N	N	N
Chile	N	N	N
France	Y	Y	Y
Germany	Y	Y	Y
Hong Kong	Y	Y	Y
India	Y	Y	Y
Indonesia	Y	Y	Y
Ireland	Y	Y	Y
Israel	N	N	N
Italy	Y	Y	Y
Japan	Y	Y	Y
South Korea	N	N	N
Mexico	Y	Y	Y
New Zealand	Y	Y	Y
Singapore	Y	Y	Y
South Africa	Y	Y	Y
Spain	Y	Y	Y
Sweden	Y	Y	Y
Switzerland	Y	Y	Y
Taiwan	Y	Y	Y
Thailand	Y	Y	Y
Turkey	Y	Y	Y
United Kingdom	Y	Y	Y
United States	Y	Y	Y

* All the above forward rates are quoted *to* U.S. $ except United States where it is quoted *to* Euro

** Y represents yes or data is available

*** N represents no or data is not available

Table 4.5 COMMODITIES – GOLD, CRUDE OIL		
Coverage	**Gold**	**Crude Oil**
For All Securities	Gold Bullion $/Troy Ounce*	London Brent Crude Oil Index U$/BBL - Price Index

*$/Troy Ounce = $/31.1 grams

Chapter 5: Assessing Diversification Benefits

The key motivation in holding a diversified portfolio of stocks is to reduce risk. When the risk of the portfolio measure in terms of variability of returns is less than the risk of its separate parts, being additive in other words, then it pays to have greater number of securities in a portfolio because one would have a lesser chance of losing portfolio value as a result of one company's misfortune. This study propose to use the Markowitz model or the mean-variance theory as well as VaR and a combination of Garman (1996, 1997), Litterman (1996, 1997), and Dowd (1998) approaches to VaR to measure portfolio diversification benefits and identify the main sources of risk of the portfolio or 'hot spots'. Other statistics include measures of central tendency i.e. quantile functions and asymmetry measures of skewness and kurtosis will also used.

Despite the large empirical literature on VaR methodologies, much of which is theoretical based, little has been said about the ways risk managers can use the VaR numbers to analyze portfolio risks and its relationship to risk management. Traditional VaR models do not allow users to select asset that provides the best risk-return tradeoff. Users cannot identify the asset that contributes most to their total risk, to pick the best hedge and to rank trades. A classic example is the Barings' collapse. If proper VaR system had been in place, the parent company could have noted Leeson's estimated VaR, components that contributed most to VaR and differentiated between positions that were hedges from those that added risk.

5.1 The Markowitz Model

This model was chosen because it enables users to analyze the returns, risks, and covariances of numerous assets simultaneously and select the best simultaneous balance of risk and return. Assuming normal distribution of returns, the biggest problem with standard deviation that it "discriminates" against investments with

volatility on the "upside" since investors are assumed to be risk adverse is resolved. The 'bad' part of an investment's return distribution is accurately summarized. The composition and the statistics of the portfolio will be introduced first. Defining the time t value of the portfolio $P(t)$ as follows:

$$P(t)=\sum_{i=1}^{n} n_i(t-1)S_i(t)$$

for $i=1,2,...,25$ and $S_i(t)$ is the price of the $i-th$ asset and $n_i(t-1)$ is the number of shares or contracts of the $i-th$ asset held when the portfolio composition was last changed at time $(t-1)$ was formed. Define $w_i(t-1)$ as the weight of the $i-th$ asset relative to its proportional contribution to the total monetary value of the portfolio P i.e. $US\$1{,}000{,}000$ at time $t-1$:

$$w_i(t-1)=\frac{n_i(t-1)S_i(t)}{P(t)}$$

for $i=1,2,...,25$. The vector of weights $w^T=[w_1(t-1),w_2(t-1),...,w_{25}(t-1)]$ where "T" indicates the transposition operator and can be viewed as the proportions or the shares of the wealth invested in the 25 assets and it will be assumed that the weights are held constant over the investment horizon. The weights can be negative or positive corresponding to short and long positions, respectively:

$$-1\le w_i\le 1$$

for $i=1,2,...,25$.

Next, the general measures of variability: the sample mean, variances and covariance for each of the 25 samples of 250 one-day continuously compounded rates of returns, i.e. $\{R_j(i),i=1,2,...,250\}$ for $j=1,2,...,25$ are computed. The mathematical basis of portfolio theory is formed by the mean and variance of a portfolio of n assets, which is just the mean and variance of a linear combination of

n random variables. Defining the mean and variance of the portfolio P used in this study, consisting of 25 assets $\{X_i; i=1,2,...,25\}$ as follows:

$$E[P]=E\left[\sum_{i=1}^{25} a_i X_i\right]$$

and

$$VAR[P]=VAR\left[\sum_{i=1}^{25} a_i X_i\right]$$

respectively.

The mean and covariance of a linear combination of 25 pairwise-correlated random variables $\{X_i; i=1,2,...,25\}$ can be defined as:

$$E\left[\sum_{i=1}^{25} a_i X_i\right]=\sum_{i=1}^{25} E[X_i]=a_1E[X_1]+a_2E[X_2]+...+a_{25}E[X_{25}]$$

and

$$VAR\left[\sum_{i=1}^{25} a_i X_i\right]=\sum_{i=1}^{25}\sum_{j=1}^{25} a_i a_j COV[X_i,X_j]$$

$$=\sum_{i=1}^{25} a_i^2 VAR[X_i]+\sum_{i=1}^{25}\sum_{j=1}^{25} a_i a_j COV[X_i,X_j]$$

respectively, where the coefficients $\{a_i; i=1,2,...,25\}$ are non-zero constants. Note variance as a measure of dispersion is affected by extreme values while quantile differences and interquartile range are not and hence are also used in the study. Interquartile range been a specific example of a quantile difference is based on an ordering of the sample and contains fifty percent of the sample.

The covariance $COV[X_i,X_j]$ is defined as:

$$COV[X_i,X_j]=E[X_i,X_j]-E[X_i]E[X_j]$$

for all $i=1,2,...,25$ and $j=1,2,...,25$.

The variance is a special case of the covariance:

$$VAR[X_i]=COV[X_i,X_i]=E[X_i^2]-(E[X_i])^2 .$$

The variance of the linear combination of two pairwise-correlated random variables $\{X_i;i=1,2,...,25\}$ can be rewritten as follows:

$$VAR[a_1X_1+a_2X_2]=a_1^2VAR[X_1]+a_2^2VAR[X_2]+2a_1a_2[X_1X_2]$$

If $\{X_i;i=1,2,...,n\}$ denote the stock price changes for each of the assets; the $\{a_i;i=1,2,...,n\}$ are the numbers of shares held in each of the assets, and if $\{X_i;i=1,2,...,n\}$ are rates of return for each of the assets; the $\{a_i;i=1,2,...,n\}$ are the monetary amounts held in each of the assets (Dalle Molle, 2003).

5.2 General Measures of Central Tendency Using Quantile Functions

Quantiles are the variate values that divide the total range of the frequency of observation for a random variable X such that a given fraction is less than or equal to the value and one minus that fraction is greater than it. Quantiles are based on a numerical ordering of the data from the smallest observation to the largest observation. The fraction of the ordered data that is less than or equal to a given value of the quantile is referred to as the fractile. If a fractile q is multiplied by 100, the resulting value $100 \cdot q$ is called a percentile. The resulting vector of the ordered observations is sometimes referred to as the order statistic. Each quantiles divides the graph of probability density (or mass) function into two well-defined parts.

The quantile of order q (or the value at the $100 \cdot q$ percentage point or $q-th$ quantile) of the random variable X denoted by x_q, is defined by the following pair of inequalities:

$$\Pr ob\left(X \leq \zeta_q\right) \geq q \text{ and } \Pr ob\left(X \geq \zeta_q\right) \geq 1-q$$

for some number ζ_q and $0<q<1$.

This expression can be rewritten as the following double inequality:

$$F_x\left(\zeta_q\right) - \Pr ob(X=\zeta_q) \leq q \leq F_x\left(\zeta_q\right)$$

where $F_x(\cdot)$ is the distribution function of X.

If $prob(X=x_{0.5})=0$ where $x_{0.5}$ is the median, then the quantile of order q is the value of the continuous random variable X that satisfies the following relationship:

$$x_q = F_x^{-1}(q)$$

which is called the quantile function and is the usual inverse of :

$$F_x(x_q) = q$$

The $q-th$ quantile x_q represents the cut-off value x_q such that the area to the right represents a probability:

$$\Pr ob\left(X \geq x_q\right) = \int_{x_q}^{\infty} dF_x(x) = 1 - F_x\left(x_q\right)$$

and the probability for the area to the left is given by $F_x\left(x_q\right)$.

If the support of the distribution function F_x is $(-\infty, \infty)$:

$$q=\int_{-\infty}^{x_q} dF_x(x)=1-\int_{x_q}^{\infty} dF_x(x)$$

Distribution functions are not always well defined in the sense that they are all not necessarily strictly increasing requiring the use of the following general definition for specifying quantiles:

The $q-th$ quantile function $x_q=F_x^{-1}(q)$ can be defined as a generalized inverse:

$$F_x^{\leftarrow}(q)=\inf\{x\in\Re:F_x(x)\geq q\}$$

for $0<q<1$.

$F_x^{-1}(q)$ can be used to indicate $F_x^{\leftarrow}(q)$ if the distribution function is strictly increasing. Both $F_x^{\leftarrow}(q)$ and $F_x^{-1}(q)$ are the quantile function of F_x . In general, the quantile is not an exact measure, but typically is the closest value in the sample to the quantile of interest. Usually one chooses the nearest observation for most quantiles or percentiles (Dalle Molle, 2003).

5.3 Asymmetry and Extreme Events Captured by Skewness and Kurtosis

Skewness is a secondary measure of central tendency and refers to a class of third-order statistics that are used to describe the symmetry (or the asymmetry or the deviations from symmetry or the tilt) of a univariate unimodal distribution function. Skewness is approximately zero for symmetric distribution and can be zero for some asymmetric distributions.

The coefficient of relative skewness γ_1 (or the skew coefficient or the asymmetry coefficient) of the random variable X can be defined as follows:

$$\gamma_1 = \frac{E\left[(X-\mu_x)^3\right]}{\sigma_x^3}$$

where σ_x is the standard deviation of the random variable X.

The measure $\gamma_1 / 2$ is called the coefficient of momental skewness.

For the uncorrelated Gaussian random variables, the mean and variance of γ_1 are:

$$E[\gamma_1] = 0 \text{ and } VAR[\gamma_1] = \frac{6}{n}$$

respectively.

Sometimes a measure called the coefficient of skewness β_1 is used to access asymmetry defined as the square of the coefficient of relative skewness γ_1 :

$$\beta_1 = \gamma_1^2$$

In general, a density function will be skewed to the left or right of the mean value according to the sign of γ_1 .

A skewness measure should have the following characteristics:

1) Zero for a symmetric unimodal distribution, i.e. $\gamma_1 = 0$, and the distribution is referred to as being centered about its mean value. If a density function is symmetric then the number less than the mean is equal to the number that exceed the mean and:

$$Mean = Median = Mode$$

The uniform and normal distributions are symmetric distributions. The Bernoulli and binomial distributions with probability parameter $p = 1/2$ are symmetric distributions.

2) Negative for a left-skewed unimodal distribution, i.e. $\gamma_1 < 0$. This distribution is referred to as being skewed to the left and has a longer tail to the left, which is towards decreasing values. If a density function is negatively skewed then the number less than the mean is less than the number that exceeds the mean and:

$$Mean < Median < Mode$$

The Bernoulli and binomial distributions with the probability parameter $p < 1/2$ are skewed to the left.

3) Positive for a right-skewed unimodal distribution, i.e. $\gamma_1 > 0$. The distribution is referred to as being skewed to the right and has a longer tail to the right, which is towards increasing values. If a density function is positively skewed then the number less than the mean is greater than the number that exceed the mean and:

$$Mean > Median > Mode$$

The Bernoulli and binomial distributions with probability parameter $p > 1/2$ are skewed to the right. The Poisson and negative exponential distributions are always skewed to the right. The lognormal distribution for large values of the parameter σ is skewed to the right.

An alternative measure of skewness can be calculated using percentile function. The following is a percentile-based skewness measure called the quartile coefficient of skewness:

$$\gamma_1 \approx \frac{x_{75} - 2x_{50} + x_{25}}{x_{75} - x_{25}}$$

where x_{25}, x_{50} and x_{75} are the $25-th$, $50-th$ and $75-th$ percentiles or first, second, and third quartiles, respectively.

Kurtosis is a secondary measure of general variability and indicates where the weight of the extreme observations of the population distribution. It is a finer measure of

general variability than the variance and is approximately zero for a distribution with a shape similar to the Gaussian distribution.

The normalized coefficient of kurtosis β_2 of the random variable X can be defined in terms of the even central moments (which are always positive):

$$\beta_2 = \frac{E\left[(X-\mu_X)^4\right]}{\sigma_X^4}$$

where σ_X is the standard deviation of the random variable X. In other words, kurtosis is the fourth moment of the distribution or the mean to the power of four divided by the square of the variance.

For the case of uncorrelated Gaussian random variables, the mean and variance of β_2 are given by:

$$E[\beta_2] = 3 \text{ and } VAR[\beta_2] = \frac{24}{n}$$

respectively.

This measure is invariant, and is referred to as the Pearson coefficient of kurtosis, and is the standardized fourth-central moment. Sometimes $\beta_2 / 2$ is referred to as the coefficient of kurtosis.

Some values of β_2 are:

1) $\beta_2 = 3$ is the reference value for the symmetrical density of the normal distribution.

2) $\beta_2 > 10$ indicates a density that has a high narrow peak and such distributions are called leptokurtic.

3) $\beta_2 < 1$ indicates a density that has a flat-topped peak and such distributions are called platykurtic.

4) $1 < \beta_2 < 10$ indicates a distribution that is called mesokurtic.

In the context of the standard Gaussian distribution as a reference point, a measure of kurtosis can be defined and is referred to as the measure of excess kurtosis or the coefficient of excess kurtosis. The measure of excess kurtosis γ_2 is defined as:

$$\gamma_2 = \beta_2 - 3$$

For the case of uncorrelated Gaussian random variables, the mean and variance of this measure of excess kurtosis γ_2 are given by:

$$E[\gamma_2] = 0 \text{ and } VAR[\gamma_2] = \frac{24}{n}$$

respectively.

An alternative measure of the kurtosis called the percentile coefficient of kurtosis can be defined using the interquartile range and interdecile range as follows:

$$\gamma_2 \approx \frac{1}{2}\left(\frac{x_{75} - x_{25}}{x_{90} - x_{10}}\right)$$

where x_{10} , x_{25} , x_{75} and x_{90} are the $10-th$, $25-th$, $75-th$ and $90-th$ percentiles respectively (Dalle Molle, 2003).

5.4 Variance/Covariance VaR

VaR is a statistical estimate of a portfolio loss, such that there is a given (small) probability that a loss of that size or greater will occur over a given holding period. Standard VaR methodologies do not offer any information concerning how much the actual portfolio losses will exceed the VaR estimate. This study will use the

variance/covariance VaR $(VAR/COV\ VaR)$ methodology to estimate a VaR forecast for portfolios of 25 securities. This methodology is based on the assumption that the log-returns of the financial variables used to determine the change in the value of a portfolio are distributed as jointly normal random variables. This implies only the means, variances, and covariances are required in the estimation of a $VAR/COV\ VaR$ forecast. Also known as the portfolio VaR methodology as it is an extension of the portfolio model first proposed by Markowitz (1952, 1959). Also, VaR forecasts will require a fixed set of parameters such as the length of the future time horizon, the sample size, the coverage level and the type of return measure (referred to above).

5.4.1 Holding Period and Confidence Level

The Group of Thirty 30 report recommends the use of 95% confidence levels and a 1 day holding period in which case VaR may be called daily earnings at risk or $DEaR$. JP Morgan Risk Metrics™ (1995) has similar guidelines. For trading, the minimum adverse move is expected to happen with probability of 5% $(1.65$ standard deviations) over 1 business day. For investment, the minimum adverse move expected by JP Morgan Risk Metrics™ (1995) occurs with probability of 5% $(1.65$ standard deviations) over 20 business days. The idea is that the longer the future time horizon, the less reliable the VaR forecast may become. This study wish to ascertain how much a firm can lose in one day and naturally the use of a one-day holding period at 95% confidence interval is justified. The assumption is that positions can be hedged or closed out over a 24 hour period or there is deep liquidity in the markets which may not be true in some markets especially the emerging markets. Other popular approach include the one by Basle Committee (BIS) where they expect the minimum adverse move to happen with the probability of 1% $(2.32$ standard deviations) over 10 business days. Permission is given though to use daily statistics

scaled up with square root of 10 or 3.1 which is equivalent to 7.3 daily standard deviations.

5.4.2 Sample Size

This study will use 250 trading days as the sample size. This is similar to what regulators such as the Basle Committee (BIS) require. The use of percentiles and loss distributions results in situation where the sample size cannot be divided evenly by 100. In this case, the next smallest integer as the percentile for the VaR forecast will be used. This is been conservative since the move is towards the center of the distribution. Letting VaR_q be defined relative to the $95-th$ percentile of the loss distribution, i.e. $q=0.95$. This implies, that the sample used of $n=250$ will be $250 \cdot 0.95=237.5$ and the next smallest integer is 238. Generally, the determination of the appropriate integer for the VaR forecast using this truncation procedure is implemented as follows: if VaR_q, which the VaR forecast at the $q-th$ percentile is required, the observation number of the first sample of R that is less than VaR_q is $n(q)$:

$$n(q)=n-\text{int}(n \cdot q-1/2)$$

where $\text{int}(y)$ is the integer part of y.

Table 5.1

VaR Calculation for Various Confidence Levels: One-Tail Test Based On the Normal Distribution

Number of Standard Deviations	1.28	1.64	1.96	2.05	2.32	2.57	3.09	3.29	3.71
Confidence Level	0.90	0.95	0.97	0.98	0.99	0.995	0.999	0.9995	0.9999

5.4.3 Calculating Portfolios Values for Positions in Assets

For the first three part of the process refer to section 5.1 above.

- *Change in the value of the portfolio of equities and one-day price changes*

  If one-day price changes $\Delta S_j(i)$ for $j=1,2,...,n$ are used; the change in the value of the portfolio $\Delta P(i)$ is given by:

$$\Delta P(i)=N_1\cdot\Delta S_1(i)+N_2\cdot\Delta S_2(i)+...+N_n\cdot\Delta S_n(i)$$

  for $i=1,2,...,250$ and V_j^{VD} for $j=1,2,...,n$ are the monetary amounts in each equity such that for this study $V_j^{VD}=US\$1{,}000{,}000/j$ and N_j are the number of shares held in the $j-th$ equity for $j=1,2,...,n$ and is such:

$$N_j=\frac{V_j^{VD}}{S_j^{VD}}$$

  and S_j^{VD} for $j=1,2,...,n$ are the asset prices on the value date of the portfolio.

- *Change in the value of the portfolio of equities and one-day continuously compounded rates of return:*

  If one-day continuously compounded rates of return $R_j(i)$ for $j=1,2,...,n$; the change in the value of the portfolio $\Delta P(i)$ is given by:

$$\Delta P(i)=V_1^{VD}\cdot R_1(i)+V_2^{VD}\cdot R_2(i)+...+V_n^{VD}\cdot R_n(i)$$

for $i=1,2,...,250$ and V_j^{VD} for $j=1,2,...,n$ are the monetary amounts in each equity such that for this study $V_j^{VD}=US\$1{,}000{,}000/j$.

5.4.4 Implementing VaR Using Variance/Covariance Approach

Using the current portfolio weights, the VaR forecast at a one-day horizon and at the appropriate number of standard deviations that corresponds to 95% coverage level. The variance/covariance VaR $(VAR/COV\ \ VaR)$, which is denoted $VaR_{.05}$, is given by:

$$VaR_{.05}=-1.645\cdot\sigma_p$$

where -1.645 is the z-score at $1-q=0.05$ of the standard normal distribution, and σ_p is the standard deviation of the profit/loss distribution of the portfolio P, respectively.

Define $\delta_\alpha=Z_\alpha$ as the scale factor at a one sided coverage level α that correspond to the value of the standard Gaussian distribution at the $(1-\alpha)-th$ percentile and can be viewed as a number of standard deviations on the standard Gaussian distribution. Note that $\delta_\alpha<0$ since it is derived from a one-sided coverage level α that corresponds to the left side of the standard Gaussian distribution where all values are less than zero. This scale factor will be used in the scale of VaR forecast and also the initial wealth in portfolio is W .

5.5 Initial VaR Theory and Approaches by Garman, Litterman, and Dowd

5.5.1 Individual VaR Forecasts

Individual VaR or the specific VaR is the VaR estimate of one component of a portfolio taken in isolation, and is based on the profit/loss distribution. The individual VaR forecast for the $i-th$ asset $S_i(t)$ at a one-sided coverage level α, denoted VaR_{Ii} is given by

$$VaR_{Ii}=\delta_\alpha \cdot W \cdot |w_i| \cdot \sigma_i$$

for $i=1,2,...,n$ and where $|\cdot|$ is the absolute value operator and σ_i is the standard deviation of the log-return r_i of the $i-th$ asset $S_i(t)$.

5.5.2 Undiversified VaR Forecasts

Undiversified VaR or the stand-alone VaR is the VaR estimate defined as the sum of the individual $VaRs$ of the $VaRs$ of the components of the portfolio VaR where there are no diversification benefits, i.e. no short positions implying $w_i>0$ for $i=1,2,...,n$ and correlations of unity existing among the assets, i.e. $\rho_{ij}=1$ is the (linear) correlation between r_i and r_j for $i=1,2,...,n$ and $j=i+1,i+2,...,n$. The latter assumption results in a ρ_R correlation matrix that is a unit or unitary matrix:

$$\rho_R = \begin{bmatrix} 1 & 1 & \cdots & 1 & 1 \\ 1 & \ddots & \ddots & \ddots & 1 \\ \vdots & \ddots & 1 & \ddots & \ddots \\ 1 & \ddots & \ddots & \ddots & 1 \\ 1 & 1 & \cdots & 1 & 1 \end{bmatrix}$$

Undiversified VaR is based on the profit/loss distribution. Undiversified VaR assumes that the movements of the assets are independent of each other. This situation may occur during extreme market conditions when all the markets are acting irrational and moving together. Undiversified VaR does not take advantage of the risk reduction benefits of diversification. When banks are setting risk limits, they use undiversified VaR as a reference point in order to make sure that they are taking advantage of the benefits of diversification and in turn, reducing the overall risk.

The undiversified VaR forecast at a one-sided coverage level α, denoted VaR_U is given the following expression:

$$\begin{aligned} VaR_U &= \delta_\alpha \cdot W \cdot \sqrt{\Sigma_R} \\ &= \delta_\alpha \cdot W \cdot \sqrt{w^T \sigma^T \rho_R w \sigma} \\ &= \delta_\alpha \cdot W \cdot \sqrt{w^T \sigma^T 1 w \sigma} \\ &= \delta_\alpha \cdot W \cdot w^T \cdot \sigma^T \end{aligned}$$

or

$$VaR_U = \delta_\alpha \cdot W \cdot \sum_{i=1}^{n} w_i \cdot \sigma_i$$

$$= \delta_\alpha \cdot W \cdot \sum_{i=1}^{n} VaR_{Ii}$$

5.5.3 Diversified VaR Forecasts

Diversified VaR or portfolio VaR or total firm-wide VaR or institutional VaR is the VaR forecast that takes into account the diversification benefits of correlated assets; and is based on the profit/loss distribution. Diversified VaR recognizes that the portfolio of banks consist of a large number of different instruments that are exposed to a wide range of risks, where each asset is typically exposed to a different subset of the risks with some risk affecting a large number of assets. The diversified VaR forecast at a one-sided coverage level α, denoted VaR_D is given as follows:

$$\begin{aligned} VaR_D &= \delta_\alpha \cdot W \cdot \sqrt{\Sigma_R} \\ &= \delta_\alpha \cdot W \cdot \sqrt{w^T \Sigma_R w} \\ &= \delta_\alpha \cdot W \cdot \sigma_R \end{aligned}$$

The undiversified VaR, which is a weighted sum of the individual $VaRs$, will typically not equal to the diversified VaR : $VaR_D \neq VaR_U$ is the usual case. These two measures would be equivalent if the positions or risk factors were perfectly correlated and the positions exhibited an elliptical distribution. Note that the component VaR is defined such that the sum of the component $VaRs$ is equal to the diversified VaR.

5.5.4 Marginal VaR Forecasts

Marginal VaR is defined as the change in the portfolio VaR resulting from taking on an additional monetary amount of exposure to a given component of the portfolio. It is also the partial or linear derivative with respect to the component's weighting in the portfolio. It measures the risk contribution of a given asset to the overall risk of the

portfolio. The sum of all the risk contributions, i.e. the sum of all the marginal $VaR's$ is equal to the overall risk of the portfolio, i.e. the overall VaR of the portfolio. Marginal VaR is also called delta VaR $(DVaR)$ or the VaR contribution $(VaRC)$ forecast (Garman, April 1996 and Garman, May 1996). Typically marginal VaR is not used explicitly as a risk measure, but it is an integral part of calculation of both incremental and component VaR measures. It is based on the profit/loss distribution and is a more economical means of (approximately) evaluating the effects of "candidate" transactions on the portfolio VaR . Marginal VaR addresses the issue of how the diversified VaR will change if some unit or numeraire change in a position is made, given the current covariance matrix.

The partial derivatives of the variance and standard deviations of the portfolio with respect to the weight in a given component of the portfolio are required in the calculation of the marginal VaR . First the partial derivatives of the variance with respect to the weight in a given component:

$$\frac{\partial \Sigma_R}{\partial w_i} = 2w_i\sigma_i^2 + 2\sum_{\substack{j=1 \\ i\neq 1}}^{n} w_j\sigma_{ij}$$

$$= 2w_i\left(E\left[r_i^2(t)\right] - \left(E\left[R_i(t)\right]\right)^2\right) + 2\sum_{\substack{j=1 \\ i\neq j}}^{n} w_j\left(E\left[r_i(t)r_j(t)\right] - E\left[r_i(t)\right]E\left[r_j(t)\right]\right)$$

$$= 2w_iE\left[r_i^2(t)\right] - 2w_i\left(E\left[r_i(t)\right]\right)^2 + 2\sum_{\substack{j=1 \\ i\neq j}}^{n} w_jE\left[r_i(t)r_j(t)\right] - 2\sum_{\substack{j=1 \\ i\neq j}}^{n} w_jE\left[r_i(t)\right]E\left[r_j(t)\right.$$

$$= 2COV\left[w_ir_i^2(t) + 2\sum_{\substack{j=1 \\ i\neq 1}}^{n} w_jr_i(t)r_j(t) \right]$$

$$=2COV[r_i(t),R(t)]$$

for $i=1,2,...,n$.

$$\sigma_i^2=VAR[r_i(t)]=E[r_i^2(t)]-(E[r_i(t)])^2$$

for $i=1,2,...,n$ and the covariance functions between the log-returns vector R are:

$$\sigma_{ij}=COV[r_i(t),r_j(t)]=E[r_i(t)r_j(t)]-E[r_i(t)]E[r_j(t)]$$

for $i=1,2,...,n$ and $j=i+1,i+2,...,n$.

This is the expression for the variance of the portfolio, but what is needed is an expression for the volatility, which is the standard deviation. This can be accomplished using the following partial derivative:

$$\frac{\partial \Sigma_R}{\partial w_i}=\frac{\partial \sigma_R^2}{\partial w_i}$$

$$=2\sigma_R\frac{\partial \sigma_R}{\sigma w_i}$$

or

$$\frac{\partial \sigma_R}{\partial w_i}=\frac{1}{2\sigma_R}\cdot\frac{\partial \sigma_R^2}{\partial w_i}$$

$$=\frac{COV[r_i(t),R(t)]}{\sigma_R}$$

for $i=1,2,...,n$.

The marginal VaR forecast at a one-sided coverage level α , denoted VaR_{Mi} or $DVaR_i$ is given by the following expression:

$$DVaR_i = \frac{1}{w} \cdot \frac{\partial VaR_D}{\partial w_i}$$

$$= \delta_\alpha \cdot \frac{\partial \sigma_R}{\partial w_i}$$

$$= \delta_\alpha \cdot \frac{COV[r_i(t), R(t)]}{\sigma_R}$$

for $i=1,2,...,n$.

There is a relationship between $DVaR_i$ and the beta coefficient β_i from the capital asset pricing model $(CAPM)$ for $i=1,2,...,n$. Recall β_i measures the sensitivity of an asset to the movements in the market and is the contribution of an asset to the systematic risk of a portfolio. β_i is defined as follows:

$$\beta_i = \frac{COV[r_i(t), R(t)]}{\sigma_R^2}$$

for $i=1,2,...,n$, which implies:

$$DVaR_i = \delta_\alpha \cdot \beta_i \cdot \sigma_R$$

$$= \beta_i \cdot \frac{VaR_D}{W}$$

for $i=1,2,...,n$.

5.5.5 Incremental VaR Forecasts

Incremental VaR $(IVaR)$ describes the incremental impact on the overall or total portfolio VaR due to the addition (elimination) of a new (an existing) position in the portfolio. It differs from the marginal VaR in that the amount of added or subtracted

can be large, in which case the change in VaR can be nonlinear function of the price of the position of interest. Also, the sum of the $IVaRs$ of the positions add up to the total VaR of the portfolio. This additive property of $IVaR$ has important applications in the allocation of risk to different units (desks, sectors, countries), where the goal is to keep the sum of the risks equal to the total risk. $IVaR$ can be used to determine the required returns on prospective investments (Dowd, 1998) and to set position limits (Garman, 1996). It is based on the profit/loss distribution. The $IVaR$ forecast when a new asset S is added to a portfolio can be defined as follows:

$$IVaR(P+S)=VaR_D(P+S)-VaR_D(P)$$

$$=VaR_D(Portfolio\ with\ Asset\ S)\ -VaR_D(Portfolio\ without\ Asset\ S)$$

The new asset S can also be vector of assets. $IVaR$ can also represent the altering of the amount of total wealth invested in the existing positions in the portfolio:

$$IVaR(W+\Delta W)=VaR_D(W+\Delta W)-VaR_D(W)$$

where the initial wealth is W and the additional wealth added is ΔW. This approach is referred to as the "before-and-after" $IVaR$ If VaR_D is a coherent risk measure and the only amount of total wealth is altered, then it is straightforward to calculate $IVaR$, i.e. it is scaling of original $IVaR$.

The first-order or linear approximation for $IVaR$ is given by:

$$IVaR(P+S)=VaR_D(P+S)-VaR_D(P)$$

$$\approx \sum_{i=1}^{n} \frac{\partial VaR_D}{\partial w_i} \cdot dw_i + higher-order\ terms$$

$$\approx \sum_{i=1}^{n} \frac{\partial VaR_D}{\Delta w_i} \cdot \Delta w_i + higher-order\ terms$$

for $i=1,2,...,n$ and where $\Delta w_i \approx dw_i$ and $\partial VaR_D / \Delta w_i$. The partial derivatives $\partial VaR_D / \partial w_i$ for $i=1,2,...,n$, represent the marginal changes in VaR_D with respect to marginal changes in the relevant asset or risk factors. The linear approximation for $IVaR$ can be expanded to a second-order or quadratic approximation $IVaR$:

$$IVaR(P+S) \approx \sum_{i=1}^{n} \frac{\partial VaR_D}{\partial w_i} \cdot dw_i + \sum_{i=1}^{n} \sum_{j=1}^{n} \frac{\partial^2 VaR_D}{\partial w_i \partial w_j} \cdot dw_i dw_j +$$

$$higher-order\ terms$$

1) $IVaR>0$ implies that the change in the position contributes significantly to the overall portfolio risk, which implies that the "candidate" transaction is positively correlated with the current portfolio. The "candidate" transaction will degrade the VaR forecast. $IVaR$ rises with respect to relative positions size at an increasing rate, since as the absolute position size continues to rise, its proportional influence on the portfolio also rises. Also as $IVaR$ rises, the benefits of diversification are reduced due to the increases in the position's absolute size.

2) $IVaR<0$ implies that the change in the position can be used as a hedge against the overall portfolio risk, and in turn reducing the overall portfolio risk. This implies that the "candidate" transaction is negatively correlated with the current portfolio. The "candidate" transaction will improve the VaR up to a point, which is the optimal hedge. The optimal hedge size is a useful benchmark in a context of portfolio risk

management. That is, $IVaR$ decreases negatively as the relative position size increases up to the optimal hedge size. Beyond the optimal hedge size, as the relative position size continues to rise, the $IVaR$ becomes positive and at an increasing rate. This implies that any position serves as a hedge over only a limited range of relative position sizes.

3) $IVaR \approx 0$ or close to zero, implies that the change in the position has little or no effect on the overall portfolio risk.

5.5.6 Component VaR Forecasts

Component VaR consists of the partitioning of the risk inherent to the portfolio VaR that indicates how much the portfolio VaR would change if the given component was deleted. It is based on the profit/loss distribution. The process of calculating the component VaR is part of a risk decomposition of the portfolio. This process is not complicated by the nonlinear relationship between the volatility of a portfolio and its components. This process is simplified if the components are not correlated, but diversification makes the process complicated if the components are correlated. Component VaR takes advantage of the power of diversification. They are useful for identifying high sources of risk and their opposite, natural hedges, and for setting position limits, making investment decisions, determining capital requirements and the establishment of remuneration schemes (Litterman, 1996 and Dowd, 1998).

Desirable properties of the component VaR should include:

1) Incrementality, which implies that at least to a first approximation, the component VaR should equal to the incremental VaR .

2) Additivity, which implies that the arithmetic sum of the component $VaRs$ should be equal to portfolio VaR .

The component VaR is calculated as the marginal VaR or $DVaR_i$ scaled by the current wealth in a given asset or risk factor. The component VaR is an additive measure that reflects correlations. The component VaR forecast at a one-sided coverage level, denoted VaR_{Ci} is given by the following expression, which is a linear approximation:

$$VaR_{Ci} \approx W \cdot w_i \cdot DVaR_i$$

$$\approx w_i \cdot \frac{\partial VaR_D}{\partial w_i}$$

$$\approx \beta_i . w_i . VaR_D$$

for $i=1,2,...,n$ and where β_i is the beta of the $i-th$ asset S_i and VaR_D is the portfolio VaR . VaR_{Ci} is a linear approximation for small or local changes in VaR_D , implying that the portfolio has a large number of components such that each positions is small compared to the size of the portfolio. The component VaR indicates how the VaR_D would approximately change if the $i-th$ asset S_i was deleted from the portfolio.

There is a relationship between the collection of the component $VaRs$ or VaR_{Ci} for $i=1,2,...,n$ and VaR_D . The relationship is a linear approximation that the sum of the component $VaRs$ adds up to VaR_D :

$$VaR_D \approx \sum_{i=1}^{n} VaR_{Ci} = \sum_{i=1}^{n} \beta_i \cdot w_i \cdot VaR_D$$

where the beta of the portfolio is unity:

$$\sum_{i=1}^{n} \beta_i \cdot w_i = 1$$

Components with negative weights can be used as a hedge against the long positions in the portfolio and if the components partition the portfolio i.e. are disjoint and exhaustive, then the component VaR should sum to the (diversified) portfolio VaR.

The component VaR can be rewritten using the decomposition of the betas β_i for $i=1,2,...,n$. Recall that beta β_i is:

$$\beta_i = \frac{COV[r_i(t), R(t)]}{\sigma_R^2}$$

$$= \frac{\sigma_{r_i R}}{\sigma_R^2}$$

$$= \frac{\rho_{r_i R} \sigma_{r_i} \sigma_R}{\sigma_R^2}$$

$$= \frac{\rho_{r_i R} \sigma_{r_i}}{\sigma_R}$$

where $\rho_{r_i R}$ is the linear correlation coefficient between the log-returns $i-th$ asset $r_i(t)$ and the log-return on the portfolio $R(t)$. Using this decomposition, the component VaR can be rewritten such that it represents as the risk contribution to the total portfolio:

$$VaR_{Ci} = \beta_i \cdot w_i \cdot VaR_D$$

$$= \beta_i \cdot w_i \cdot \delta_\alpha \cdot W \cdot \sigma_R$$

$$= \frac{\rho_{r_i R}\sigma_{r_i}}{\sigma_R} \cdot w_i \cdot \delta_\alpha \cdot W \cdot \sigma_R$$

$$= \delta_\alpha \cdot w_i \cdot W \cdot \rho_{r_i R} \cdot \sigma_{r_i}$$

$$= \rho_{r_i R} \cdot VaR_{Ii}$$

for $i=1,2,...,n$ and VaR_{Ii} is the individual VaR for the $i-th$ asset S_i. This expression can be interpreted as follows: the component VaR multiplied by its correlation coefficient relative to the portfolio represents as the risk contribution to the total portfolio.

The percent contribution to the total portfolio VaR VaR_D by the $i-th$ asset S_i for $i=1,2,...,n$ is the decomposition of the component VaR multiplied by VaR_D :

$$VaR_{\%Ci} = \frac{VaR_{Ci}}{VaR_D} = \beta_i \cdot w_i$$

The interpretation of the component $VaRs$ is similar to that of $IVaR$ and may be summarized for the VaR_{Ci} of the $i-th$ asset S_i as follows:

1) $VaR_{Ci} > 0$ implies that the risk attributed to the position contributes significantly to the overall portfolio risk.

2) $VaR_{Ci} < 0$ implies that the risk attributed to the position indicates that it reduces the overall portfolio risk and may be used as a hedge against the overall portfolio risk.

3) $VaR_{Ci} \approx 0$ close to zero, implies that the risk attribute to the position has little or no effect on the overall portfolio risk.

Another interpretation of the component VaR is that it reflects the marginal contribution to the overall portfolio risks, taking into consideration the relevant risk factors such as the correlations, volatilities and sizes of the positions. The consequence of incorporating position size, variability and co-variability information are summarized below:

1) Positions that have a relatively large (small) position size may have a small or negative (large or positive) component VaR due to correlations and volatility effects.

2) A high (low) volatility position might have a small or negative (large or positive) component VaR due to correlations and position size effects.

3) A position that is positively (negatively) correlated with a large number of the other positions in the portfolio might have a small or negative (large or positive) component VaR due to volatility and position size effects.

5.6 Implementing the Historical VaR Methodology

The historical VaR methodology, which derives a risk measurement based on a high quantile of the ordered raw historical log-returns of the portfolio. The ordering is from the largest to the smallest loss. An appealing aspect of the historical VaR method is that it does not require explicit assumptions about the underlying dependence structure, which includes the structure of the covariances among the components of the portfolio. Historical VaR lets the data speak in the sense that relationships of the sample volatilities and correlations are captured in the historical time series. Historical VaR

forecasts do not present any information concerning the loss outside the sample loss range (Dalle Molle, 2003).

1) Using the current portfolio weights and the 250 one-day continuously compounded rates of returns, i.e. $\{R_j(i), i=1,2,...,250\}$ for $j=1,2,...,n$, determine the 250 one-day scenarios for the log-returns of the portfolio $\{R_P(i), i=1,2,...,250\}$. The portfolio log-returns are just the sums of the current portfolio weight times the one-day continuously compounded rates of returns for each asset for each of the 250 scenarios, i.e. the 250 observations of the continuously compounded rates of returns for each asset.

2) Transform the log-returns of the portfolio $\{R_P(i), i=1,2,...,250\}$ into changes in the value of the portfolio $\{\Delta P(i), i=1,2,...,250\}$. Refer to section 5.4.3 for the procedures to calculate the changes in the values of the portfolios for positions in assets and currencies, respectively.

3) Determine the expected one-day continuously compounded rates of returns fro the portfolio, which is also the one-day expected loss and denoted EL_P. It is the expected value of the changes in the value of the portfolio $\{\Delta P(i), i=1,2,...,250\}$.

4) To calculate the vector of unexpected losses $\{UL_P(i), i=1,2,...,250\}$ subtract EL_P from each of the changes in the value of the portfolios $\{\Delta P(i), i=1,2,...,250\}$:

$$UL_P(i) = \Delta P(i) - EL_P$$

for $i=1,2,...,250$.

5) Rank the vector of unexpected losses $\{UL_P(i), i=1,2,...,250\}$ from smallest to largest unexpected losses, i.e. sort the one-day continuously compounded rates of returns for the portfolio by decreasing magnitude from largest profit to largest loss.

6) From the sorted vector of unexpected losses $\{UL_P(i), i=1,2,...,250\}$ report the historical VaR forecasts for a one-day time horizon, $q=0.05$ and a $(1-q)=0.95$ percent coverage level. The VaR forecast, which is denoted VaR_{95} is given by the $n(q)-th$ sorted observation of the unexpected portfolio losses, where the sort of the unexpected losses is from the smallest to the largest and:

$$n(q)=n-\text{int}(n.q+1/2)$$

represents the observation number of the first returns sample that is less than or equal to the $q-th$ percentile and where and $\text{int}(y)$ represents the integer part of y . This is $n(q)-th$ sorted observation is chosen to be conservative.

5.7 Expected Shortfall Methodology as an Extension To VaR

Refer to variance/covariance VaR $(VAR/COV\ VaR)$ for the first four part of the process.

5) For a loss distribution where the largest loss is the observation that is the farthest to right of the origin and in a VaR risk measurement context for a given coverage level defined relative to a given high quantile, the expected

shortfall is the expected magnitude of the loss, conditioned that the loss has exceeded the VaR forecast at the $q-th$ percentile VaR_q :

$$e_{sf}\left[VaR_q\right]=E\left[X\middle|X>VaR_q\right]=\frac{1}{n-n(q)}\sum_{j=n(q)+1}^{n}X_j$$

where $x_q=VaR_q$ is the threshold at the $q-th$ percentile where $n(q)+1$ is the observation number of the first sample of X that is greater than VaR_q ,

$$n(q)=n-\text{int}(n\cdot q-1/2)$$

and $\text{int}(y)$ is the integer part of y .

In a manner analogous to the historical VaR methodology, find the VaR_q at the $q-th$ percentile.

Once this is found, the $e_{sf}\left[VaR_q\right]$ is calculated.

The expected shortfall is also known as the mean excess function or mean shortfall function or the conditional tail expectation or the "Beyond-VaR" measure, conditional VaR measure or tail VaR . The method is similar to the historical VaR procedure, except that after the VaR forecast at a given quantile has been determined, instead of reporting this value, the average value of all losses greater than VaR forecast is reported as the risk measurement. The expected shortfall is generally sub-additive and a coherent risk measure. The expected shortfall will always be greater than or equal to VaR for a given coverage level. They should give similar results for reasonable portfolios where reasonable portfolios are those that are normally distributed and in many case elliptically distributed.

If two loss distributions have the same VaR for a given coverage level, then the distribution with the heavier tail will have the higher expected shortfall. A problem with the expected shortfall measure of risk is that it treats a large probability of a small shortfall as the same as a small probability of a large shortfall (Dalle Molle, 2003).

Chapter 6: Risk Mapping Using Multi-Factor Models

A risk mapping procedure will be implemented using a factor model in this chapter, forming the last part of this study. There are two objectives of a risk mapping process:

1) The minimization of the amount of raw data that is requirement in the risk measurement.

2) Simplify the valuation of complex instruments through mapping the corresponding cash flow to a set of fundamental risk factors.

The risk mapping process will be limited to linear-factor sensitivities through the use of a multi-factor model. The basic difference between the multi-factor model that will be used and the arbitrage pricing theory model is that the latter requires additional constraints on the portfolio weights and log-returns of the portfolio that eliminate the possibility of arbitrage opportunities.

6.1 An Overview of the Multi-Factor Risk Mapping Modeling Procedure

The following is a discussion of the fundamentals underlying the returns generating mechanisms or the single-period multi-factor model: Let the portfolio $P(t)$ consist of n securities where $S_i(t)$ for $i=1,2,...,n$ is the $i-th$ security. Also let there be k common factors that underlie the common variance of the n securities, where $f_j(t)$ for $j=1,2,...,k$ and $n>>k$ is the $j-th$ non-diversifiable common factor. Basically the risk mapping procedure will use the movements of k common factors $\{f_j(t); j=1,2,...,k\}$ where $n>>k$ to approximate the movements of $P(t)$, which consists of n securities $\{S_i(t); i=1,2,...,n\}$ using combinations of the n total expressions from each of n securities $\{S_i(t); i=1,2,...,n\}$

modeled as a function of the k common factors $\{f_i(t); j=1,2,...,k\}$. The functional form of the models of n securities will be linear, implying that the relationships $\{S_i(t); i=1,2,...,n\}$ and $\{f_i(t); j=1,2,...,k\}$ will be approximated using linear sensitivity measures, i.e. factor betas. That is, the movements of $P(t)$ will be linearly approximated using the movements of k common factors $\{f_i(t); j=1,2,...,k\}$ where $n>>k$ instead on directly modeling the movements of $P(t)$ as a function of the movements of n securities $\{S_i(t); i=1,2,...,n\}$ where $n>>0$. The linear sensitivities measures describing the relationship between $P(t)$ and the k common factors $\{f_i(t); j=1,2,...,k\}$ will be weighted averages of the linear sensitivities measures describing the relationship between of each of the n securities $\{S_i(t); i=1,2,...,n\}$ with the k common factors $\{f_i(t); j=1,2,...,k\}$.

6.2 An Overview of the Multi-Factor Model

Assume that the random returns-generating process $r_{S_i}(t)$ for the $i-th$ security $S_i(t)$ has the following linear functional form:

$$r_{S_i}(t)=\beta_{i,0}(t)+\beta_{i,1}f_1(t)+...+\beta_{i,k}f_k(t)+\varepsilon_{S_i}(t)$$

$$=\beta_{i,0}(t)+\sum_{i=1}^{k}\beta_{i,j}f_j(t)+\varepsilon_{S_i}(t)$$

for $i=1,2,...,n$ and where $f_j(t)$ for $j=1,2,...,k$ is the $j-th$ non-diversifiable factor (or communality), $\beta_{i,0}$ is the intercept term of the $i-th$ security

$S_i(t)$ for $i=1,2,...,n$. $\beta_{i,j}$ is the $j-th$ factor beta or the $i-th$ security's responsiveness to the $j-th$ factor for $j=1,2,...,k$, and $\varepsilon_{S_i}(t)$ is random error term (or idiosyncratic risk or residual risk term) for the $i-th$ security $S_i(t)$ for $i=1,2,...,n$.

6.3 The Rate of Return of the Portfolio in Terms of the Factors

The rate of return $r_P(t)$ of the wealth-weighted portfolio $P(t)$ formed as follows:

$$r_P(t) = \sum_{i=1}^{n} w_i r_{S_i}(t)$$

$$= \beta_0(t) + \sum_{j=1}^{k} \beta_j f_j(t) + \varepsilon_P(t)$$

where w_i is the wealth proportion an investor have allocated to the $i-th$ security $S_i(t)$ for $i=1,2,...,n$,

$$\beta_0(t) = \sum_{i=1}^{n} w_i \beta_{i,0}(t) \ ,$$

$$\beta_j = \sum_{i=1}^{n} w_i \beta_{i,j} \ ,$$

$$\varepsilon_P(t) = \sum_{i=1}^{n} w_i \varepsilon_{S_i}(t) \ ,$$

and

$$\sigma_\varepsilon^2(t) = \sum_{i=1}^{n} w_i^2 \sigma_{\varepsilon_i}^2$$

6.4 The Factor Loadings

The factor loadings $f_j(t)$ for $j=1,2,...,k$ are assumed to have zero expected rates of return, i.e. $E\lfloor f_t(t)\rfloor=0$ for $j=1,2,...,k$. The factors $f_j(t)$ for $j=1,2,...,k$ are assumed to be uncorrelated (or orthogonal) with each other:

$$COV\lfloor f_j(t), f_l(t)\rfloor=E\lfloor f_j(t) f_l(t)\rfloor=0$$

for $j=1,2,...,k$ and for $l=j+1, j+2,...,k$.

6.5 The Linear Factor Sensitivity Measures

The linear factor sensitivity measures of factor betas will be discussed in this section. $\beta_{i,0}$ represents the expected return of the $i-th$ security for $i=1,2,...,n$, i.e. $\beta_{i,0}=E\lfloor r_{S_i}(t)\rfloor$ since it is assumed that the expected return of each factor is zero. $\beta_{i,0}$ is also the expected riskless rate of return that equals the expected return of the $i-th$ security $S_i(t)$ if all risk factors $f_j(t)$ for $j=1,2,...,k$ have a value of zero. The $\beta_{i,0}$ for a given i is not independent of the $\beta_{i,j}$ for $j=1,2,...,k$, implying that the risk-free term must be related to the factor betas. The factor betas $\beta_{i,j}$ for $i=1,2,...,n$ and $j=1,2,...,k$ are defined in an analogous manner to the beta in the single index capital asset pricing model $(CAPM)$:

$$\beta_{i,j}(t)=\frac{COV\lfloor r_{S_i}(t), f_j(t)\rfloor}{\sigma^2_{f_j}}$$

where $COV\left[r_{S_i}(t), f_j(t)\right]$ for $j=1,2,...,k$ is the $j-th$ covariance function between $r_{S_i}(t)$ and the $j-th$ non-diversifiable factor $f_j(t)$, and σ_{f_j} is the standard deviation of the $j-th$ factor $f_j(t)$ for $j=1,2,...,k$. The factor betas $\beta_{i,j}$ for $j=1,2,...,k$ are also referred to *factor loadings* or the *factor sensitivity coefficients* or the *factor sensitivity indicator* or the *factor prices* of the $i-th$ security $S_i(t)$ for $i=1,2,...,n$. $\beta_{i,j}$ is called a *regression slope coefficient* when it is estimated using a regression framework, and a *factor loading* when estimated using a factor analytic procedure. $COV\left[r_{S_i}(t), f_j(t)\right]$ for $j=1,2,...,k$ is the $j-th$ covariance function between $r_{S_i}(t)$ and the $j-th$ non-diversifiable factor $f_j(t)$, and σ_{f_j} is the standard deviation of the $j-th$ factor $f_j(t)$ for $j=1,2,...,k$. The factor betas $\beta_{i,j}$ for $j=1,2,...,k$ and $i=1,2,...,n$ are the slope coefficients, measures of un-diversifiable risk, and indicate how sensitive the returns of a given security are to a common source of variation $f_j(t)$ for $j=1,2,...,k$, respectively. If all $\beta_{i,j}$'s for $j=1,2,...,k$ and each $i=1,2,...,n$ are equal to zero, which implies that there is no risk, then $\beta_{i,0}=E\left[r_{S_i}(t)\right]$. If $\beta_{i,j}$ for a given i is nonzero, then the $E\left[r_{S_i}(t)\right]$ increase in proportion to the magnitude of $\beta_{i,j}$.

6.6 The Residual Risk Term of the Multi-Factor Model

$\varepsilon_{S_i}(t)$ is the security-specific contribution to the returns generating mechanism for the $i-th$ security $S_i(t)$, which measures the unexplained residual return. $\varepsilon_{S_i}(t)$ has a mean of zero and a bounded variance:

$$E\left[\varepsilon_{S_i}(t)\right]=0 \text{ , and } \sigma_{\varepsilon_i}^2=VAR\left[\varepsilon_{S_i}(t)\right]=E\left[\varepsilon_{S_i}^2(t)\right]<\infty \text{ ,}$$

respectively and where $\sigma^2_{\varepsilon_i}$ is the variance of the residual risk terms $\varepsilon_{S_i}(t)$ for $i=1,2,...,n$. The $\varepsilon_{S_i}(t)$ for $i=1,2,...,n$ are pairwise uncorrelated:

$$E\left[\varepsilon_{S_i}(t)\varepsilon_{S_l}(t)\right]=0 ,$$

for $i=1,2,...,n$ and $l=i+1,i+2,...,n$. $\varepsilon_{S_i}(t)$ is uncorrelated with each of the k factors, i.e. $E\left[\varepsilon_{S_i}(t)f_j(t)\right]=0$ for $i=1,2,...,n$ and $j=1,2,...,k$. $\varepsilon_{S_i}(t)$ is unique to security $S(t)$, implying that it is independent of the residual risk term of other securities.

6.7 The Multi-Factor Model Presented in the Risk-Premium Form

The expected value of zero assumption for the random factor $f_j(t)$ for $j=1,2,...,k$ severely restricts possible choices for factors. The potential factor set can be increased is the factors $f_j(t)$ for $j=1,2,...,k$ are defined such that they represent the unanticipated changes in some underlying market variable $M_j(t)$:

$$\tilde{f}_j(t)=M_j(t)-E\left[M_j(t)\right]$$

for $j=1,2,...,k$.

This definition of the factors will always have an expected value of zero since $M_j(t)$ is a deviation from the mean value $E[M_j(t)]$. Substituting the above expressions for the unexpected change factors $\tilde{f}_j(t)$ for $j=1,2,...,k$ into the expression for the rate of return $r_P(t)$ of the portfolio $P(t)$:

$$r_P(t)=\beta_0(t)+\sum_{j=1}^{k}\beta_j[M_j(t)-E[M_j(t)]]+\varepsilon_P(t)$$

The version of the APM is referred to as the *return-generating function in the risk-premium form* (Dalle Molle, 2003).

PART THREE
RESULTS & ANALYSIS

The results from the empirical testing that has been conducted in this study are presented in Part three. In general the results for the tail-risk measures were similar to what has been found for the center of the portfolio risk measures. The use of a mix of positions denominated in different foreign currencies will reduce the risk of a portfolio. Also that the portfolios from developed markets were in general, less risky and more diversified than portfolios from emerging markets. Finally, the results from the analysis of the simulated models, whose log-returns were generated independently, indicated that the covariance between the positions plays a significant role in the assessment of the risk inherent to real portfolios. This observation is based on the greater diversification benefits exhibited by the two simulations models when compared to the domestic, mixed-foreign, developed markets and emerging markets portfolios. The five simple weightings for factor models did not work that well in the sense of generating a risk measurement estimate that is close to the estimate from the original portfolios. On the average the best weighting scheme was the naïve equal-weighted scheme.

Chapter 7: The Empirical Analysis of the Effects of Diversification

The following sections discuss the formulation of the portfolios that were used in the risk measurement analysis. The risk measurements and diversification studies were applied to the twenty five sets of domestic portfolios and ten sets of mixed-foreign portfolios. Each of the twenty five sets of domestic portfolios consisted of twenty five portfolios where the compositions of the portfolios started with the largest market-capitalized equity position and continued adding the next largest market capitalized equity position until there were twenty five equity positions in the portfolio. That is, the adding of the positions was implemented in terms of a ordering from the largest to the smallest of the twenty five largest market capitalized equity positions in a given country. Each of the ten sets of mixed foreign portfolios was defined as a function of the market capitalization rank in a given country and consisted of one individual position from each of the twenty five different countries. For each mixed-foreign set there were a total of twenty five portfolios for each mixed portfolio and the compositions of the portfolios started with one equity position, and followed with continued adding another position until there were twenty five equity positions in the portfolio. The adding of the positions was done in terms of an alphabetical ordering of the twenty five countries. The ten mixed-foreign portfolios were all analyzed in terms of US dollars. Also two simulation models will be included as reference cases whose properties will be discussed in a latter section. One simulation model is normal tailed and the other is fat tailed.

The analysis period consisted of five one-year measurement periods of 250 daily observations. The five-year time period started on June 29, 1998 and ended on June 30, 2003. Note the form in which the effects of diversification on the risk measurement estimates will be presented as averages over the five one-year measurement periods The initial wealth of the portfolio was always set to 1,000,000 in the domestic currency for the 25 domestic cases and US$ 1,000,000 for the 10 foreign cases. The initial amount in each position (for a given portfolio) is 1,000,000 divided by the number of

positions, i.e. initial equal-wealth weighted. The analysis is performed on the log-returns of the positions and portfolios. The log-returns may be viewed as the differences in the natural logarithm of the prices.

Two simulation models were studied: the geometric Brownian motion (GBM) and the centered two-sided symmetric Fréchet random walk (FRW). The simulation models were included as two ideal reference models that were similar in the majority of the characteristics of their central regions, but different in their tail regions. They provide valuable insight for the relative and absolute risk ratios, but the magnitudes of the risk measurements for the two models were not completely representative of the magnitude of the corresponding results for the real portfolios. Tabular results and graphs are displayed in the appendices.

7.1 Composition of the Portfolios

All the portfolio sets consist of the following: a portfolio that has one position up to and including a portfolio with twenty five positions. The data base of twenty five positions for the domestic portfolios consisted of the 25 largest equities by market capitalization. The adding of position was based on the market capitalization and not the properties of the log-returns of the individual positions. The domestic portfolios are presented in alphabetical order by country name in Table Y1, which contains the classifications and compositions of the twenty five country databases. 14 countries were classified as developed markets and 11 were classified as emerging markets. There are eight countries from Europe, eight countries from Asia, two countries from North America, two countries from the Middle East, two countries from South America, two countries from the South Pacific, and one country from Africa. The foreign portfolios are listed in Table Y2, and are defined as functions of the ten largest market capitalization groups, where the n-th largest stock (in terms of market capitalization) from each of the twenty five countries form the n-th group, for n = 1, 2, ..., 10. Tables I1.01 through I1.25 contain the 25 individual positions as listed by market capitalization for each of the 25 countries. Tables I1.01 through I1.25 also contain the DataStream codes, the actual market capitalization in the domestic currency, and the industry classification of each position. Table 7.1 contains a summary of the various industries included in the twenty-five portfolio of twenty-five equities.

Table 7.1 – Industry Categories for Equities	
Airlines and Airports Asset Managers	Leisure Facilities
Automobile	Life Assurance
Brewers	Media Agencies
Business Support	Medical Equipment and Supplies
Building Materials	Mining Finance
Chemicals Advanced Materials	Mining Services
Chemicals and Commodity	Mortgage Finance
Chemicals, Specialty	Multi-Utilities
Commercial Vehicles	Non-Ferrous Metals
Computer Hardware	Oil and Gas Exploration or Production
Construction Services	Oil Integrated
Consumer Electronics	Other Mining
Defense	Paper
Distillers and Vintner	Personal Products
Diversified Industry	Pharmaceuticals
Electrical Equipment	Publishing and Printing
Electricity	Rail, Road, Freight
Electronic Equipment	Real Estate Development
Engineering Contractors	Retailers and Multi-department
Engineering; General	Retail, Hardlines
Environmental Control	Security and Alarms
Farming and Fishing	Semiconductors
Financial Services	Shipping & Ports
Food & Drug Retailers	Soft Drinks
Food Processors	Software
Forestry	Steel
Furniture and Floor-covering	Subscribed Entertainment
Gas Distribution	Telecom Equipment Banks
Gold Mining	Telecom Fixed Line
Hospital Management Hotels	Telecom Wireless Clothing and Footwear
House Building	Textiles and Leather Goods
Household Appliances & Housewares	Tyres and Rubber
Household Products	Tobacco
Insurance Non-Life	TV, Radio and Film
Investment Companies	Water

For each set of results, the results of the two simulation cases are presented first, then the domestic results, and finally the foreign results.

7.2 Overview of the Simulation Reference Models

Two simulation models were included as reference or "*ideal*" cases where one case, the geometric Brownian motion (GBM), which emulates ideal diversification benefits with its log-returns that were jointly Gaussian distributed implying a central limit theorem (CLT) is justifiable for the normalized sum of the portfolio log-returns. The CLT justification allows for the variance of the resulting normalized sum to be reduced. The other case is the centered two-sided symmetric Fréchet random walk (FRW), which emulates the limitations of both the process of diversification and the CLT for normalized sums of the portfolio log-returns.

The rest of this section contains a summary of the two simulation reference models that were included in the analysis. First the GBM, and then the FRW:

1) A geometric Brownian motion (GBM), which is the standard model used in financial model for price series since it is a multiplicative growth model that is lognormally distributed, implying log-differences that are normally distributed. This model emulates the situation where benefits of diversification work "*ideally*" due to applicability of a central limit theorem, which implies that the distribution of the log-returns is multivariate Gaussian since the importance of the tail regions is rapidly averaged away. The lognormal and normal distributions are considered the normal-tailed distributions in the context of the thin-, normal- and fat-tailed decomposition of distribution associated withy the generalized extreme distributions. This model will be the reference case where there is minimal probabilistic weight in the both tails regions, or the case where market conditions are considered normal or business as usual. The results of the tail index estimation for this model should be examined with care since the Hill tail index estimator is suitable for only fat-tailed distributions and not the normal tails that are associated with the log-returns of the geometric Brownian motion. The parameters of the GBM will be set to match the scale parameter of the Fréchet random walk, which is described next.

2) A centered two-sided symmetric Fréchet random walk (FRW), which is defined as the multiplicative product formed through the composition of Fréchet random

variable and minus one times the same Fréchet random variable with respect to its parameters. The composition of these two random variables is through the use of a Bernoulli random variable where in this investigation, the likelihood of each these Fréchet-based random variables will always be equal, i.e. a probability of 0.5 for both the upward and downward movements. The sample means of each of these Fréchet random variables are subtracted out in order to center the distribution statistically about zero. The Fréchet distributions are considered the fat-tailed distributions in the context of the thin-, normal- and fat-tailed decomposition of distribution associated with the generalized extreme distributions. This model will be the reference case where there is extensive or significant probabilistic weight in the both tails regions. This model emulates the situation where benefits of diversification are limited due to non-applicability of the central limit theorem, which implies that the distribution of the log-returns is non-gaussian since no matter how large a sample is used (which refers to number of positions in this investigation), there will always be significant weight in the tail regions. The results of the tail index estimation for this model should be considered the best-case scenario since the Hill tail index estimator is designed specifically for fat-tailed distributions.

The scale and tail index parameters of the Fréchet random variables that underlie the simulated symmetric two-sided Fréchet random walk were set to $\sigma = 0.0075$ and $\alpha = 1/\lambda = 3$, respectively. These parameters correspond to the following population estimates for the mean, variance and standard deviation; 0.010156, 4.755E-05, and 0.006896, respectively. Recall that the symmetric two-sided Fréchet random walk is generated as the exponentiated product of samples from two Fréchet distributions, which are both multiplied by Bernoulli random variables that are either equal to plus or minus one with equal probability. The underlying normal parameters of the discrete-time continuous-space geometric Brownian motion or lognormal random walk were set as follows: the mean was set to zero and the variance was set to the population estimate of the variance which was 4.755E-05. This parameter setting attempts to "guarantee" that the mean and variance properties of the geometric Brownian motion and the Fréchet random walk were similar with the Fréchet random walk having fatter tails. Recall the geometric Brownian motion is generated as the exponentiated product of

samples from the normal distribution. The initial value for both simulation models was always set to 100.

7.3 Overview of this Investigation

7.3.1 Overview of the Method and Risk Measures Estimated in this Investigation

Note five year averages will be used in the presentation of results, and this is due to the large volume of results, which included five one-year measurement periods, twenty-five sub-portfolios for each of twenty-five countries, ten mixed-foreign portfolios, and two simulation models, plus the estimation of a number different risk measurement models and ratios that are formed from the results of the estimation of the different risk measurement models. The analysis began with a preliminary statistical analysis of all the sets of log-returns of the portfolios and the individual positions. Also the preliminary statistical analysis is applied to the corresponding foreign exchange rates for the sets of log-returns for the mixed-foreign portfolios. The measures estimated in the preliminary statistical analysis included moment- and quantile-based measures such as the mean, variance, skewness and kurtosis, and the median and inter-quartile range, respectively. The inter-quartile range is the 75^{th} percentile minus the 25^{th} percentile and is a common quantile-based measure of dispersion. Two diversified volatility models were estimated. The models were, a model based on the weighted variance/covariance matrix of the individual positions and a model based on the properties of the sample aggregate portfolio, which implies that the weighted positions were sum together to generate the portfolio values and then the risk measurements were estimated. The former was defined as the standard deviation of the sum of the variances and covariances of the individual positions in the portfolio and the latter as the sum of the variances of the positions in the portfolio, respectively. This difference between the two diversified models represents a measure of the deviations from Gaussianity (or normality). Also risk-adjusted measures such as the mean divided standard deviation and the median divided by the inter-quartile range were calculated, but the results of these measures were not included in the final results.

There are three related aspects to this investigation: The first part investigates both relative and absolute approaches to quantify the risk reduction effects as a function of an increasing number of positions, which were added one-by-one to the portfolio. The

volatility measures examined included the sample inter-quartile range and both of the diversified volatility estimates. The first approach to quantifying the extent of the risk reduction via the volatility examines the sequential risk reduction of adding positions to the portfolio, and the second approach examines the relative risk reduction of adding positions to the portfolio. The former calculates the following volatility ratios; the first portfolio relative to the second, the second portfolio relative to the third, and up to and including the twenty-fourth portfolio relative to the twenty-fifth, whereas the latter approach calculates the following volatility ratios; the first portfolio relative to the second, the first portfolio relative to the third, and up to and including the first portfolio relative to the twenty-fifth. The former indicates the additional risk reduction from the addition of an additional position, whereas the latter in an indication over the overall risk reduction. The covariances and linear correlation coefficients between each of the position in a portfolio and a given portfolios were estimated. Also the covariances between each of the position with the other positions were estimated.

The second part of investigation studies the effects (naïve) diversification on a number of common portfolio risk metrics including the two diversified volatility estimates, the maximum loss, both the historical and variance/covariance value-at-risk forecasts, and the historical expected shortfall forecasts. The specific risk measurements that were calculated include the VaR forecasts of the positions and the corresponding undiversified VaR forecasts based on the sum of the position VaR forecasts, a diversified VaR forecasts based on the Gaussian-approximation since it uses only the variance/covariance matrix, which implies it considers only the means, variances and covariances of the positions, the diversified aggregate VaR forecasts and a diversified VaR based on the sample aggregate portfolio variance. The sample aggregate portfolio variance first generates the portfolio values as the weighted sum of the positions and then estimates the various portfolio risk metrics from the properties of the aggregate sum. The method takes into consideration the non-Gaussianity of the portfolio log-returns. The ratios of the undiversified VaR to the diversified VaR forecast based on the variance/covariance estimate of the portfolio and the undiversified VaR to the diversified VaR based on the sample aggregate portfolio variance. The historical VaR and historical expected shortfall forecasts were estimated at the 95, 98 and 99 percent confidence levels (CIs). The relative and absolute approaches to quantifying the extent of the risk reduction via the volatility estimates are also applied to the historical value-at-risk and historical expected shortfall forecasts, and this is for all three confidence

levels and each set of twenty-five portfolios. Also reported were the differences between the positions diversified forecasts based on the variance/covariance matrix and the diversified forecasts based on the sample aggregate portfolio variance for each of the historical VaR and historical expected shortfall forecasts at each of the three confidence levels.

The third part of investigation considers the estimation of various risk contribution measures including the delta position VaR, the component position VaR, the increment position VaR and the incremental expected shortfall forecasts. The delta and component VaR estimates are calculated relative to all the positions in a given portfolio and require the estimation of the beta measures, which are linear sensitivity measures. The delta and component forecasts were estimated only at the 95 percent confidence level. Recall that the component VaR estimates represent the (linear) contribution of a given position to the diversified portfolio VaR. The results for the delta VaR estimates were not included in the final analysis since the component VaR estimates are just scaled functions of the delta VaR estimates. The component VaR forecasts are easier to interpret due to their magnitude. Portfolio VaR forecasts are calculated as the sum of the component VaR estimates for the positions, which can be viewed as a linear approximation of the diversified portfolio VaR forecasts. Also calculated were the differences between the portfolio VaR forecasts based on the sum of the component VaR estimates and the positions diversified VaR forecast based on the variance/covariance matrix and the portfolio VaR forecasts based on the sum of the component VaR estimates and the diversified VaR based on the sample aggregate portfolio variance.

The increment VaR and incremental expected shortfall forecasts using the historical methods were estimated at the 95, 98 and 99 percent confidence levels. These risk measurement were calculated by first estimating the appropriate VaR and expected shortfall forecasts for the portfolio with twenty-five positions and then calculating the VaR and expected shortfall forecasts for all twenty-five possible portfolios with twenty-four positions. The increment VaR (incremental expected shortfall) forecasts for each position is calculated as the difference between the increment VaR (incremental expected shortfall) forecasts for the portfolio with twenty-five positions and the corresponding portfolio with twenty-four positions. This difference is calculated for each of the twenty five positions. Also the maximum loss and maximum

gain attributed to adding a position to a given portfolio VaR are reported for the increment VaR and incremental expected shortfall forecasts at the 95, 98 and 99 percent confidence levels.

7.3.2 Presentation of the Estimated Risk Measures and Ratios

The first presentations of the results were all based on average of the risk measurements and risk reduction ratios of domestic and mixed-foreign portfolios over five one-year periods. The simulation results were presented as raw values estimated over a simulated one-year period. The average of the data should allow for a smoothing of the effects of diversification in the tail-region based risk measurements and risk reduction ratios. Note not all the estimated results were included in the final empirical analysis. Only the results that were significant with respect to explaining the diversification effects were included. The results were too varied and numerous for the risk measurements and risk reduction ratios of domestic and mixed-foreign portfolios in order for them to be detailed in a data-set-by-data-set framework. In order to reduce and facilitate the analysis of the results, which were initially presented as averages over five one-year periods; the five-year averages were calculated as averages where the averaging was two-way, i.e. over the five years and the twenty five portfolios for a given case. Recall the cases were twenty-five countries, ten mixed-foreign portfolios, and two simulation models. The two-way averaging approach was used to facilitate the conclusions concerning the benefits over diversification by country-to-country comparisons, foreign-to-domestic comparisons, and comparisons of the real portfolios to reference simulation models. The two-way averages were arithmetic averages for the risk measurements and geometric averages for the ratios of risk measurements. Also arithmetic averages were used for the relative dispersion reduction measures and geometric averages were used for the absolute dispersion reduction measures. These results are in Tables J1 to J3, K1 to K3, L1 to L3, M1 to M3, N1 to N3, O1 to O3, P1 to P3, and Q1 to Q3 for the domestic, mixed-foreign and simulation cases, respectively.

Recall the two-way averaging over the five one-year periods and the twenty-five portfolios were used to facilitate country-to-country comparisons of the risk measurements and risk reduction ratios of domestic and mixed-foreign portfolios; In order to make some general comments on the effects of diversification and risk

reduction, a set of three-way averages over the five one-year periods, the twenty-five portfolios, and grouping (or classifications) of the portfolios from the different countries were calculated. Comparisons using three-way averages were made to compare the results of the domestic and mixed-foreign portfolios, developed and emerging markets, and the real and simulated data sets. These results are in Tables AA1 to AA5.

7.4 The Results for the Risk Measurements and the Diversification Studies

7.4.1 Results for Relative and Absolute Dispersion Reduction of the Volatility

Tables A1.01 through A2.25 contain the results for the relative and absolute dispersion reduction for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases, as function of an increasing number of positions in the portfolio. Tables A2.01 through A2.10 contain the results for the dispersion reduction for the corresponding set of twenty-five portfolios from each of the ten different mixed-foreign cases, as function of an increasing number of positions in the portfolio. Tables A3.01 and A3.02 contain the results for the dispersion reduction for the corresponding set of twenty-five portfolios from each of the two simulation models, as function of an increasing number of positions in the portfolio. These tables contain both the relative and absolute dispersion reduction ratios for the aggregate portfolio standard deviations (which implies the statistics of the portfolio log-returns are used), the portfolio standard deviation based on the sum of the variances of the individual positions and covariances between the individual positions and the interquartile range, which is the 75^{th} percentile minus the 25^{th} percentile of the log-returns are included. The risk reduction for the dispersion of the GBM was significantly greater than that of the FRW. This is to be expected due to the fatter-tails of the FRW, whose significance is more difficult to "*average*" away. Since the results are too varied and numerous for the relative and absolute risk reduction ratios of domestic and mixed foreign portfolios so two-way averages across years and portfolio size for a given case were used.

Tables J1 to J3 contain the arithmetic averages of the dispersion/volatility reduction as a function of the number of positions in the portfolio for the domestic, mixed-foreign and simulation cases, respectively. The additional averaging for the relative risk reduction is the arithmetic average over the ratios of portfolio one to portfolio two,

portfolio two to portfolio three, up to and including portfolio twenty-four to portfolio twenty-five. The additional averaging for the absolute risk reduction is the geometric average over the ratios of portfolio one to portfolio two, portfolio one to portfolio three, up to and including portfolio one to portfolio twenty-five. The Indonesian, Swiss and Turkish portfolios exhibited the least average extents of relative and absolute risk reductions and the German, Israeli, and Spanish portfolios exhibited the largest average relative and absolute risk reductions. The Indonesian portfolios exhibited negative results for the 75th percentile minus the 25th percentile measure, which may be a consequence of the aftermath of the 1997 Southeast Asian Crisis. There is no discernable pattern inherent to the results of the average relative and absolute risk reduction results in Table J2.

Table AA.1 contains the three way averages or overall absolute dispersion reduction of the twenty-fifth position relative to the first position for the twenty-five domestic portfolios. The Indonesian results did not really exhibit significant risk reduction, whereas the range of the reduction was about 25% for Switzerland and Turkey, to 150% for Germany. Table AA.2 contains the three way averages or overall absolute dispersion reduction of the twenty-fifth position relative to the first position for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. The simulation models exhibited around 500% reduction for the GBM and 130% reduction for the FRW, respectively. These results might imply that real portfolios more closely match the characteristics of the fat-tailed FRW. There is no discernable pattern inherent to the results of the average relative and absolute risk reduction results in Table AA.2. This leads to the use of the three-way averages absolute dispersion reduction of the twenty-fifth position relative to the first position in order make sense of this collection of results. The average simulation results exhibited nearly twice the risk reduction as the real portfolios. The mixed-foreign portfolio results exhibited nearly 10% more risk reduction as the domestic portfolios, and the developed market portfolio results exhibited approximately 5% more risk reduction as the emerging market portfolios.

Table AA.3 contains the three-way averages or overall absolute and relative dispersion reduction for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. Note these three-way averages were averaged over the results in Tables J1 through J3. The averages for the relative and absolute risk reduction for the real portfolios were approximately 50% of that for the simulated models. The averages for the relative and absolute risk reduction for the domestic portfolios were approximately 66% and 80% of the reduction exhibited by the foreign portfolios, respectively. The averages for the relative and absolute risk reduction for the emerging markets portfolios were approximately 85% of the reduction exhibited by the foreign portfolios.

7.4.2 Results for Aggregate Portfolio Risk Measurements and Diversification Effects

Tables B1.01 through B1.25 contain the aggregate portfolio risk measurement estimates for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables B2.01 through B2.10 contain the aggregate portfolio risk measurement estimates for the corresponding set of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables B3.01 and B3.02 contain the aggregate portfolio risk measurement estimates for the corresponding set of twenty-five portfolios from each of the two simulation models. The specific risk measurements include the maximum portfolio loss, aggregate diversified portfolio VaR based on the variance/covariance VaR method and estimated at the 95, 98, and 99 confidence levels, and diversified portfolio VaR based on the sum of the individual positions and estimated using the variance/covariance VaR method for the 95, 98, and 99 confidence levels. The tables also contain the aggregate diversified portfolio VaR forecasts that were estimated using the historical VaR method for the 95, 98, and 99 confidence levels. Once again the results are too varied and numerous for the relative and absolute risk reduction ratios of domestic and mixed foreign portfolios so two-way averages across years and portfolio size for a given case were used. The results for aggregate diversified portfolio VaR estimates using the variance/covariance VaR method for the

95, 98, and 99 confidence levels are in general larger than those of diversified portfolio VaR based on the sum of the individual positions and estimated. The differences range between five and ten percent.

Figures R1 to R3 are graphical illustrations of the effects of diversification on the variance/covariance VaR forecast at the 95 confidence level based on the log-returns of the aggregate diversified portfolio for the domestic, mixed-foreign and simulation cases, respectively. Figure R1 illustrates the general reduction of the magnitude of the variance/covariance VaR forecasts as a function of an increasing number of positions, that diversification provides for the domestic portfolios. From the graph, it seems that the benefits of diversification are more prevalent and the reduction in the VaR estimates seems to have leveled off or plateau with developed or mature markets (as compared to the emerging markets). The following five emerging markets equities; Brazil, Indonesia, South Korea, Thailand and Turkey exhibited reasonable risk reduction by the time the twenty-fifth position was added, but visually there still seemed to be the potential for greater risk reduction. Historically, the benefits of diversification imply a well diversified portfolio should have 20-25 different positions. Figure R2 illustrates the general reduction of the magnitude of the variance/covariance VaR forecasts as a function of an increasing number of positions, that diversification provides for the mixed-foreign portfolios, which is smoother than that for the domestic portfolios. The smoothness of the reduction is broken up by the excessive risk of the Indonesian positions. Figure R3 illustrates the general reduction of the magnitude of the variance/covariance VaR forecasts as a function of an increasing number of positions, that diversification provides for the two simulation models. The risk reduction for the geometric Brownian motion is a smoother process than that for the Fréchet random walk, but the Fréchet random walk reaches a seemingly constant risk measurement level whereas the geometric Brownian motion did not by the 25^{th} portfolio. These results were not what was expected, but may be due to how the two models' parameters were selected.

Figures V1 to V3 are graphical illustrations of the effects of diversification on the variance/covariance VaR forecasts for the diversified portfolio at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively. This type of diversified portfolio VaR forecast is based on the sum of the variances of the individual positions and covariances between the individual positions. The

qualitative interpretation of Figures V1 to V3 is very similar to those of the Figures R1 to R3, respectively. This similarity is expected since the former is based on the sum of the variances and covariances over the set of positions formed in each portfolio, and the latter is based on forming the portfolio log-returns and then estimating the variance/covariance VaR forecasts.

Figures S1 to S3 are graphical illustrations of the effects of diversification on the maximum portfolio loss as a function of the number of positions based on the log-returns of the aggregate diversified portfolio for the domestic, mixed-foreign and simulation cases, respectively. The three graphs of the maximum portfolio losses exhibit some degree of risk reduction, but less than the VaR forecasts at the 95 percent level, and this is due to the extreme volatility associated with the maximum loss, which is the minimum value of the log-returns. The smoothness of the reduction for the mixed-foreign portfolios in Figure S2 is broken up by the excessive risk of the Brazilian and Indonesian positions, which were severely affected by the Brazilian Currency Crisis of January 1999 and the 1997 Southeast Asian Financial Crisis.

Figures T1 to T3 are graphical illustrations of the effects of diversification on the historical VaR forecast at the 95 percent confidence level based on the log-returns of the aggregate diversified portfolio for the domestic, mixed-foreign and simulation cases, respectively. The graphical illustrations contained in Figures T1 to T3 are qualitatively similar to the graphical illustrations in Figures V1 to V3, which were the plots of the effects of diversification as a function of the portfolio on the variance/covariance VaR forecasts for the diversified portfolio at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively. Figures U1 to U3 are graphical illustrations of the effects of diversification on the expected shortfall forecast at the 95 percent confidence level based on the log-returns of the aggregate diversified portfolio for the domestic, mixed-foreign and simulation cases, respectively. The graphical illustrations contained in Figures U1 to U3 are qualitatively similar to the graphical illustrations in Figures V1 to V3, which were the plots of the effects of diversification as a function of the portfolio on the variance/covariance VaR forecasts for the diversified portfolio at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively.

7.4.3 Results for Historical Portfolio Risk Measurements

Tables C1.01 through C1.25 contain estimates from different approaches to estimating a portfolio VaR forecast and various comparisons of these measures for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables C2.01 through C2.10 contain estimates from different approaches to estimating a portfolio VaR forecast and various comparisons of these measures for the corresponding set of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables C3.01 and C3.02 contain estimates from different approaches to estimating a portfolio VaR forecast and various comparisons of these measures for the corresponding set of twenty-five portfolios from each of the two simulation models. The tables contain the raw position VaR forecasts, the undiversified VaR forecast based on the sum of the raw position VaR forecasts, the diversified portfolio VaR forecast based on the sum of the variances of the individual positions and covariances between the individual positions, and the portfolio VaR forecasts calculated as the sum of the component VaR estimates for the positions. The tables also include the ratios of the undiversified VaR forecast to the portfolio VaR forecast based on the sum of the variances and covariances of the individual positions and the undiversified VaR forecast to the portfolio VaR forecasts calculated as the sum of the component VaR estimates for the positions. These two ratios are more informative of the results presented in this set of tables since the four risk measurements, one for positions and the other three for portfolios are used in the calculation of these diversification ratios.

Tables K1 to K3 contain the geometric averages of the ratios of the undiversified VaR forecast to the portfolio VaR forecast based on the sum of the variances and covariances of the individual positions and the undiversified VaR forecast to the portfolio VaR forecasts calculated as the sum of the component VaR estimates for the positions. Tables K1 to K3 correspond to results for the domestic, mixed-foreign and simulation cases, respectively. All the risk measurements were estimated at the 95 percent confidence level. The results for the ratios of the undiversified VaR forecast to the diversified portfolio VaR forecast of mixed-foreign results were significantly larger than those of the domestic, and this was close to a 75% difference. There was not a significant difference between the results of the developed and emerging markets, but the average values for the developed markets were greater than the averages of the

emerging markets. The results of the two simulation models were quite similar and significantly greater diversification relative to ratios of the undiversified VaR forecast to the diversified portfolio VaR forecast of the domestic and mixed-foreign results.

Table AA.1 contains the three-way averages of the two diversification ratios of the twenty-fifth position relative to the first position for the twenty-five domestic portfolios. The following emerging markets exhibited the largest undiversified to diversified ratios: Chile, Ireland, Israel, and Mexico, whereas New Zealand for the developed markets exhibited the largest diversification ratio. Table AA.2 contains the three-way averages of the two diversification ratios of the twenty-fifth position relative to the first position for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. The GBM model exhibited diversification ratios that were approximately twice that of the real portfolios, whereas the FRW model exhibited diversification ratios that were approximately the same magnitude as those of the real portfolios. The overall average diversification ratios for the foreign portfolios were close to 50% greater than the overall average of the domestic portfolios. The overall average diversification ratios for the developed markets were around 5% greater than the overall average diversification ratios for the emerging markets.

7.4.4 Results for Relative and Absolute Risk Reduction Ratios

The next set of tables contains the relative and absolute risk reduction approaches calculated as a function of an increasing number of positions, which were added one-by-one to the portfolio. The former calculates the following risk measurement ratios; the first portfolio relative to the second, the second portfolio relative to the third, and up to the twenty-fourth portfolio relative to the twenty-fifth, whereas the latter approach calculates the following risk measurement ratios; the first portfolio relative to the second, the second portfolio relative to the third, and up to the first portfolio relative to the twenty-fifth. The relative and absolute risk reduction ratios are calculated for the maximum loss, the historical VaR estimates at the 95, 98, and 99 percent confidence levels, and the historical expected shortfall estimates at the 95, 98, and 99 percent

confidence levels, and this is for each set of twenty five portfolios. Tables E1.01 through E1.25 contain relative and absolute risk reduction ratios for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables E2.01 through E2.10 contain relative and absolute risk reduction ratios for the corresponding set of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables E3.01 through E3.02 contain relative and absolute risk reduction ratios for the corresponding set of twenty-five portfolios from each of the two simulation models. The results of these risk reduction ratios were too varied and numerous for the domestic and mixed foreign portfolios so two-way averages across years and portfolio size for a given case were used, and this summary analysis is given next.

Tables M1 to M3 contain the arithmetic averages for the relative risk reduction ratios and the geometric averages for absolute risk reduction ratios for the domestic, mixed-foreign and simulation cases, respectively. The risk reduction ratios were calculated for the maximum loss, the historical VaR at the 95, 98, and 99 percent confidence levels, and the historical expected shortfall at the 95, 98, and 99 percent confidence levels. Again the Indonesian, Swiss and Turkish portfolios exhibited the least average relative and absolute risk reductions, whereas the German, Israeli, and Spanish portfolios exhibited the largest average relative and absolute risk reductions.

Table AA.1 contains the three way averages of the maximum loss, the historical VaR at the 95, 98, and 99 percent confidence levels, and the historical expected shortfall at the 95, 98, and 99 percent confidence levels for the twenty-five domestic portfolios. The Indonesian, Swiss and Turkish portfolios exhibited the least average relative and absolute risk reductions, whereas the German, Israeli, and Spanish portfolios exhibited the largest average relative and absolute risk reductions. Table AA.2 contains the three way averages for the maximum loss, the historical VaR at the 95, 98, and 99 percent confidence levels, and the historical expected shortfall at the 95, 98, and 99 percent confidence levels for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. The average values for the simulated models were close to twice that of the real portfolios. Again it was difficult to extract trends from the results for the mixed-foreign portfolios. The average simulation results exhibited nearly twice

the risk reduction as the real portfolios. The mixed-foreign portfolio results exhibited nearly 10-15% more risk reduction as the domestic portfolios, and the developed market portfolio results exhibited approximately 10-15% more risk reduction as the emerging market portfolios. Table AA.3 contains the three-way averages for the maximum loss, the historical VaR at the 95, 98, and 99 percent confidence levels, and the historical expected shortfall at the 95, 98, and 99 percent confidence levels for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the only the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. The averages for the absolute risk reduction for the real portfolios were less than 50% of that for the simulated models. The averages for the absolute risk reduction for the domestic portfolios were approximately 85-90% of the reduction exhibited by the foreign portfolios. The averages for the absolute risk reduction for the emerging markets portfolios were approximately 87.5-90% of the reduction exhibited by the developed portfolios.

7.4.5 Results for Difference in Portfolio Risk Measurements

The next set of tables focus on the differences between a number of two different diversified risk measurements including difference in the maximum loss, difference in the historical VaR forecasts at the 95, 98, and 99 percent confidence levels and difference in the historical expected shortfall the VaR forecasts at the 95, 98, and 99 percent confidence levels. The diversified risk measurements were based on the properties of the sample aggregate portfolio, which implies that the weighted positions were sum together to generate the portfolio values and then the risk measurements were estimated, whereas the other diversified risk measurements are calculated as the sum of the variances and covariances of the different positions. Tables F1.01 through F1.25 contain results for the differences between the two different diversified risk measurements for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables F2.01 through F2.10 contain results for the differences between the two different various diversified risk measurements for the corresponding sets of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables F3.01 through F3.02 contain results for the differences between

the two different diversified risk measurements for the corresponding sets of twenty-five portfolios from each of the two simulation models. The results for all cases, the domestic portfolios, the mixed-foreign portfolios and the two simulation cases are hard to interpret since there is significant variability and no discernable patterns as a function of the number of positions, the risk measurement model or the confidence level. Although it can be stated that the differences are mostly positive, implying that the volatility of the aggregate portfolio risk measurements are larger and that maybe the use of only variance/covariance matrix in the estimation of the risk does not suffice. The results of these summaries of the differences between the two different diversified risk measurements were too varied and numerous for the domestic and mixed foreign portfolios so two-way averages across years and portfolio size for a given case were used, and this summary analysis is given next.

Tables N1 to N3 contain the arithmetic averages of the differences between the two diversified portfolio risk measurements for the domestic, mixed-foreign and simulation cases, respectively. The risk measurements includes the maximum loss, the historical VaR forecasts at the 95, 98, and 99 percent confidence levels and the historical expected shortfall the VaR forecasts at the 95, 98, and 99 percent confidence levels.

Table AA.3 contains the three-way averages of the arithmetic averages of the differences between the two diversified portfolio risk measurements for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the only the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. The three-way averages of the differences between the two diversified portfolio risk measurements exhibited both positive and negative signs for the simulated models, whereas all the real portfolio results were positive. A positive difference indicates that the normal approximation is not sufficient. The three-way averages of the differences between the two diversified portfolio risk measurements for the domestic portfolios were approximately 50% of the differences exhibited by the foreign portfolios. The three-way averages of the differences between the two diversified portfolio risk measurements for the emerging markets portfolios were approximately 60% of the reduction exhibited by the developed portfolios.

7.4.6 Results for Beta Estimates

The next set of results contains the estimated beta measures for a position relative to the portfolio. Recall that beta is a linear sensitivity measure that describes how the movements of the positions (linearly) affect the value of the portfolio. Tables Z1.01 to Z1.25 present the average beta estimates for a given portfolio as the number of positions in the portfolio is increased, and this set of tables is for the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables Z2.01 to Z2.10 present the average beta estimates for a given portfolio as the number of positions in the portfolio is increased, and this set of tables is for the corresponding sets of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables Z3.01 to Z3.02 present the average beta estimates for a given portfolio as the number of positions in the portfolio is increased, and this set of tables is for the corresponding sets of twenty-five portfolios from each of the two simulation models. The betas are used in the calculation of the delta VaR estimates, which in turn, are used in determining the component VaR forecasts since the delta VaR is equal to beta multiplied by the portfolio VaR normalized by the total portfolio wealth. There is not too much to say about the beta estimates that will not be subsumed in the analysis of the component VaR forecasts.

7.4.7 Results for Component Portfolio Risk Measurements

The next set of results includes the sets of estimates for the component VaR estimates at the 95 percent confidence level. Recall that a component VaR estimate for a given positions is the delta VaR estimate multiplied by the monetary amount in the position. The results in each table are presented such that each column represents a given portfolio and each row in that column represents the component VaR estimate for a given position. This implies that estimates across the columns in a given row starting from the first portfolio that consists of a given position, represent the effects of diversification on the component VaR estimate for a given position as a function of the number of positions in the portfolios. The sum of the rows in a given column is a delta VaR derived estimate of the diversified portfolio VaR, and is the sum of the component VaR estimates for all the positions in a portfolio. Recall that delta VaR is derived from the beta measure, which is a linear sensitivity measure that describes how the

movements of the positions (linearly) affect the value of the portfolio. Tables G1.01 through G1.25 contain the estimates of component VaR at the 95 percent confidence level for all the positions that correspond to each set of twenty-five portfolios for each of the twenty-five different domestic cases. Tables G2.01 through G2.10 contain the estimates of component VaR at the 95 percent confidence level for all the positions that correspond to each set of twenty-five portfolios for each of the ten different mixed-foreign cases. Tables G3.01 through G3.02 contain the estimates of component VaR at the 95 percent confidence level for all the positions that correspond to each set of twenty-five portfolios for each of the two simulation models. The volume of the estimated results for the component VaR were too varied and numerous for the domestic and mixed foreign portfolios.

Figures W1 to W3 are graphical illustrations of the effects of diversification on the component VaR forecasts for position one for the domestic, mixed-foreign and simulation cases, respectively. Position one is used since it is the only position that is a component in all twenty-five portfolios of a given case. These component VaR forecasts for position one as a function of other positions added to the portfolio illustrated the significant reduction in the extent of the contribution of each position in a portfolio as more positions are added. It seems that approximately 10 positions may be all that is required to take advantage of the significant part of the benefits of diversification for the mixed foreign portfolios, whereas for the domestic, it may be closer to 15 positions.

Tables O1 to O3 contain the arithmetic averages for the component VaR estimates at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively. The volume of the estimated results for the two-way averages across years and portfolio size for the component VaR were also too varied and numerous for the domestic and mixed foreign portfolios. Therefore the discussion of the results for the component VaR will only consider the three-way averages in the first section of Table AA.4. The component VaR averages for the real portfolios were 300-400% greater than the estimates for the simulated models. This may be due to the generation of the log-returns for the simulation, which was approximately independent. The component VaR averages for the domestic portfolios were approximately 50% greater than the component VaR averages of the foreign portfolios. The component VaR

averages for the developed markets portfolios were approximately 33% less than the exhibited component VaR averages for the emerging markets.

7.4.8 Results for Positions to Component Risk Reduction Ratios

The next set of results includes the sets of ratios of the raw position VaR estimates over the component VaR estimates at the 95 percent confidence level. The estimates across the columns in a given row starting from the first portfolio that consists of a given position present an illustration of the effects of diversification on the contribution of a given position as a function of the number of positions in the portfolios. Tables H1.01 through H1.25 contain results for the ratios of the raw position VaR estimate over the component VaR estimate as a function of the position, and this is for each of the corresponding set of twenty-five portfolios from each of the twenty-five different domestic cases. Tables H2.01 through H2.10 contain results for the ratios of the raw position VaR estimate over the component VaR estimate as a function of the position, and this is for each of the corresponding sets of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables H3.01 through H3.02 contain results for the ratios of the raw position VaR estimate over the component VaR estimate as a function of the position, and this is for each of the corresponding sets of twenty-five portfolios from each of the two simulation models. Note that a negative (positive) incremental VaR estimate indicates that the position increases (decreases) the overall risk of the portfolio Note the results of the domestic portfolios are biased by the large one-day movement in the fifth year of the German data. The move was for Contigas, which went from 40.94 on 28-08-98 to 52.11 on 31-08-98. The effects of this large movement illustrate the limitations of the linear analyses that were undertaken in this investigation. The volume of the estimated results for the ratios of the raw position VaR estimates to the component VaR estimates were too varied and numerous for the domestic and mixed foreign portfolios, so two-way and three-way averages will be used to summarize the results. The results of the two-way averages were also too varied and numerous, implying that only the three-way averages will be discussed.

Figures X1 to X3 are graphical illustrations of the effects of diversification on the ratio of the raw position VaR estimate over the component VaR estimate at the 95 percent confidence level for position one. Again position one is used since it is the only

position that is a component in all twenty-five portfolios of a given case. The reduction of the influence of a given position in a portfolio as the number of positions is increased is evident in these graphical illustrations. The risk reduction is also evident. From the plots; there is greater diversification for the domestic portfolios. There is a large jump in the Irish results and this is due to the price movements of the equity Elan, which went from between 2 and 3 at the beginning of the five-year observation period, to 30, then around 60 and then back down to between 20 and 30 by the end of the five-year period. Again this illustrates the limitation of the linear analysis underlying the analysis in this investigation. In Figure X3, the FRW exhibits some of the problems that fat-tailed log-returns processes can have on the process of diversification.

The two-way average analysis for the raw position VaR estimates to the component VaR estimates were applied over the positions (Tables P1 to P3) and over the portfolios (Tables Q1 to Q2). Tables P1 to P3 contain the arithmetic averages for ratios of the raw position VaR estimates over the component VaR estimates at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively. The arithmetic averages of the ratios were over the position for a given portfolio. Tables Q1 to Q2 contain the geometric averages for ratios of the raw position VaR estimates over the component VaR estimates at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases, respectively. The geometric averages of the ratios were over the first portfolio that contained a position to the twenty-five portfolio for a given position.

Therefore the discussion of the results for the ratios of the raw position VaR estimates over the component VaR estimates at the 95 percent confidence level for the domestic, mixed-foreign and simulation cases will only consider the three-way averages in the latter part of Table AA.4. The three-way averages ratios of the raw position VaR estimates over the component VaR estimates for the mixed-foreign portfolios were within 10% of the estimates for the simulated models, whereas as the estimate for domestic portfolios were approximately 60% of the simulated model estimates. The three-way averages ratios of the raw position VaR estimates over the component VaR estimates for the domestic portfolios were approximately 50% greater than the averages of the foreign portfolios. The averages of the ratios of the raw position VaR estimates over the component VaR estimates for the developed markets were approximately equal to the estimates of the emerging markets portfolios.

7.4.9 Results for Incremental Portfolio Risk Measurements

Tables D1.01 through D1.25 contain the estimates of the historical incremental VaR and historical incremental expected shortfall for the corresponding set of twenty-five portfolios from each of the two simulation models. Tables D2.01 through D2.10 contain the estimates of the historical incremental VaR and historical incremental expected shortfall for the corresponding set of twenty-five portfolios from each of the ten different mixed-foreign cases. Tables D3.01 through D3.02 contain the estimates of the historical incremental VaR and historical incremental expected shortfall for the corresponding set of twenty-five portfolios from each of the two simulation models. Both the historical incremental VaR forecasts and historical incremental expected shortfall were estimated at the 95, 98, and 99 confidence levels. All six incremental risk measurements were derived from the delta VaR estimates. The interpretation of the incremental VaR forecasts is that the addition/removal of a position may reduce or increase the portfolio VaR these improvement/declines are with respect to the sign of the marginal effect of a given position. A positive (negative) incremental VaR forecast indicates the addition of a position reduced (increased) the overall risk of the portfolio. Incremental VaR forecasts do not provide means for comparing the relative amounts of the risk contribution or influence of different positions. Recall that incremental VaR forecasts differ from the delta VaR estimates in that the amount of added or subtracted can be large, in which case the change in portfolio VaR may be a nonlinear function of the log-returns of a given position. The volume of the estimated results for the incremental risk measurements were too varied and numerous for the domestic and mixed foreign portfolios, so two-way and three-way averages will be used to summarize the results.

Tables L1 to L3 contain the arithmetic averages of the historical incremental VaR and historical incremental expected shortfall at the 95, 98, and 99 percent confidence levels for the domestic, mixed-foreign and simulation cases, respectively. The interesting aspect of these results is that there were both positive and negative increment risk measurements for a given country such as Australia, Mexico, and South Africa for example.

Table AA.5 contains the three-way averages of the arithmetic averages of the historical incremental VaR and historical incremental expected shortfall at the 95, 98, and 99

percent confidence levels for the ten mixed-foreign portfolios and the average results for the domestic portfolios, the average results for the only the domestic portfolios classified as developed market, the average results for the domestic portfolios classified as emerging markets, the average results for the mixed-foreign portfolios and the average results for the simulation models. A negative (positive) incremental risk measurement indicates an increase (decrease) in risk.

The three-way averages of the arithmetic averages of the historical incremental VaR and historical incremental expected shortfall for the simulated models were not comparable to the other results. The simulated models exhibit an anomalous result historical incremental VaR at the 98 percent confidence level and this is due to an extreme fat-tailed simulated path for the FRW. Also the historical incremental VaR for the GBM were all negative, whereas the corresponding historical incremental expected shortfall forecasts were all positive. The three-way averages of the arithmetic averages of the historical incremental VaR and historical incremental expected shortfall for the domestic portfolios were approximately 50% of the averages of the foreign portfolios. The three-way averages of the arithmetic averages of the historical incremental VaR for the developed markets were approximately 200-300% of the averages form the emerging markets, whereas the historical incremental expected shortfall for the emerging markets portfolios were approximately 120-150% of the averages for the developed portfolios. The results were all positive on the average, indicating risk reduction through the addition of a position.

Chapter 8: Results for Risk Mapping

This section discusses a simple implementation of a risk factor mapping of the mixed foreign portfolios. All factor mappings are linear and based on the linear factor sensitivities or factor betas. The factor betas calculated as the weighted averages of the betas of the positions relative to a given factor. The modeling is a multi-factor model and not a model based on the arbitrage pricing theory, since the latter required constraints on the returns and the amounts invested. The risk factor mapping procedures were only applied to the ten sets of mixed-foreign portfolios. For this section, the ten sets of mixed foreign portfolios were formed using as a function of the market capitalization rank in a given country and consisted of one individual position from each of the twenty five different countries. Each mixed-foreign portfolio consisted of twenty five equity positions. All ten mixed-foreign portfolios were all analyzed in terms of US dollars. The same analysis period was used and this consisted of five one-year measurement periods of 250 daily observations. The five-year time period started on June 29th 1998 and ended on June 30th 2003. Again the risk mapping results will be presented as averages over the five one-year measurement periods. The initial wealth of the ten mixed-foreign portfolios was always set to US$ 1,000,000. The risk mapping analysis is performed on the log-returns of the factors positions and portfolios. The log-returns may be viewed as the differences in the natural logarithm of the prices.

The proxy risk factors selected for inclusion for the risk mapping are based on the ones from data and methodology, are listed in Table 8.1. These factors included two foreign exchange rates from mature markets, three foreign exchange rates from emerging markets, the 3 month US Treasury bill rate, equity indices from three mature markets, an equity index from an emerging market, the Brent Crude Oil Index in terms of US dollars per barrel, and the price of Gold Bullion in terms of US dollars per troy ounce. This set of proxy risk factors is believed to cover a large percentage of the influences that underlies the movements in global markets.

Table 8.1 – Proxy Risk Factors Selected for the Risk Mapping	
Risk Factors	**DataStream Code**
FOREX US$ to ECU (WMR) [US$]	ECURRS$
FOREX US$ to JAPANESE YEN (WMR) [US$]	JAPAYE$
FOREX US$ to THAI BAHT TO (WMR) [US$]	THABAH$
FOREX US$ to CHILEAN PESO (WMR) [US$]	CHILPE$
FOREX US$ to SOUTH AFRICA RAND (WMR) [US$]	COMRAN$
Forward FOREX US$ TO ECU 1M FWD (WMR) [US$]	USXEU1F
Forward FOREX US$ TO ECU 3M FWD (WMR) [US$]	USXEU3F
Forward FOREX US$ TO ECU 1Y FWD (WMR) [US$]	USXEUYF
US TREASURY BILL 3 MONTH - MIDDLE RATE	USTBL3M
NIKKEI 225 STOCK AVERAGE [US$]	JAPDOWA
NASDAQ COMPOSITE [US$]	NASCOMP
MEXICO IPC (BOLSA) [US$]	MXIPC35
FTSE 100 [US$]	FTSE100
Brent Crude Oil Index (London) (US$/BBL)	LCRINDX
Gold Bullion (US$/Troy Ounce)	GOLDBLN

Five different but simple factor weighting schemes were investigated. The factor weighting schemes were as follows:

1) *Equal monetary weighted positions*; where equal monetary amounts are initially allocated to each position.

2) *Proportional mean log-return weighted positions*; where each position's weight is given by its mean log-return divided by the arithmetic sum of the mean log-returns of all 25 positions.

3) *Proportional risk-adjusted mean log-return weighted positions*; where each position's weight is given by its risk-adjusted mean log-return divided by the arithmetic sum of the risk-adjusted mean log-returns of all 25 positions. The risk-adjusted mean log-returns are defined as the mean log-returns divided by the corresponding estimate of the volatility as defined by the standard deviation.

4) *Proportional variance or undiversified weighted positions*; where each position's weight is given by its estimated variance divided by the arithmetic sum of the estimated variance of all 25 positions.

5) *Proportional covariance or diversified weighted positions*; where each position's weight is given by its estimated covariance contribution to the portfolio divided by the arithmetic sum of the estimated covariance contributions of all 25 positions.

The covariance contribution is the arithmetic sum of a position's variance plus its covariance with each of the other twenty four positions in the portfolio.

8.1 The Results for the Risk Mapping

Six different risk measurements were analyzed in the risk mapping section; the historical value-at-risk measure and historical expected shortfall measure, which were both calculated at each of the 95, 98, and 99 percent confidence levels. The basic comparison is the risk measurement from the portfolio consisting of the raw positions to the risk measurement from a given risk mapping weighting scheme. Two sets of results were included in the write-up: Tables AB2.01 through AB2.10, which contains the average weighted-factor beta estimates for portfolio groups MC1 through MC10, respectively and Tables AC2.01 through AC2.10, which contains the estimates of the average risk measurements for portfolio groups MC1 through MC10, respectively and this is for each of the five factor-weighting schemes for each of the six different risk measurements. Tables AC2.01 through AC2.10, also contain the ratios of relative risk measurement from the portfolio with raw positions to the risk measurement from a given risk mapping weighting scheme. In order to facilitate the summarizing of the results, average relative risk measurement ratios were calculated and presented in Table 8.2; where the averages were over both models and factor weighting schemes.

From Table 8.2, none of the factor weighting scheme performed that well, but the "*best*" factor weighting scheme on the average was the naïve equal-weighted scheme. The risk-adjusted factor weighting scheme did better than the average factor weighting scheme, and the covariance-based factor weighting scheme did better than the variance-based factor weighting scheme. A very interesting result is that that the weighting schemes systematically did better for the more extreme tail risk measurement at all three confidence levels. At a given confidence level, the historical expected shortfall consistently performs better than the historical value-at-risk measure.

Table 8.2 - Average Relative Risk Measurement Ratios					
Factor weighting Scheme	**Average Over Entire Series**	**Average/Standard Deviation**	**Covariance**	**Variance**	**Equal weighted**
HVAR@95%	0.169930568	0.20554241	0.324467	0.395399	0.50435
HVAR@98%	0.180146556	0.21779541	0.336038	0.409319	0.515826
HVAR@99%	0.180655406	0.21720801	0.331092	0.40333	0.508754
ES(95%)	0.177300563	0.21345758	0.334046	0.407417	0.512466
ES(98%)	0.182220812	0.2189935	0.345278	0.420022	0.52407
ES(99%)	0.18321935	0.22015846	0.355922	0.432619	0.538656
Factor Weighting Average	0.178912209	0.21552589	0.337807	0.411351	0.517354

Chapter 9: Conclusions and Future Research

Most studies of the benefits of diversification focus on portfolio risk measures that are functions of the properties of the center region of a log-return distribution. The distribution of the log-returns of an equity portfolio should be at least approximately Gaussian if the portfolio is considered diversified. This is because the consequences of the benefits of the diversification effects of a well-diversified portfolio will have "averaged" away the significance of the extreme values and extreme dependencies. Statistically, this is just another way of stating the central limit theorem for a sum of centered and normalized sums. If the portfolio is diversified and the log-returns are approximately jointly Gaussian, the variance/covariance VaR forecast is a coherent risk measure. In general, even if the returns are fat-tailed, there will be diversification benefits, justifying the use of the simple model to implement VaR and expected shortfall estimators to be implemented using the historical risk measurement method. The expected shortfall is, in general a coherent risk measure, but the historical VaR method may not be coherent. A historical VaR forecast should be an approximately coherent risk measure if a portfolio is diversified, whereas the expected shortfall should be a coherent risk measure if a portfolio is diversified. This study concerned an empirical analysis of the statements and concepts just mentioned. Specifically, the analysis concerned the quantification of the extent and nature of the risk reduction arising as a consequence of the effects of diversification on a number of different categories of equity portfolios. The risk reduction was measured using both an unexpected and an exceptional (or extreme) risk metric, which were the value at risk (VaR) and the expected shortfall, respectively. Many of the unexpected loss discussions were based on the historical VaR results since the results of portfolio risk measurement results from standard portfolio theory and its normally distributed log-returns directly carry over to unexpected loss estimation as both methodologies are based on function of the standard deviation of normally distributed log-returns.

If the portfolio is well-diversified and the variance/covariance VaR approach is appropriate, then setting risk capital levels and risk limits is straightforward and a function of the standard deviation of the distribution of the portfolio returns. In this context, the risk capital levels and risk limits of the portfolios and the individual positions will be functions of the estimates diversified portfolio VaR forecasts and component VaR forecasts, respectively. In this study, only the diversified portfolio VaR and component VaR forecasts were estimated, since the risk capital levels and risk limits are just scaled-version of the diversified portfolio VaR and component VaR forecasts.

The additional benefits of diversification for foreign portfolio gained, as compared to domestic portfolios may be attributed to the unsystematic component of the added volatility/noise/uncertainty of the FOREX rates. The results of the two simulation models exhibited two extremes of ideal diversification. The geometric Brownian motion (GBM) was the ideal normal-tailed model where diversification was obtained quickly and the most significant extent of risk reduction, whereas the Fréchet random walk (FRW) was the ideal fat-tailed model, with significantly greater diversification benefits than the collections of domestic or mixed-foreign portfolios, but the extent of the risk reduction was not as great as that of the GBM. The lesser extent of risk reduction for the FRW was due to the difficulties of averaging away the influence of the low-probability extremely-large log-returns that occur with the FRW.

The Indonesian, Swiss and Turkish portfolios exhibited the least average relative and absolute risk reductions, whereas the German, Israeli, and Spanish portfolios exhibited the largest average relative and absolute risk reductions. The average values for the simulated models were close to twice that of the real portfolios. Again it was difficult to extract any patterns from the results for the mixed-foreign portfolios.

The excessive risk of the Brazilian and Indonesian positions, which were severely affected by the Brazilian Currency Crisis of January 1999 and the 1997 Southeast Asian Financial Crisis and the large movement in the German equity Contigas during the fifth observation year and the large fluctuating price movements for the Irish equity Elan illustrate the limitations of the linear analyses that were undertaken in this

investigation and the limitation of diversification. The benefits of diversification are applicable during normal market conditions. This implies that higher order risk sensitivities may be required for modeling extreme losses even if there are a large number of positions in a portfolio.

In general the results for the tail-risk measures were similar to what has been found for the center of the portfolio risk measures. The use of a mix of positions denominated in different foreign currencies will reduce the risk of a portfolio. Also that the portfolios from developed markets were in general, less risky and more diversified than portfolios from emerging markets. Finally, the results from the analysis of the simulated models, whose log-returns were generated independently, indicated that the covariance between the positions plays a significant role in the assessment of the risk inherent to real portfolios. This observation is based on the greater diversification benefits exhibited by the two simulations models when compared to the domestic, mixed-foreign, developed markets and emerging markets portfolios.

The analysis is static, implying that the effects of liquidity changes and portfolio compositions changes were not considered. Another approach to generating the portfolios is to first select the largest twenty five equity shares by market capitalization and then add the positions as a function of the sample standard deviations of the log-returns of the individual positions. This way of adding the positions would smooth out the shapes of the graphs and help in the interpretations.

As an extension to the results presented, the empirical risk mapping experiment was investigated, and risk mapping is the next step for portfolio with extremely large numbers of positions from numerous financial markets in numerous different country. The idea is risk mapping may be able to simplify the risk measurement process for portfolios with extreme large numbers of position, where the position may be changing often. That is, the process of risk mapping of the component risks from a large set of positions to a much smaller set of proxy risk factors may reduce the cost of risk monitoring and allow for an increased frequency of risk assessment, while still emulating the inherent risk of the original portfolio and its component positions. This is after it has been determined that a "well-diversified" portfolio has been secured and has estimated the risk contribution measures between the positions and the portfolio

and the positions and the proxy set of risk factors. Finally risk mapping may allow for a more dynamic approach to risk assessment and measurement.

The five simple weightings for factor models did not work that well in the sense of generating a risk measurement estimate that is close to the estimate from the original portfolios. On the average the best weighting scheme was the naïve equal-weighted scheme. Other more complicated weighting schemes such as those based on statistical factor analysis or principal components analysis could have been tried.

The factor selection process was basically add-hoc in the sense that an attempt was made to include most of the perceived major stylized influences on global market prices. Once the factors were choose very little analytic screening was undertaken. A more systematic to the factor selection process could have been implemented based on say, the extent to which the selected factors describe the movements in major global markets' indices. Also the risk factors could have modeled factor risk premiums, where the latter are defined as the current value of the factor minus the expected value of the factor or centered version of the original factors.

Sometimes the portfolio weights were equal to zero. When considering the typically low R-squared estimates for stock and portfolio values, the results of typically explaining about 50 % of the risk measurements is considered reasonable. The analysis was linear, which implies that the linear factor structure is inadequate for time periods where a given factor or equity has experienced a large movement over the period. Sometime the estimated factor-based portfolio processes and the raw portfolio process are out of phase, i.e. when one is up, the other is down. This implies that maybe quadratic terms or 2^{nd}-order cross-terms.

References

Acerbi, C. and D. Tasche (May 2001), Expected Shortfall: A Natural Coherent Alternative to Value At Risk, Abaxbank und Munchen.

Agmon, T. (1972), "The Relations Among Equity Markets: A Study of Share Price Co-Movements in the United States, United Kingdom, Germany and Japan," Journal of Finance, 27, 839-855.

Artzner, P. "Application of Coherent Risk Measures to Capital Requirements in Insurance," North American Actuarial Journal, 3, 2, 11-25.

Artzner, P., F. Delbaen, J., M. Eber, and D. Heath (1999), "Coherent Measures of Risk," Mathematical Finance, 3, 203-228.

Barber, J., R. and M., L. Copper (Fall 1996), "Immunization Using Principal Component Analysis," The Journal of Portfolio Management, 99-105.

Bessis, J. (April 2002), Risk Management in Banking, London, London: John Wiley & Sons.

Best, P. (1999), Implementing Value at Risk, New York, New York: John Wiley & Sons.

Blattberg, R., C. and Gonedes, N., J. (April 1974), "A Comparison of the Stable Student Distributions as Statistical Models for Prices," Journal of Business, 47, 244-280.

Brooks, R. and M. Del Negro (2002), International Diversification Strategies, Atlanta, Atlanta: Federal Reserve Bank of Atlanta, working paper.

Brummelhuis, R., A. Cordoba, M. Quintanillia, and L. Seco (2000), "Principal Component Value At Risk," International Journal of Theoretical and Applied Finance, 541-545.

Crouchy, M., D. Galai, and R. Mark (2000), Risk Management, New York, New York: McGraw-Hill Book Company, 627-655.

Cuthbertson, K. and D. Nitzsche, Financial Engineering: Derivatives and Risk Management, New York, New York: McGraw-Hill Book Company, 627-655.

Dalle Molle, J. (2003), Advanced Financial Risk Management: Lecture Notes, Palmerston North, Palmerston North: Department of Finance, Banking and Property, Massey University, unpublished lecture notes.

Da Costa Lewis, N. (2003), Market Risk Modelling: Applied Statistical Methods for Practitioners, RISK Books, 109-123.

Das, S. (1997), Risk Management and Financial Derivatives: A Guide to the Mathematics, edited by S. Das, New York, New York: McGraw-Hill Book Company.

Deutsche, H., and R., Eller, Derivatives and Internal Models: Modern Risk Management, MACMILLAN Business, 258-279.

Dowd, K. (November 1998), "VAR by Increments," RISK, 31-32.

Dowd, K. (2002), Measuring Market Risk, West Sussex: John Wiley & Sons, Ltd.

Embrechts, P. (2000), "What is Wrong with the Bell Curve," Extremes and Integrated Risk Management, edited by P. Embrechts, London, England, RISK books, xxv-xxvii.

Espitia, M. and R., Santamaria (1994), "International Diversification Among the Capital Markets of the EEC," Applied Financial Economics, 4, 1-10.

Elton, E., J., M., J. Gruber, S., J., Brown and W., N. Goetzmann (2003), Modern Portfolio Theory and Investment Analysis, 6th edition, New York, New York: John Wiley and Sons Inc..

Evans, J., L. and S, H. Archer (1968), "Diversification and the Reduction of Dispersion: An Empirical Analysis," Journal of Finance, 23, 761-769.

Fama, E. (January 1965), "The Behavior of Stock Market Prices," Journal of Business, 38, 34-105.

Fama, E. (September 1990), "Stock Returns, Expected Returns, and Real Activity," Journal of Finance, 45, 1089-1108.

Fengler, M., R., W., K. Hardle and C. Villa (2001), The Dynamics of Implies VolatilitiesA Common Principal Components Approach, Humboldt-Universitat, working paper.

Fisher, L. and L. Lorie (April 1970), "Some Studies of Variability of Returns on Investments on Common Stocks," Journal of Business, 43, 99-134.

Follmer, H. and A. Schied, Convex Measures of Risk and Trading Constraints, Institut Fur Mathematik and Humboldt-Universitat, Berlin, Germany.

Francis, J., C. and S., H. Archer (1979), Portfolio Analysis, New Jersey, New Jersey: Prentice-Hall.

Frye, J. (1997), Principals of Risk: Finding VAR Through Factor-Based Interest Rate Scenarios, New York, New York: KPMG publications.

Gallati, R., R. (2003), Risk Management and Capital Adequacy, New York, New York:

McGraw, 318-403.

Garman, M. (May 1996), "Improving on VAR," RISK, 9, 5.

Garman, M. (October 1997), "Taking VAR to Pieces," RISK, 10, 10.

Garman, M., J., R., Aragones and C., Blanco (February 1999), "A Sector Approach," ASIA RISK, 36-39.

Glauber, R. (January 1998), "Relative Values", RISK, 38-40.

Golub, B., W. and L., M. Tilman (2000), Risk Management: Approaches for Fixed Income Markets, New York, New York: John Wiley & Sons, Inc.

Golub, B., W. and L., M. Tilman (Summer 1997), "Measuring Yield Curve Risk Using Principal Components Analysis, Value at Risk, and Key Rate Durations," The Journal of Portfolio Management, 72-84.

Grubel, H., G. (1968), "Internationally Diversified Portfolios: Welfare Gains and Capital Flows," American Economic Review, 58, 1299-1314.

Grubel, H., G. and K., Fadner, (1971), "The Interdependence of International Equity Markets," Journal of Finance, 26, 89-94.

Hanranhan, M. (2000), "Establishing a Capital-Based Limit Structure," The Professional's Handbook of Financial Risk Management, edited by M. Lore, and L. Borodovsky, Oxford, England: Butterworth-Heinemann, Chapter 22, 635-656.

Ho, T., S., Y.; M., Z., H. Chen and F., T., H. Eng (Fall 1996), "VAR Analytics: Portfolio Structure, Key Rate Convexities, and VAR Betas," The Journal of Portfolio Management, 89-98.

Jeon, B., N. and G., M., Furstenberg (1990), "Growing International Co-movement in Stock Price Indexes," Quarterly Review of Economics and Business, 30, 15-30.

Johnson, K., H. and D., S. Shannon (1974), "A Note on Diversification and the Reduction of Dispersion," Journal of Financial Economics, 4, 365-372.

Jorion, P. (2001), The New Benchmark for Managing Financial Risk: Value At Risk, Second Edition, New York, New York: McGraw-Hill Book Company.

Kamphuis, R., W., R., C., Kormendi and J., W., H., Watson (eds.), Black Monday and The Future of Financial Markets, Homewood: Irwin, 1989.

King, B., F. (January 1966), "Market and Industry Factors in Stock Price Behavior," Journal of Business, 39, 149-150.

Lessard, D., R. (1973), "International Portfolio Diversification: A Multivariate Analysis for a Group of Latin American Countries," Journal of Finance, 28, 619-633.

Lessard, D., R. (1974), "World, National and Industry Factors in Equity Returns," Journal of Finance, 29, 379-391.

Lessard, D., R. (1976), "International Diversification," Financial Analysts Journal, 32, 32-38.

Levy, H. and M., Sarnat (1970), "International Diversification of Investment Portfolios," American Economic Review, 60, 668-675.

Linter, J. (1965), "Security Prices, Risk and Maximal Gains from Diversification," Journal of Finance, 20, 587-615.

Litterman, R. (Special Issue 1996), "Hot Spots and Hedges (I)," The Journal of Portfolio Management, 52-75.

Litterman, R. (1997), "Hot Spots and Hedges (II)," RISK, 10, 5.

Markowitz, H. (1952), "Portfolio Selection," Journal of Finance, 7, 77-91.

Marrison, C. (2002), The Fundamentals of Risk Measurement, New York, New York: McGraw-Hill Book Company.

Martin, G. and S., Y., Chung, Risk Management for Hedge Funds and CTA's: VAR versus SPAN Margin, University of Massachusetts and TRS Associates; Long University.

McDonald, J., G. (1973), "French Mutual Fund Performance: Evaluation of Internationally Diversified Portfolios," Journal of Finance, 28, 1161-1180.

Morgan, J., P. (1995), RiskMetrics Technical Document, Third Edition, New York, New York: Morgan Guaranty Trust Company.

Parker, V., R., Managing Hedge Fund Risk: From the Seat of the Practitioner – Views From Investors, Counterparties, Hedge Funds and Consultants, London: RISK Books.

Pearson, N. and C. Smithson (December 2000), "Beyond VAR," RISK, 85-87.

Rau-Bredow, H. (2002), Value At Risk, Expected Shortfall, and Marginal Risk Contribution, Wurzburg.

Rouinez, C. (February 1997), "Going Greek with VAR," RISK, 10, 2.

Scherer, B. (December 2000), "Preparing the Best Risk Budget," RISK, 30-32.

Sharpe, W., F. (1964), "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk," Journal of Finance, 19, 425-442.

Sharpe, W., F. (Winter 1992), "Asset Allocation: Management Style and Performance Measurement: An Asset Class Factor Model Can Help Make Order Out of Chaos," The Journal of Portfolio Management, 18, 2.

Singh, M., K. (Fall 1997), "Value at Risk Using Principal Components Analysis," The Journal of Portfolio Management, 101-112.

Smithson, C. (December 2000), "Beyond VAR," RISK, 85-87.

Solnik, B., H. (1974), "Why Not Diversify Internationally Rather Than Domestically?" Financial Analysts Journal, 30, 48-54.

Statman, M. (2002), How Much Diversification is Enough? Santa Clara: Santa Clara University.

The Basle Committee on Banking Supervision, Bank for International Settlements (April 1995), "Proposal to Issue a Supplement to the Basle Capital Accord to Cover Market Risks."

The Institute of Chartered Financial Analysis, A Practitioner's Guide to Factor Models, The Research Foundation of the Institute of Chartered Financial Analysts.

Venkat, S. (2000), "Implementing a Firm-wide Risk Management Framework," The Professional's Handbook of Financial Risk Management, edited by M. Lore, and L. Borodovsky, Oxford, England: Butterford-Heinemann, Chapter 20, 581-613.

Watson, G. and J. Mina (December 2000), "The Value of Relative VAR," RISK, 20-25.

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios

Table A1.01 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Australia																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.0939	0.9043	1.1142	1.0592	1.0185	1.0517	1.0572	1.0363	1.016	1.0183	1.0191	1.0061	1.0284	0.9863	1.0251	1.0187	0.9982	0.992	1.0037	1.0055	1.0077	1.0072	1.0013	0.9987
Port Std Dev/Sum Positions**	1.0923	0.9114	1.1179	1.0589	1.0194	1.0491	1.0564	1.0347	1.016	1.0177	1.0183	1.0068	1.0267	0.9876	1.0248	1.0189	0.9999	0.991	1.004	1.0044	1.0072	1.007	1.0435	0.9988
75th-25th Range of Return***	1.0585	0.9161	1.1473	1.0426	1.0531	1.0345	1.0364	1.03	1.0297	1.018	1.0419	1.0001	1.0304	1.0047	1.032	0.9974	1.011	0.9984	0.9901	1.0032	0.9993	1.0104	1.0059	0.9948
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.0939	0.9892	1.1019	1.1679	1.1892	1.2506	1.3204	1.3675	1.3892	1.4131	1.4401	1.4492	1.4903	1.4673	1.5042	1.5316	1.5291	1.5163	1.5221	1.5307	1.5426	1.5536	1.5556	1.5532
Port Std Dev/Sum Positions**	1.0923	0.9952	1.1124	1.1788	1.2016	1.2596	1.3295	1.3747	1.3964	1.4199	1.4456	1.4557	1.4946	1.4731	1.5096	1.5375	1.5375	1.5233	1.5296	1.5365	1.5478	1.5584	1.6262	1.6241
75th-25th Range of Return***	1.0585	0.9704	1.1103	1.1562	1.2161	1.2566	1.3032	1.3397	1.3783	1.4035	1.4621	1.4627	1.5069	1.5133	1.5604	1.557	1.5736	1.5692	1.5518	1.5537	1.5544	1.5682	1.5804	1.5678

Table A1.02 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Brazil																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.9565	1.3133	1.022	1.0195	1.0288	1.0771	0.9953	1.009	0.9979	0.9956	1.0352	1.0137	0.9727	0.9131	1.0245	1.0178	0.9875	1.0379	1.0144	1.0142	1.0241	1.0128	1.0098	1.0117
Port Std Dev/Sum Positions**	0.9931	1.2635	1.0132	1.0163	1.0378	1.0803	0.9894	1.0085	0.9968	0.9943	1.0334	1.0172	0.9744	0.9786	1.0257	1.0143	0.9836	1.0359	1.0122	1.0111	1.0221	1.0126	1.0435	1.0065
75th-25th Range of Return***	0.9756	1.3939	0.9705	1.0307	1.03	1.08	0.9922	1.0061	0.9798	0.9961	1.0365	1.0302	0.9748	0.9553	1.0238	1.0317	0.9951	1.0361	1.0052	1.0085	1.0126	1.0227	1.0044	0.9968
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.9565	1.2647	1.3008	1.3222	1.3574	1.4575	1.451	1.454	1.4517	1.4463	1.5005	1.5195	1.4785	1.3608	1.394	1.4194	1.4002	1.4554	1.4724	1.4949	1.5316	1.5487	1.5633	1.5809
Port Std Dev/Sum Positions**	0.9931	1.2576	1.2796	1.2988	1.3477	1.4542	1.4391	1.4448	1.4413	1.4338	1.4843	1.5091	1.4706	1.4397	1.4765	1.4983	1.474	1.5277	1.5443	1.5633	1.5993	1.6179	1.6883	1.6997
75th-25th Range of Return***	0.9756	1.3904	1.3342	1.3782	1.3993	1.5044	1.4889	1.478	1.4492	1.4474	1.5078	1.5602	1.5028	1.4372	1.4689	1.5121	1.5093	1.5681	1.5741	1.5838	1.6088	1.643	1.647	1.6439

Table A1.03 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Chile																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.0234	1.0406	1.0326	1.0498	1.1062	1.0558	1.0478	1.081	1.0432	1.0191	1.0318	1.0332	0.988	1.0419	1.0361	1.0292	1.0089	1.0264	1.0084	1.022	1.0173	0.9969	0.9829	0.9985
Port Std Dev/Sum Positions**	1.0469	1.0332	1.0284	1.053	1.1035	1.0534	1.0462	1.0772	1.0406	1.0187	1.0325	1.0362	1.003	1.0405	1.0375	1.0294	1.0046	1.0256	1.0078	1.0234	1.0171	0.9917	1.0435	0.9743
75th-25th Range of Return***	0.9923	1.0148	1.0273	1.017	1.0632	1.0537	1.0468	1.0761	1.0616	0.9901	1.0519	1.0338	1.0556	1.0271	1.0354	1.0182	0.9981	1.0248	1.0068	1.0364	1.0043	0.9784	1.0325	0.9917
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.0234	1.0574	1.0923	1.1499	1.2632	1.3346	1.3944	1.5069	1.5712	1.6017	1.6512	1.7067	1.7017	1.7757	1.8369	1.8889	1.9033	1.953	1.9657	2.0077	2.0428	2.0355	2.0016	1.9966
Port Std Dev/Sum Positions**	1.0469	1.0768	1.1091	1.172	1.2896	1.359	1.4178	1.5253	1.5858	1.6158	1.6669	1.7283	1.7344	1.8061	1.8731	1.9281	1.936	1.9862	1.999	2.0464	2.0818	2.0646	2.1544	2.1044
75th-25th Range of Return***	0.9923	1.0019	1.0264	1.0536	1.11	1.1737	1.2182	1.3152	1.3922	1.3732	1.4444	1.4967	1.5811	1.6306	1.6859	1.7165	1.7046	1.7458	1.7593	1.8279	1.8327	1.7936	1.8597	1.8426

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,...,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,...,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.04 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for France

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.04	1.1515	1.093	1.0155	0.963	1.008	1.1321	0.9708	1.0481	1.0055	1.0132	1.005	1.003	0.9257	1.0074	1.0103	0.999	0.9964	1.0177	0.9915	1.0013	1.0211	0.9954	0.99196
Port Std Dev/Sum Positions**	1.0362	1.1561	1.091	1.0137	0.9699	1.0064	1.1274	0.9796	1.0473	1.0069	1.0123	1.0031	1.003	0.9537	1.0033	1.009	0.9973	0.9978	1.014	0.9873	0.9997	1.02	1.0435	0.99491
75th-25th Range of Return***	1.0908	1.1093	1.075	1.0528	0.9404	1.0294	1.1247	0.9534	1.0583	1.017	1.0326	1.0206	1.0016	0.9195	1.0111	1.0194	1.0022	0.9748	1.0151	1.0026	1.0099	1.0089	1.0019	0.98561
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.04	1.1945	1.307	1.3307	1.2931	1.3079	1.4837	1.4554	1.5228	1.5414	1.5599	1.5675	1.5655	1.4565	1.4615	1.4753	1.4737	1.4679	1.5004	1.4879	1.4891	1.5203	1.514	1.49771
Port Std Dev/Sum Positions**	1.0362	1.1945	1.304	1.3263	1.2982	1.3112	1.4771	1.4599	1.5259	1.5463	1.5636	1.5687	1.5679	1.5001	1.5004	1.5137	1.5107	1.5064	1.5342	1.5151	1.5144	1.544	1.6112	1.60314
75th-25th Range of Return***	1.0908	1.2041	1.298	1.3715	1.3048	1.3492	1.5248	1.4645	1.547	1.585	1.6479	1.671	1.6687	1.5507	1.5566	1.587	1.5876	1.5492	1.5762	1.5866	1.5965	1.6029	1.5986	1.5838

Table A1.05 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Germany

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.2053	1.4639	1.076	0.949	1.0373	1.0396	0.9948	0.9954	1.0217	0.9902	1.078	1.0293	1.0173	1.0187	0.9889	1.0164	1.0434	1.0326	0.9847	1.0107	1.0315	0.9984	0.9852	1.03076
Port Std Dev/Sum Positions**	1.214	1.4421	1.081	0.9629	1.0336	1.0466	0.9888	0.993	1.0189	0.9913	1.0767	1.0286	1.0158	1.0184	0.9876	1.0137	1.0469	1.0362	0.9877	1.0091	1.0338	0.9984	1.0435	0.98373
75th-25th Range of Return***	1.2044	1.4907	1.048	1.0085	1.0187	1.0869	0.9914	0.9824	1.026	0.9932	1.0591	1.0314	1.0304	1.0324	0.9793	1.0147	1.0549	1.0217	1	0.9936	1.0518	1.0027	0.9977	1.01703
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.2053	1.7613	1.891	1.8033	1.874	1.9452	1.9377	1.9302	1.9726	1.9575	2.1063	2.1641	2.1998	2.2406	2.2197	2.2493	2.3455	2.4188	2.3775	2.3985	2.4717	2.4673	2.4332	2.50693
Port Std Dev/Sum Positions**	1.214	1.747	1.89	1.8297	1.8935	1.9818	1.9619	1.9496	1.9868	1.9729	2.1186	2.1746	2.2078	2.2481	2.2258	2.2511	2.3533	2.4341	2.4028	2.4204	2.4994	2.4951	2.6036	2.56356
75th-25th Range of Return***	1.2044	1.7907	1.872	1.8952	1.9337	2.104	2.0851	2.0517	2.1065	2.0974	2.2098	2.2735	2.3399	2.421	2.378	2.3872	2.5163	2.5693	2.5707	2.5464	2.6773	2.6829	2.6766	2.71925

Table A1.06 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Hong Kong

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.9207	1.1226	0.945	0.9545	1.1463	1.1229	1.0609	0.9512	0.9657	0.977	0.9877	0.9984	1.0059	1.0113	0.9991	1.0194	0.9946	1.0338	0.9783	0.9932	1.0482	1.0122	1.0471	1.02929
Port Std Dev/Sum Positions**	0.9277	1.1203	0.947	0.9515	1.1455	1.1224	1.0641	0.9501	0.9677	0.9737	0.9879	0.9982	1.0064	1.0109	1.003	1.0176	0.9943	1.0369	0.9765	0.9923	1.0407	1.0123	1.0435	1.03525
75th-25th Range of Return***	0.9121	1.0958	0.921	0.997	1.1539	1.0751	1.049	0.972	0.9331	1.0003	0.987	1.0158	1.011	1.0031	1.0014	1.0343	1.0137	1.0319	0.9842	1.0048	1.0241	1.0089	1.0337	1.00719
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.9207	1.032	0.977	0.9313	1.0676	1.1991	1.2736	1.2098	1.1656	1.1391	1.1256	1.1222	1.1292	1.1419	1.1415	1.1645	1.1579	1.1964	1.1704	1.1626	1.2176	1.2325	1.2908	1.32896
Port Std Dev/Sum Positions**	0.9277	1.0383	0.986	0.9357	1.073	1.2062	1.2863	1.2186	1.176	1.1451	1.1319	1.1283	1.1357	1.1479	1.1519	1.1726	1.1656	1.2087	1.1802	1.1709	1.2187	1.234	1.2876	1.33311
75th-25th Range of Return***	0.9121	0.9919	0.917	0.9101	1.0488	1.1259	1.1835	1.1533	1.0659	1.0692	1.0571	1.067	1.0765	1.0831	1.082	1.1161	1.1286	1.1657	1.1484	1.1531	1.1795	1.1916	1.2282	1.23645

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,...,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,...,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.07 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for India

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.3422	0.8446	1.0739	1.097	1.0493	1.091	1.0218	1.0523	0.995	0.9933	0.9924	1.0326	1.0461	1.0147	1.0181	1.0021	1.0133	1.0025	1.0007	1.0128	1.0235	1.0235	1.0167	0.98475
Port Std Dev/Sum Positions**	1.3339	0.8799	1.083	1.097	1.0499	1.0938	1.0142	1.0529	0.988	0.9896	0.9891	1.0304	1.0439	1.0144	1.0156	0.9998	1.0117	1.0012	0.9981	1.0112	1.0247	1.0201	1.0435	1.01313
75th-25th Range of Return***	1.2757	0.8093	1.1293	1.08	1.0466	1.0958	1.0172	1.0527	0.976	0.9997	0.9709	1.0542	1.0671	0.9811	1.0245	0.9932	1.0164	0.977	0.9898	1.0176	1.0258	1.0238	1.0204	0.96058

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.3422	1.1399	1.2117	1.327	1.3946	1.5222	1.5573	1.6381	1.629	1.6191	1.6081	1.6594	1.7401	1.7613	1.7972	1.8024	1.8288	1.8344	1.8361	1.8618	1.9053	1.9516	1.9876	1.95683
Port Std Dev/Sum Positions**	1.3339	1.1782	1.2671	1.389	1.4631	1.5995	1.6233	1.7094	1.686	1.6686	1.6525	1.7028	1.7811	1.8023	1.833	1.835	1.8589	1.8624	1.8594	1.8827	1.9289	1.969	2.0546	2.08453
75th-25th Range of Return***	1.2757	1.0361	1.1585	1.245	1.3119	1.437	1.4532	1.5378	1.49	1.4886	1.4408	1.5198	1.6271	1.5843	1.6218	1.617	1.6417	1.6031	1.5855	1.6081	1.6511	1.6945	1.73	1.66879

Table A1.08 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Indonesia

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.091	0.9654	0.9292	0.954	0.8155	1.0312	1.0684	0.9715	1.019	1.0309	1.0216	1.0523	1.0381	1.0067	1.0156	1.0292	1.0055	0.999	1.0202	1.0386	0.9896	1.0126	1.0045	0.99408
Port Std Dev/Sum Positions**	1.1002	0.9628	0.905	0.982	0.8823	1.0263	1.0525	0.9759	1.011	1.0135	1.0103	1.0562	1.0378	0.9989	1.0115	1.025	0.9993	0.9918	1.0213	1.0328	0.9846	1.0091	1.0435	1.00382
75th-25th Range of Return***	0.7508	0.9717	0.9455	0.902	0.8452	1.0438	1.0514	0.9308	1.015	0.9997	1.046	1.0493	1.0387	1.0113	1.0192	1.0341	1.0081	1.0124	1.0287	1.0425	0.978	1.0144	1.0187	1.00686

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.091	1.0537	0.9825	0.934	0.757	0.7796	0.833	0.802	0.817	0.84	0.8587	0.9017	0.9346	0.9402	0.9558	0.9826	0.9869	0.986	1.0055	1.0435	1.0347	1.0466	1.0518	1.04236
Port Std Dev/Sum Positions**	1.1002	1.0605	0.9643	0.94	0.8296	0.8522	0.8975	0.8761	0.886	0.8977	0.9072	0.957	0.9916	0.9902	1.0029	1.0266	1.0247	1.0168	1.0381	1.0716	1.0578	1.0665	1.1128	1.1177
75th-25th Range of Return***	0.7508	0.7296	0.6971	0.618	0.5214	0.5439	0.5705	0.5395	0.545	0.5399	0.5671	0.5925	0.6141	0.622	0.6339	0.6543	0.6616	0.6726	0.6893	0.7185	0.7065	0.7177	0.7292	0.73901

Table A1.09 - Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Ireland

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1022	1.1517	1.0814	1.153	0.8256	1.0322	1.0742	1.0703	1.04	1.0169	1.0236	1.0482	0.9983	1.0271	1.0212	1.0125	1.0333	1.0109	0.9948	0.9294	1.0169	1.0104	1.0119	1.0146
Port Std Dev/Sum Positions**	1.0995	1.1552	1.0797	1.152	0.8714	1.0452	1.0858	1.0743	1.044	1.0094	1.0225	1.0509	1.007	1.0294	1.0184	1.0108	1.0338	1.0065	0.9883	0.9177	1.0129	1.0099	1.0435	1.0058
75th-25th Range of Return***	1.082	1.1691	1.0889	1.139	0.8424	1.0464	1.0745	1.0559	1.072	0.9853	1.0132	1.062	0.9985	1.0209	1.0226	1.0408	1.0145	1.0224	0.9943	0.9024	0.981	1.0182	1.0247	1.01767

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1022	1.2717	1.3735	1.585	1.2818	1.3186	1.4175	1.5263	1.589	1.6095	1.6452	1.7265	1.7182	1.765	1.7983	1.8193	1.8853	1.9024	1.8875	1.7515	1.781	1.8016	1.8138	1.8406
Port Std Dev/Sum Positions**	1.0995	1.2723	1.3718	1.582	1.3694	1.4279	1.5484	1.6681	1.743	1.7577	1.802	1.8942	1.9105	1.9671	2.0018	2.0271	2.0998	2.1138	2.0891	1.9255	1.9529	1.9772	2.0632	2.06514
75th-25th Range of Return***	1.082	1.2641	1.3719	1.563	1.3179	1.3812	1.4866	1.5659	1.683	1.6529	1.668	1.7753	1.7735	1.8111	1.8426	1.9263	1.9578	1.9883	1.9824	1.8182	1.7936	1.8151	1.8607	1.90065

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1- Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.10- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Israel																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1437	1.2042	1.097	1.078	0.9646	1.0508	1.0316	0.9888	1.003	1.0051	0.9679	1.0144	1.0544	1.0114	0.9837	1.0087	1.0353	1.0312	1.0161	1.0149	1.0241	1.0273	1.0251	1.00845
Port Std Dev/Sum Positions**	1.1451	1.0595	1.118	1.1	1.0053	1.0623	1.0442	1.0094	1.017	1.0183	0.9677	1.0295	1.0568	1.0197	0.9992	1.0135	1.036	1.0335	1.0214	1.0192	1.001	1.0258	1.0435	1.02318
75th-25th Range of Return***	1.2265	1.3473	1.061	1.044	0.9082	1.0345	1.0642	0.9996	1.004	1.0454	0.9669	0.9886	1.078	1.0421	0.9779	1.0165	1.0437	1.0347	1.0025	1.0144	1.0092	1.0303	1.0205	1.01456
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1437	1.3654	1.483	1.594	1.5339	1.6086	1.6592	1.6394	1.647	1.6555	1.6053	1.6288	1.7175	1.7372	1.7086	1.723	1.7832	1.8428	1.8725	1.9014	1.9485	2.0012	2.0518	2.06974
Port Std Dev/Sum Positions**	1.1451	1.1857	1.281	1.377	1.3452	1.4105	1.4548	1.4547	1.471	1.4896	1.4362	1.4771	1.5599	1.587	1.5838	1.6016	1.6578	1.7164	1.7511	1.7843	1.7892	1.8328	1.9125	1.95641
75th-25th Range of Return***	1.2265	1.6499	1.74	1.82	1.6458	1.6992	1.8056	1.8027	1.809	1.8938	1.833	1.8136	1.9518	2.0377	1.9935	2.0209	2.1139	2.1933	2.2012	2.2266	2.2438	2.3101	2.3647	2.40075

Table A1.11- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Italy																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.2042	1.0015	0.979	1.062	1.0279	1.0269	1.0319	0.9999	1.058	1.0004	1.0226	1.0268	1.0439	0.9843	1.0237	1.0178	0.9961	0.9982	0.9838	1.0171	1.0015	1.0202	1.0191	1.01295
Port Std Dev/Sum Positions**	1.2139	0.9952	0.98	1.065	1.0235	1.0247	1.0328	0.9988	1.061	1.0035	1.0256	1.0285	1.045	0.9896	1.0256	1.0172	0.9959	0.999	0.9887	1.0183	0.9994	1.0176	1.0435	1.02122
75th-25th Range of Return***	1.2185	1.022	0.95	1.049	1.0448	1.0198	1.0469	1.0474	1.036	1.019	1.0194	1.0459	1.0395	0.9908	1.0076	1.0244	0.9866	0.9891	0.9752	1.0219	1.0069	1.03	1.0133	1.00342
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.2042	1.2095	1.173	1.249	1.2879	1.3249	1.3722	1.3714	1.448	1.4457	1.4786	1.518	1.5824	1.5613	1.5994	1.6293	1.6251	1.6203	1.5911	1.6176	1.6217	1.6528	1.6838	1.70642
Port Std Dev/Sum Positions**	1.2139	1.2126	1.177	1.258	1.2907	1.3245	1.3722	1.3701	1.451	1.4534	1.4902	1.5328	1.5986	1.5853	1.6259	1.6556	1.6509	1.6476	1.6272	1.6557	1.6562	1.6837	1.7569	1.79314
75th-25th Range of Return***	1.2185	1.2511	1.17	1.235	1.2937	1.3164	1.3835	1.455	1.503	1.5433	1.5711	1.6469	1.7017	1.6885	1.6946	1.7391	1.7113	1.6945	1.6471	1.6713	1.687	1.7367	1.7539	1.75804

Table A1.12- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Japan																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.0988	1.0898	1.009	1.011	1.0822	0.9912	1.0211	0.97	1.081	0.989	0.9912	1.0123	1.0071	0.9969	1.0407	0.9835	1.0399	0.9827	0.9903	1.0025	1.0042	0.9935	1.0049	0.98325
Port Std Dev/Sum Positions**	1.1029	1.0798	1.007	1.013	1.0772	0.9968	1.0209	0.9729	1.075	1.0004	0.9914	1.0122	1.0069	0.9962	1.0393	0.9861	1.0383	0.9826	0.9909	1.0017	1.0037	0.9974	1.0435	1.00259
75th-25th Range of Return***	1.0307	1.1042	0.974	1.044	1.0592	0.9723	1.0265	0.9603	1.074	1.0124	0.9891	1.0289	1.0165	0.9925	1.0444	0.9928	1.0263	0.9924	0.9704	1.0075	1.0078	0.9883	1.0079	0.98044
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.0988	1.1974	1.206	1.221	1.3205	1.3093	1.3372	1.297	1.402	1.3803	1.3695	1.3876	1.3976	1.3939	1.4504	1.4276	1.4849	1.4604	1.4479	1.4523	1.4588	1.4471	1.4545	1.43073
Port Std Dev/Sum Positions**	1.1029	1.1915	1.198	1.215	1.308	1.3052	1.3329	1.2973	1.395	1.392	1.3813	1.3999	1.4095	1.4049	1.4594	1.4403	1.4953	1.4702	1.4586	1.462	1.4676	1.4622	1.5258	1.52992
75th-25th Range of Return***	1.0307	1.1344	1.099	1.143	1.212	1.1689	1.2065	1.1589	1.248	1.2546	1.2466	1.2812	1.292	1.286	1.3416	1.3306	1.367	1.3605	1.3199	1.3314	1.3402	1.3215	1.3332	1.30257

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1- Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.13- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Mexico

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1156	1.3468	0.9415	0.9728	1.0367	1.019	1.0139	1.1014	1.036	1.0558	1.0138	1.0539	1.019	0.982	1.0234	1.0222	0.9954	1.0362	1.0249	1.031	0.9854	1.02	0.9985	0.9662
Port Std Dev/Sum Positions**	1.112	1.2838	0.9524	0.9795	1.0441	1.0239	1.018	1.0947	1.0387	1.0607	1.0136	1.0508	1.0208	0.989	1.0168	1.0229	1.0011	1.0365	1.0274	1.0311	1.0023	1.0217	1.0435	0.9921
75th-25th Range of Return***	0.9251	1.4254	0.8523	0.953	1.0643	1.0169	1.0023	1.1215	1.0579	1.0628	0.9764	1.0547	1.0465	1.0545	1.0213	1.0251	0.9642	1.0345	1.0409	1.0327	0.9882	1.0186	1.0073	0.9698

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1156	1.4968	1.4018	1.3644	1.416	1.4451	1.4675	1.6166	1.6771	1.7711	1.7987	1.8924	1.9302	1.8949	1.9416	1.9871	1.9792	2.0514	2.1056	2.1714	2.1477	2.1937	2.1883	2.1187
Port Std Dev/Sum Positions**	1.112	1.4199	1.3452	1.3189	1.3789	1.4141	1.4421	1.5792	1.642	1.7425	1.7699	1.8598	1.9011	1.8843	1.915	1.9627	1.9662	2.0388	2.098	2.1641	2.1746	2.2244	2.3211	2.3013
75th-25th Range of Return***	0.9251	1.3167	1.124	1.0688	1.137	1.159	1.1635	1.3051	1.3738	1.464	1.4306	1.5085	1.568	1.6613	1.6978	1.7465	1.688	1.7412	1.8114	1.869	1.8531	1.889	1.8966	1.8365

Table A1.14- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for New Zealand

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.0533	1.1189	0.9915	1.1239	1.0924	1.0563	1.0172	1.0324	1.0289	1.0256	1.0204	1.0045	1.0299	1.0178	1.0038	1.0036	0.9982	0.9982	1.0113	1.0065	1.0143	1.0061	1.0099	1.0171
Port Std Dev/Sum Positions**	1.0469	1.1238	0.9746	1.1225	1.0886	1.0637	1.0258	1.0375	1.0306	1.0276	1.0214	1.0068	1.0308	1.0188	1.0046	1.0045	0.9982	1.0001	1.0118	1.0075	1.0151	1.0065	1.0435	1.0093
75th-25th Range of Return***	1.048	1.1376	1.0361	1.1436	1.0522	1.0438	1.0201	1.004	1.0292	1.0476	1.0181	1.0115	1.0474	0.987	0.9929	1.0182	0.9956	1.0278	0.9965	1.0015	0.9921	1.027	0.9982	1.0177

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.0533	1.1647	1.1531	1.2908	1.3988	1.4748	1.5025	1.551	1.5956	1.6362	1.6696	1.6771	1.7247	1.7545	1.761	1.7696	1.7685	1.7655	1.7861	1.796	1.8218	1.8316	1.8466	1.878
Port Std Dev/Sum Positions**	1.0469	1.1594	1.1266	1.2607	1.3602	1.4403	1.4788	1.5335	1.5791	1.6216	1.6557	1.6662	1.7141	1.7445	1.7511	1.7611	1.7592	1.7583	1.7793	1.7907	1.8177	1.8279	1.9073	1.9216
75th-25th Range of Return***	1.048	1.1769	1.2177	1.3924	1.4587	1.5223	1.5568	1.5668	1.6102	1.6759	1.7097	1.7399	1.8218	1.8042	1.7803	1.8173	1.8134	1.8723	1.8569	1.8566	1.846	1.8932	1.8885	1.9224

Table A1.15- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Singapore

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.0967	1.0631	1.0814	1.0621	1.0595	1.0414	0.9669	0.9856	1.0322	0.997	1.0987	1.0203	1.0426	1.0444	1.0313	1.0117	1.0026	1.0018	0.9944	1.0083	0.9792	1.0114	0.9892	1.0135
Port Std Dev/Sum Positions**	1.0959	1.0634	1.0842	1.0601	1.0704	1.0448	0.9668	0.9851	1.0335	0.9943	1.0855	1.0184	1.0446	1.0456	1.0284	1.013	1.0034	1.0016	0.9978	1.0083	0.9784	1.012	1.0435	0.9905
75th-25th Range of Return***	1.1205	1.0873	1.0779	1.0853	1.0548	1.0408	0.9695	0.9846	1.0434	1.0052	1.094	1.0258	1.022	1.0782	1.0284	1.0187	1.0045	0.9954	0.9814	1.0151	0.9909	0.9926	1.0117	1.0057

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.0967	1.1657	1.2603	1.3386	1.4187	1.4775	1.4306	1.4123	1.4566	1.4515	1.5918	1.6245	1.6948	1.771	1.8267	1.8481	1.8542	1.8583	1.8464	1.8623	1.8247	1.8468	1.8257	1.85
Port Std Dev/Sum Positions**	1.0959	1.1652	1.2628	1.3388	1.4346	1.4985	1.4511	1.4315	1.4784	1.4685	1.5938	1.6237	1.6978	1.7765	1.8276	1.851	1.8587	1.8619	1.8575	1.8732	1.8338	1.8573	1.9381	1.9191
75th-25th Range of Return***	1.1205	1.2144	1.298	1.4078	1.4857	1.5447	1.4975	1.4735	1.5373	1.5422	1.6861	1.728	1.7675	1.9057	1.9588	1.9976	2.0067	1.9944	1.9559	1.9863	1.9709	1.9494	1.9759	1.9841

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.16- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for South Africa

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.2712	1.091	1.0779	1.01	0.995	1.01	0.998	1.009	1.029	1.0055	1.0095	1.0068	0.9969	1.009	0.9971	1.02	1.0001	1.0101	0.9968	1.001	1.0181	1.0157	1.0093	1.0029
Port Std Dev/Sum Positions**	1.2668	1.104	1.0798	1.0087	1	1.006	0.998	1.006	1.029	1.0057	1.0087	1.0056	0.9961	1.0084	0.9974	1.0196	0.9999	1.0104	0.9931	1.0012	1.0186	1.0135	1.0435	1.0077
75th-25th Range of Return***	1.1366	1.134	1.0436	1.0367	0.988	1.009	1.002	1.027	0.991	1.0335	1.0149	1.0104	1.0247	1.0416	0.9832	1.0376	1.005	1.0073	0.9919	1.0155	1.0093	1.015	1.0066	0.9959

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.2712	1.39	1.4939	1.5049	1.501	1.515	1.51	1.523	1.571	1.5786	1.5939	1.6039	1.599	1.6136	1.6088	1.6425	1.6423	1.6591	1.6535	1.6558	1.6867	1.7162	1.7329	1.7376
Port Std Dev/Sum Positions**	1.2668	1.403	1.5092	1.5197	1.523	1.532	1.528	1.536	1.582	1.5905	1.6047	1.6129	1.6063	1.62	1.6157	1.6487	1.6482	1.6657	1.6548	1.6575	1.6893	1.7142	1.7887	1.8035
75th-25th Range of Return***	1.1366	1.283	1.3319	1.3804	1.361	1.375	1.373	1.409	1.393	1.4415	1.4617	1.4772	1.5114	1.576	1.548	1.6074	1.6136	1.6262	1.6138	1.6404	1.6551	1.6802	1.6923	1.684

Table A1.17- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for South Korea

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1388	1.141	1.1004	0.9919	1.02	0.967	1.019	1.015	0.993	1.0099	1.0104	0.9985	0.9989	1.0353	0.9788	0.9699	1.0029	0.9976	1.0217	1.0018	0.9759	0.9944	1.0085	1.0118
Port Std Dev/Sum Positions**	1.1414	1.138	1.0979	0.989	1.019	0.963	1.021	1.023	0.992	1.009	1.0124	0.9996	0.9976	1.0342	0.9803	0.9726	1.0018	0.9982	1.0213	1.0005	0.9936	0.9928	1.0435	1.0063
75th-25th Range of Return***	1.2442	1.185	1.0547	1.0073	1	0.995	1	0.997	0.977	1.0113	1.0323	0.9768	1.0167	1.0369	0.9716	0.9751	0.9861	1.0171	1.0091	1.0162	0.9729	0.9792	1.0189	1.0059

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1388	1.297	1.4295	1.4182	1.447	1.396	1.425	1.447	1.437	1.4521	1.4683	1.466	1.4643	1.5187	1.4862	1.4399	1.4449	1.4426	1.475	1.4772	1.4352	1.427	1.4389	1.4565
Port Std Dev/Sum Positions**	1.1414	1.298	1.4257	1.4106	1.438	1.384	1.413	1.446	1.435	1.4483	1.4679	1.4667	1.4633	1.5167	1.4868	1.4447	1.448	1.4463	1.478	1.4786	1.4688	1.4575	1.5209	1.5297
75th-25th Range of Return***	1.2442	1.48	1.5504	1.5602	1.563	1.555	1.557	1.55	1.517	1.5402	1.5854	1.5434	1.5697	1.623	1.5799	1.5394	1.5164	1.5472	1.5588	1.5841	1.5377	1.5068	1.535	1.5488

Table A1.18- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Spain

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1411	1.042	1.1423	1.1035	1.108	1.049	1.025	1.049	1.046	1.0626	1.0075	1.0134	1.0076	1.0147	1.0321	1.0055	0.9927	1.0012	1.0109	1.0208	0.9933	0.9953	1.0275	1.0243
Port Std Dev/Sum Positions**	1.1437	1.044	1.1459	1.0963	1.108	1.052	1.027	1.046	1.051	1.0606	1.0071	1.012	1.0074	1.0149	1.0348	1.0046	0.9934	1.0028	1.0096	1.0203	0.994	0.9949	1.0435	1.0278
75th-25th Range of Return***	1.1223	1.092	1.1037	1.0683	1.108	1.064	0.982	1.06	1.058	1.0563	1.031	1.0162	1.0137	0.9967	1.0336	1.0142	1.0109	0.9993	1.0367	1.0201	0.9933	1.0179	1.0271	1.0213

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1411	1.204	1.3772	1.5217	1.673	1.751	1.78	1.858	1.942	2.0648	2.0794	2.1063	2.1199	2.1475	2.215	2.2266	2.2104	2.2166	2.2408	2.286	2.2683	2.2553	2.3169	2.3729
Port Std Dev/Sum Positions**	1.1437	1.208	1.3847	1.5224	1.674	1.756	1.791	1.863	1.954	2.0742	2.0878	2.1121	2.1249	2.1525	2.2259	2.235	2.2209	2.2299	2.2512	2.2957	2.2792	2.2654	2.3639	2.4293
75th-25th Range of Return***	1.1223	1.234	1.3569	1.4565	1.608	1.706	1.661	1.743	1.844	1.9516	2.0153	2.0426	2.0666	2.057	2.1293	2.1609	2.1884	2.1919	2.2781	2.3145	2.3002	2.334	2.3897	2.4355

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.19- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Sweden

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.911	1.237	1.1344	1.092	1.036	1.059	1.0257	1.01	1.017	0.9498	1.0138	1.0255	1.0049	0.9973	1.0179	1.0213	1.0099	1.027	1.0252	0.9934	1.0128	0.9865	1.0242	1.0203
Port Std Dev/Sum Positions**	0.9462	1.276	1.1311	1.089	1.027	1.061	1.0223	1.003	1.011	0.9448	1.012	1.0232	1.0035	0.9945	1.017	1.02	1.0089	1.0238	1.0278	0.9924	1.0135	0.9854	1.0435	1.0224
75th-25th Range of Return***	0.8151	1.189	1.1364	1.074	1.026	1.07	1.0211	1.031	1.028	0.9433	1.0409	1.0165	0.9992	1.0133	1.0156	1.0406	1.0045	1.0452	1.0271	0.9898	1.0114	1.0112	1.0187	1.0376
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.911	1.13	1.2923	1.417	1.475	1.561	1.6063	1.619	1.647	1.571	1.5908	1.6341	1.6397	1.6307	1.656	1.6876	1.7023	1.7499	1.794	1.7811	1.8054	1.7796	1.8216	1.8562
Port Std Dev/Sum Positions**	0.9462	1.216	1.3833	1.511	1.558	1.652	1.6949	1.695	1.716	1.6246	1.6423	1.6843	1.6863	1.6734	1.698	1.7284	1.7417	1.7855	1.8352	1.8206	1.8467	1.8165	1.8955	1.9369
75th-25th Range of Return***	0.8151	0.97	1.0936	1.179	1.206	1.282	1.3161	1.356	1.391	1.3192	1.369	1.3953	1.3867	1.4077	1.4182	1.474	1.4828	1.5543	1.5948	1.5769	1.5952	1.6123	1.6383	1.6955

Table A1.20- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Switzerland

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.1415	0.98	1.0501	0.919	0.983	0.941	1.0233	0.992	1.02	1.0169	0.9705	1.0334	0.9882	1.0113	1.0008	1.0494	0.9942	1.0312	0.992	1.0197	1.0283	0.9919	1.0058	1.0298
Port Std Dev/Sum Positions**	1.142	0.974	1.0515	0.917	0.989	0.945	1.0257	0.989	1.02	1.015	0.9734	1.0356	0.9937	1.0097	1.0027	1.0467	0.9962	1.0309	0.9865	1.0208	1.0265	0.992	1.0435	1.0038
75th-25th Range of Return***	1.1451	1.016	1.0354	0.868	0.99	0.966	1.0141	1.022	0.988	1.027	0.9606	1.0269	1.0268	0.9843	1.0147	1.0622	0.9854	1.0275	0.9816	1.0193	1.0327	0.9791	1.0089	1.0475
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.1415	1.12	1.1779	1.085	1.071	1.011	1.0357	1.028	1.045	1.0613	1.0335	1.0673	1.0499	1.0623	1.0657	1.1173	1.1133	1.1461	1.1358	1.156	1.1865	1.1778	1.184	1.2186
Port Std Dev/Sum Positions**	1.142	1.113	1.1726	1.077	1.07	1.015	1.0416	1.031	1.048	1.0625	1.0389	1.0748	1.0635	1.0739	1.0793	1.1284	1.1271	1.1597	1.1421	1.1637	1.1927	1.1842	1.2357	1.2397
75th-25th Range of Return***	1.1451	1.162	1.2039	1.041	1.035	0.997	1.0108	1.034	1.018	1.0411	1.006	1.0305	1.0638	1.043	1.0611	1.1215	1.1076	1.1356	1.1133	1.1337	1.171	1.1515	1.1642	1.219

Table A1.21- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Taiwan

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.3283	1.052	1.0333	1.091	1.007	1.002	1.0008	0.981	0.979	1.0249	1.0079	0.9968	0.9977	0.9912	1.0002	1.0042	1.0089	0.9863	0.9938	0.9988	0.9933	1.0074	0.9995	0.996
Port Std Dev/Sum Positions**	1.3197	1.051	1.0353	1.095	1.005	1.003	0.9998	0.984	0.982	1.0244	1.0064	0.9974	0.9971	0.9921	0.9994	1.0039	1.0085	0.9883	0.9952	0.9983	0.9938	1.0068	1.0435	0.9978
75th-25th Range of Return***	1.4205	1.084	1.0484	1.106	0.971	1.005	0.9829	1.002	0.962	1.0259	1.008	0.983	1.0131	0.9862	0.9825	1.0035	1.005	0.9965	0.9977	0.9981	1.0136	1.0059	1.0054	0.9691
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.3283	1.398	1.4427	1.573	1.584	1.587	1.5886	1.559	1.525	1.5627	1.5748	1.5693	1.5658	1.5522	1.5527	1.5593	1.5732	1.5518	1.5423	1.5403	1.5303	1.5418	1.5411	1.5349
Port Std Dev/Sum Positions**	1.3197	1.387	1.4345	1.569	1.576	1.581	1.5808	1.555	1.526	1.563	1.5726	1.5683	1.5639	1.5517	1.551	1.5571	1.5703	1.5522	1.5448	1.5421	1.5328	1.5434	1.6105	1.607
75th-25th Range of Return***	1.4205	1.532	1.6036	1.772	1.721	1.731	1.6995	1.7	1.635	1.6752	1.6901	1.6604	1.6805	1.6589	1.6297	1.6343	1.6415	1.6382	1.6352	1.6295	1.6532	1.6628	1.6721	1.623

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios (Continued)

Table A1.22- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Thailand

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.212	1.0069	0.9979	0.996	1.058	0.9718	1.092	0.99	1.043	0.9595	0.98	1.0334	0.9776	1.0173	0.969	1.0289	0.9892	0.9996	0.9823	1.0288	1.0187	1.029	1.0272	1.0328
Port Std Dev/Sum Positions**	1.222	1.0155	0.9968	0.99	1.058	0.9743	1.104	0.992	1.045	0.9549	0.9819	1.03	0.9789	1.0173	0.9662	1.0321	0.9889	0.9953	0.9795	1.0336	1.0253	1.0279	1.0435	1.028
75th-25th Range of Return***	1.142	0.9022	0.9896	0.98	1.081	0.9804	1.082	0.988	1.019	0.9504	0.9963	1.0404	0.9898	1.0123	0.9606	1.0314	1.0152	0.9783	1.0115	1.0135	1.0152	1.044	1.0348	1.0266

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.212	1.218	1.2163	1.212	1.281	1.2454	1.361	1.349	1.406	1.3509	1.3253	1.3708	1.3413	1.3644	1.3231	1.3601	1.3452	1.3442	1.3212	1.3597	1.3843	1.4256	1.4644	1.5128
Port Std Dev/Sum Positions**	1.222	1.2391	1.2359	1.224	1.293	1.2606	1.392	1.382	1.444	1.3808	1.3567	1.399	1.3701	1.3935	1.3473	1.3898	1.3744	1.3673	1.3396	1.3846	1.419	1.4592	1.5226	1.5647
75th-25th Range of Return***	1.142	1.0267	1.0112	0.988	1.067	1.0485	1.132	1.124	1.144	1.087	1.0834	1.1235	1.1145	1.125	1.0803	1.1128	1.1321	1.1089	1.1264	1.1375	1.1551	1.204	1.2449	1.2735

Table A1.23- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for Turkey

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.033	1.0654	1.0304	0.981	1.01	0.9971	0.98	1.005	1.007	1.0207	1.0045	1.0232	1.0093	0.9998	1.0064	1.0038	1.008	0.9957	1.0052	1.0062	1.0024	1.0129	1.0022	1.0225
Port Std Dev/Sum Positions**	1.039	1.0632	1.0303	0.98	1.015	0.997	0.981	1.002	1.007	1.0187	1.0017	1.0254	1.0099	0.9985	1.0074	1.0033	1.0086	0.9959	1.0052	1.006	1.0016	1.0147	1.0435	0.9998
75th-25th Range of Return***	0.983	1.0604	1.0136	0.998	1.025	1.0262	0.993	1.005	0.98	1.0414	0.9884	1.0313	1.0197	1.0031	1.0046	0.9998	1.005	0.9991	1.0039	1.0081	1.0149	1.0205	1.0056	1.0257

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.033	1.1008	1.1333	1.113	1.123	1.1194	1.097	1.103	1.111	1.1342	1.1392	1.1657	1.1769	1.1766	1.184	1.1885	1.1982	1.1933	1.1999	1.2076	1.2106	1.2264	1.2293	1.2577
Port Std Dev/Sum Positions**	1.039	1.1051	1.1378	1.116	1.132	1.1287	1.108	1.11	1.118	1.1389	1.1404	1.1693	1.1812	1.1794	1.1881	1.1919	1.2025	1.1978	1.2046	1.2119	1.2139	1.2318	1.2853	1.2854
75th-25th Range of Return***	0.983	1.0408	1.0508	1.045	1.072	1.1009	1.093	1.097	1.073	1.1186	1.1037	1.1384	1.1609	1.1646	1.1693	1.1701	1.1762	1.1742	1.1788	1.1888	1.2064	1.2311	1.2383	1.2699

Table A1.24- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for United Kingdom

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.968	1.188	1.065	1.023	1.079	0.981	1.03	1.058	1.029	1.0044	0.9789	1.0196	0.9879	0.9753	1.0226	1.0183	0.9899	1.0188	1.009	1.0197	1.0038	0.9939	0.9894	1.0188
Port Std Dev/Sum Positions**	0.991	1.192	1.0525	1.019	1.076	0.9887	1.029	1.055	1.027	1.0025	0.9814	1.0175	0.9862	0.978	1.0218	1.0188	0.9899	1.0179	1.0087	1.0186	1.0041	0.9943	1.0435	0.9879
75th-25th Range of Return***	0.957	1.1681	1.111	0.995	1.08	0.959	1.043	1.07	1.054	0.9995	0.9936	1.0354	0.9946	0.9691	1.0261	1.0127	1.0142	1.0335	0.9893	1.0106	0.9911	0.9828	0.999	1.0184

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.968	1.1468	1.2205	1.252	1.35	1.3251	1.367	1.444	1.484	1.4898	1.4609	1.4892	1.4697	1.4343	1.464	1.4904	1.4749	1.502	1.5158	1.5457	1.552	1.544	1.5287	1.5561
Port Std Dev/Sum Positions**	0.991	1.1793	1.2419	1.269	1.365	1.3519	1.392	1.465	1.504	1.5064	1.4811	1.5066	1.4843	1.4527	1.4814	1.5092	1.4935	1.5197	1.5331	1.5619	1.5688	1.5616	1.6295	1.6107
75th-25th Range of Return***	0.957	1.1009	1.2277	1.226	1.312	1.2585	1.31	1.397	1.471	1.4725	1.466	1.5203	1.5072	1.4666	1.4996	1.5198	1.5414	1.5914	1.5734	1.5884	1.5673	1.5431	1.5452	1.5651

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A1 - Dispersion Reduction as a Function of the Number of Positions in the Domestic Portfolios

Table A1.25- Dispersion Reduction as a Function of the Number of Positions in the Portfolio for United States																							
Average Relative Dispersion Reduction - Sequential Adding of Positions																							
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P1	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P2(	P20/P2	P21/P2	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.053	1.2824	1.0771	0.98	0.9069	1.029	1.02	1.0235	0.9561	1.0545	1.0461	1.032	0.9453	0.9965	1.0412	1.0174	1.0391	1.0006	0.9666	0.9987	1.0162	1.0176	1.0211	1.0135
Port Std Dev/Sum Positions**	1.054	1.2758	1.0762	0.972	0.9239	1.029	1.018	1.0223	0.9585	1.0471	1.048	1.0282	0.9528	0.9936	1.0386	1.0157	1.038	1.0006	0.9652	0.9974	1.0162	1.0183	1.0435	1.0207
75th-25th Range of Return***	1.073	1.2795	1.0179	1.021	0.9386	1.029	0.975	1.0447	0.9614	1.0256	1.053	1.0437	0.935	0.9892	1.0303	1.015	1.0604	1.0149	0.9724	0.9952	1.0246	1.0169	1.0137	1.0035
Average Absolute Dispersion Reduction - Relative to First Position																							
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.053	1.348	1.4562	1.429	1.2935	1.332	1.356	1.3906	1.323	1.3981	1.4646	1.5114	1.4186	1.4135	1.4719	1.4986	1.5574	1.5589	1.504	1.501	1.5268	1.5549	1.5885	1.6113
Port Std Dev/Sum Positions**	1.054	1.3424	1.4487	1.412	1.3042	1.343	1.364	1.397	1.3336	1.3991	1.469	1.5103	1.433	1.4229	1.4786	1.5031	1.5614	1.5626	1.505	1.4992	1.5253	1.555	1.6226	1.6575
75th-25th Range of Return***	1.073	1.3707	1.3965	1.425	1.3367	1.374	1.33	1.3922	1.3308	1.3662	1.4393	1.5057	1.3978	1.3832	1.421	1.4447	1.5304	1.5521	1.5024	1.4951	1.534	1.5585	1.5814	1.5869

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A2 - Dispersion Reduction as a Function of the Number of Positions in the Foreign Portfolios

Table A2.01- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.948	1.2424	1.1161	0.953	1.1028	1.064	1.0572	1.0317	1.0081	0.9928	1.0321	0.995	1.0386	1.0065	1.0007	0.9677	0.9706	0.9831	1.0187	1.002	0.999	0.9843	1.012	1.01285
Port Std Dev/Sum Positions**	0.935	1.2613	1.1181	0.971	1.1019	1.065	1.0588	1.03	1.0094	0.9958	1.0317	0.9922	1.0367	1.0046	1.0003	0.9614	0.9755	0.9875	1.0194	1.0044	1.0038	0.9874	1.0435	1.01179
75th-25th Range of Return***	0.974	1.2493	1.0629	0.956	1.1028	1.069	1.0518	1.0337	0.9938	0.9942	1.0393	1.0194	1.0755	0.9791	1.0196	0.966	0.9587	0.9628	1.0122	1.0128	1.0117	1.008	1.0007	1.01193

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.948	1.1824	1.315	1.237	1.3616	1.443	1.5265	1.5721	1.5824	1.5675	1.6171	1.608	1.6693	1.681	1.6848	1.6289	1.5799	1.5524	1.5814	1.583	1.5829	1.5568	1.5752	1.59557
Port Std Dev/Sum Positions**	0.935	1.1791	1.3107	1.252	1.3769	1.457	1.5449	1.587	1.5977	1.587	1.6371	1.6229	1.6818	1.6906	1.6943	1.6257	1.5844	1.5636	1.5943	1.5986	1.6071	1.5855	1.6544	1.67405
75th-25th Range of Return***	0.974	1.236	1.3052	1.211	1.3342	1.427	1.502	1.5536	1.5182	1.5118	1.5736	1.6001	1.7159	1.6825	1.7137	1.6529	1.5813	1.5206	1.5413	1.5594	1.5779	1.5841	1.5868	1.60132

Table A2.02- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Second Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.785	1.3033	1.1404	1.077	1.0895	1.108	1.0352	1.0459	1.0448	1.0228	1.0384	1.0081	1.0186	1.0124	1.04	0.9788	0.9931	0.9135	1.0323	1.0282	1.0099	0.9739	0.9898	1.0125
Port Std Dev/Sum Positions**	0.873	1.2687	1.1498	1.07	1.0779	1.119	1.0327	1.0318	1.0458	1.0095	1.03	1.0053	1.018	1.0072	1.0374	0.9749	0.9868	0.9386	1.0317	1.0241	1.009	0.9807	1.0435	0.9851
75th-25th Range of Return***	0.922	1.2225	1.1235	1.084	1.0655	1.088	1.0198	1.0695	1.0054	1.0377	1.0285	1.0432	1.0098	1.0287	1.0448	0.9509	0.9988	0.9131	1.0439	1.0375	0.9938	0.9889	0.9818	1.04764

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.785	1.0277	1.17	1.255	1.3618	1.508	1.5602	1.625	1.6928	1.7293	1.7942	1.8071	1.8414	1.8635	1.9342	1.8913	1.8764	1.7019	1.7571	1.8063	1.8232	1.7765	1.7581	1.77986
Port Std Dev/Sum Positions**	0.873	1.1113	1.2754	1.361	1.464	1.636	1.6935	1.744	1.8196	1.8374	1.8914	1.8989	1.9347	1.9481	2.0196	1.9677	1.9413	1.82	1.8787	1.9249	1.9416	1.9029	1.9857	1.95553
75th-25th Range of Return***	0.922	1.1232	1.2495	1.359	1.4474	1.562	1.5923	1.6993	1.7058	1.7659	1.8151	1.8956	1.9091	1.9616	2.0495	1.9416	1.9347	1.7593	1.8381	1.9104	1.8958	1.8674	1.8351	1.92732

Table A2.03- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Third Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.398	1.2768	1.1383	1.193	1.1334	0.883	1.0403	1.0562	1.0525	1.0058	1.031	1.0686	1.0269	1.0128	1.0115	0.9995	0.9906	1.0049	0.9907	1.0116	0.9846	0.9783	1.0204	1.03094
Port Std Dev/Sum Positions**	1.418	1.2657	1.144	1.211	1.1303	0.935	1.0119	1.0461	0.9386	1.0056	1.0311	1.0481	1.0319	1.0128	1.0216	1.0027	0.9989	1.0107	0.998	1.0183	0.9911	0.9981	1.0435	1.01773
75th-25th Range of Return***	1.947	1.0841	1.0544	1.215	1.0464	0.919	1.0083	1.0427	1.0806	0.9922	1.0131	1.067	1.0169	1.0436	0.9944	0.9628	0.9884	0.9897	0.9956	1.0038	0.9614	1.0004	0.9843	1.05477

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.398	1.7634	2.0007	2.385	2.6954	2.295	2.3932	2.5212	2.6557	2.6623	2.7424	2.9258	2.9989	3.04	3.0724	3.07	3.0463	3.0644	3.0421	3.073	3.0327	2.961	3.0269	3.12035
Port Std Dev/Sum Positions**	1.418	1.7798	2.0312	2.452	2.7647	2.533	2.5824	2.6999	2.5329	2.5138	2.5765	2.6634	2.7396	2.7661	2.818	2.8114	2.8026	2.8302	2.8221	2.8615	2.8301	2.8226	2.9454	3.0013
75th-25th Range of Return***	1.947	2.0905	2.2121	2.677	2.8002	2.534	2.5575	2.6732	2.8828	2.863	2.901	3.0874	3.1419	3.2896	3.2675	3.1437	3.121	3.0887	3.0735	3.054	2.9575	2.9418	2.9058	3.06395

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A2 - Dispersion Reduction as a Function of the Number of Positions in the Foreign Portfolios (Continued)

Table A2.04- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Fourth Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.771	1.247	1.109	1.092	1.089	1.065	0.952	1.051	1.058	0.993	1.0214	1.0028	1.0232	1.0138	1.0033	1.0121	1.0265	1.0013	1.0201	1.024	0.9866	0.9736	1.0108	1.022
Port Std Dev/Sum Positions**	0.794	1.232	1.12	1.099	1.077	1.067	0.913	1.05	1.063	0.998	1.0188	1.0069	1.0119	1.0151	1.0025	1.0125	1.0258	1.0024	1.0197	1.026	0.9913	0.9791	1.0435	1.0117
75th-25th Range of Return***	0.754	1.267	1.066	1.048	1.112	1.058	0.962	1.027	1.075	0.977	1.032	1.0018	1.0172	1.0411	1.0186	1.0515	1.027	1.0008	0.9983	1.034	0.979	0.9456	1.0092	1.0399
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.771	0.959	1.058	1.155	1.256	1.335	1.271	1.334	1.411	1.4	1.4293	1.4323	1.4673	1.4876	1.4916	1.5087	1.5487	1.5513	1.5829	1.622	1.5978	1.5534	1.5705	1.6042
Port Std Dev/Sum Positions**	0.794	0.976	1.087	1.196	1.286	1.368	1.247	1.308	1.388	1.383	1.4076	1.4166	1.4346	1.4564	1.4594	1.4763	1.5143	1.518	1.548	1.588	1.5731	1.5389	1.6058	1.6247
75th-25th Range of Return***	0.754	0.953	1.011	1.061	1.185	1.252	1.2	1.229	1.32	1.282	1.3276	1.3215	1.3465	1.3996	1.4261	1.5003	1.5449	1.5484	1.5461	1.596	1.5505	1.452	1.465	1.5218

Table A2.05- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Fifth Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.811	1.228	1.091	1.001	1.065	1.076	0.845	1.097	1.073	1.022	1.0389	1.0265	1.0537	1.0349	1.0087	0.9959	1.0243	1.008	0.9799	1.039	1.0002	0.9687	0.9968	1.0052
Port Std Dev/Sum Positions**	0.838	1.239	1.071	1.004	1.051	1.083	0.898	1.098	1.074	1.018	1.0293	1.0148	1.051	1.0277	1.0021	0.9787	1.0179	1.0042	0.9769	1.036	0.9939	0.9714	1.0435	0.9921
75th-25th Range of Return***	0.916	1.185	1.021	1.047	1.085	1.054	0.859	1.09	1.058	1.032	1.0302	1.0301	1.0641	1.0261	0.9887	0.987	1.0385	0.9931	0.9882	1.056	0.972	0.9768	0.9859	1.0175
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.811	0.997	1.089	1.093	1.156	1.237	1.029	1.128	1.207	1.23	1.2762	1.3079	1.3769	1.4239	1.4363	1.4286	1.4616	1.4716	1.44	1.497	1.4971	1.4473	1.4429	1.4507
Port Std Dev/Sum Positions**	0.838	1.04	1.115	1.123	1.175	1.267	1.125	1.235	1.326	1.348	1.3871	1.4077	1.4793	1.5201	1.5241	1.4908	1.5168	1.5228	1.4881	1.542	1.5322	1.4868	1.5514	1.5399
75th-25th Range of Return***	0.916	1.086	1.113	1.179	1.261	1.319	1.094	1.193	1.259	1.299	1.337	1.3742	1.4625	1.501	1.4817	1.4643	1.5219	1.5121	1.4903	1.575	1.5284	1.49	1.4697	1.495

Table A2.06- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Sixth Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.088	1.317	1.003	1.061	1.163	1.046	0.601	0.973	1.062	1.041	1.0656	1.0432	1.0579	1.0342	1.0238	1.0183	1.0429	1.0129	1.0033	1.036	1.0215	1.005	1.0256	1.0054
Port Std Dev/Sum Positions**	1.107	1.313	1.012	1.057	1.156	1.062	0.659	0.993	1.062	1.043	1.0693	1.0455	1.0598	1.0431	1.0262	1.0114	1.0441	1.0037	1.0037	1.034	1.0197	0.9915	1.0435	1.0244
75th-25th Range of Return***	1.129	1.349	0.906	1.046	1.239	1.008	0.764	0.944	1.024	1.06	1.0584	0.9989	1.0544	1.0433	1.0167	1.0167	1.0347	1.0119	1.0059	1.057	1.0006	0.9835	1.0208	0.9907
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.088	1.435	1.412	1.496	1.734	1.803	1.077	1.052	1.116	1.159	1.2398	1.2942	1.3708	1.4181	1.4504	1.4774	1.5428	1.5613	1.5627	1.621	1.6574	1.6554	1.6984	1.7028
Port Std Dev/Sum Positions**	1.107	1.454	1.466	1.548	1.784	1.882	1.232	1.223	1.298	1.356	1.4508	1.5164	1.6047	1.6749	1.7167	1.7365	1.8133	1.8235	1.835	1.898	1.9349	1.9142	1.9974	2.0478
75th-25th Range of Return***	1.129	1.526	1.353	1.427	1.767	1.746	1.316	1.233	1.249	1.331	1.4113	1.3919	1.4692	1.5429	1.5619	1.5809	1.6359	1.6602	1.6708	1.774	1.7651	1.7166	1.7494	1.732

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A2 - Dispersion Reduction as a Function of the Number of Positions in the Foreign Portfolios (Continued)

Table A2.07- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Seventh Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.359	1.1955	0.9995	1.055	1.166	1.067	0.84	1.034	1.047	1.0035	1.0089	1.0345	1.0404	1.0222	0.9947	0.9607	1.0228	1.0089	0.9539	1.0164	0.9927	0.9595	0.9943	1.0206
Port Std Dev/Sum Positions**	1.3434	1.2025	0.9906	1.075	1.165	1.06	0.837	1.042	1.04	1.0142	1.0112	1.0345	1.0419	1.0217	0.995	0.9536	1.0261	1.0105	0.9619	1.0144	0.9915	0.9815	1.0435	0.9901
75th-25th Range of Return***	1.3045	1.1486	0.8698	1.102	1.163	1.08	0.804	1.035	1.048	0.9847	1.0091	1.0468	1.048	1.0097	1.0042	0.9661	1.0191	0.9949	0.9926	1.0126	0.9577	0.9637	1.0266	0.9901

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.359	1.6307	1.5884	1.685	1.96	2.084	1.761	1.803	1.884	1.8853	1.9011	1.9697	2.0409	2.0849	2.0742	1.982	2.0267	2.0437	1.942	1.9717	1.9614	1.8626	1.854	1.892
Port Std Dev/Sum Positions**	1.3434	1.6213	1.5572	1.685	1.965	2.076	1.738	1.798	1.867	1.8898	1.9091	1.9801	2.0562	2.1015	2.0922	1.9867	2.0396	2.0609	1.9821	2.0092	1.9968	1.9477	2.0324	2.0121
75th-25th Range of Return***	1.3045	1.4963	1.2859	1.422	1.636	1.768	1.41	1.46	1.527	1.5075	1.5165	1.5916	1.6684	1.6752	1.6778	1.6096	1.6355	1.6287	1.6253	1.6365	1.5583	1.4974	1.5408	1.5221

Table A2.08- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Eighth Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.8643	1.2731	1.2372	1.009	1.134	1.012	1.001	1.057	1.022	0.9862	1.0222	1.0115	1.0254	0.9812	0.9853	0.9755	1.0239	0.9935	0.9907	1.0188	1.0299	0.9175	0.9963	1.0131
Port Std Dev/Sum Positions**	0.8578	1.2648	1.2292	1.008	1.136	1.037	1.001	1.055	1.024	0.9989	1.0225	1.0114	1.0233	0.9783	0.9835	0.9723	1.0227	0.9993	0.992	1.0202	1.0327	0.9517	1.0435	0.99
75th-25th Range of Return***	0.9089	1.2634	1.2041	1.039	1.072	1.021	1.007	1.079	1.031	0.9909	1.0316	0.9643	1.0552	1.015	1.0045	0.9802	1.0388	0.9843	1.0018	0.9667	1.0536	0.9245	1.0263	1.0005

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.8643	1.1049	1.354	1.365	1.543	1.56	1.555	1.639	1.674	1.6549	1.6933	1.7114	1.7548	1.7219	1.6973	1.655	1.6936	1.688	1.6769	1.7079	1.7565	1.601	1.5979	1.6209
Port Std Dev/Sum Positions**	0.8578	1.0893	1.3229	1.329	1.506	1.561	1.553	1.634	1.673	1.6743	1.7133	1.7309	1.7715	1.7348	1.7064	1.6585	1.6945	1.6967	1.6868	1.7201	1.7748	1.6839	1.7572	1.7417
75th-25th Range of Return***	0.9089	1.1378	1.3651	1.408	1.504	1.522	1.527	1.639	1.691	1.6895	1.7397	1.6629	1.7521	1.7788	1.7802	1.7476	1.813	1.7878	1.7889	1.7281	1.8235	1.6976	1.7435	1.7425

Table A2.09- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Ninth Highest Market Capitalization

Average Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.9344	1.405	0.9772	1.075	1.09	1.09	0.72	1.085	1.039	1.0522	1.0433	1.074	1.0516	1.0247	1.0164	1.0118	1.0451	1.0062	0.9867	1.0268	1.014	0.9757	1.0351	1.0212
Port Std Dev/Sum Positions**	0.9286	1.3947	1.0101	1.07	1.079	1.092	0.796	1.092	1.04	1.0334	1.0371	1.0749	1.0571	1.0075	1.0068	1.0046	1.0427	1.0012	0.9814	1.025	1.0055	0.9811	1.0435	1.0343
75th-25th Range of Return***	1.1101	1.4218	0.8753	1.01	1.068	1.08	0.788	1.064	1.001	1.0583	1.0742	1.0641	1.0377	0.9937	1.0434	0.9629	1.0546	0.9984	0.9767	1.0299	0.9882	1.0044	1.0173	1.0261

Average Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.9344	1.2648	1.1585	1.245	1.347	1.462	1.041	1.12	1.158	1.2215	1.2732	1.3674	1.4357	1.4698	1.4901	1.5082	1.573	1.5789	1.5559	1.5974	1.6188	1.5695	1.6241	1.6595
Port Std Dev/Sum Positions**	0.9286	1.2537	1.2116	1.3	1.395	1.515	1.195	1.3	1.348	1.3968	1.4489	1.5567	1.6454	1.6578	1.6682	1.6778	1.7458	1.7477	1.7195	1.7643	1.7731	1.7378	1.8134	1.8753
75th-25th Range of Return***	1.1101	1.5499	1.2724	1.298	1.364	1.462	1.137	1.212	1.203	1.2729	1.366	1.4534	1.5142	1.4953	1.5622	1.5003	1.5822	1.5739	1.5372	1.5858	1.5693	1.5856	1.6128	1.6507

* represents aggregate portfolio standard deviation

** represents the ratio of portfolio standard deviation to sum of individual positions

*** represents the 75th percentile minus the 25th percentile

**** P1/P2,...,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions

***** P1/P2,...,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A2 - Dispersion Reduction as a Function of the Number of Positions in the Foreign Portfolios

Table A2.10- Dispersion Reduction as a Function of the Number of Positions for Foreign Portfolios with the Tenth Highest Market Capitalization																								
Average Relative Dispersion Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	0.987	1.2698	1.2364	1.0841	1.005	1.0019	0.9811	1.0807	1.0426	1.0555	1.0728	1.0356	1.0397	1.0249	1.0201	0.9674	1.0273	1.0006	1.006	0.9926	1.0181	0.9681	1.0181	0.9943
Port Std Dev/Sum Positions**	0.977	1.2779	1.2328	1.0922	1.007	1.0429	0.9327	1.082	1.0427	1.056	1.0668	1.0374	1.0376	1.0247	1.027	0.9649	1.0269	1.0012	1.007	0.999	1.0151	0.9814	1.0435	1.0147
75th-25th Range of Return***	0.925	1.3891	1.1328	1.0145	1.011	0.9691	0.9988	1.0793	1.0534	1.0751	1.0563	1.0734	1.0261	1.0157	1.0144	0.9681	1.0526	0.9758	1.0074	0.9811	1.0267	0.9668	1.0368	0.9751
Average Absolute Dispersion Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	0.987	1.2523	1.5494	1.6835	1.679	1.6687	1.6436	1.7724	1.852	1.9544	2.0956	2.1655	2.2499	2.3075	2.3553	2.2725	2.3302	2.3307	2.3482	2.3259	2.3677	2.2912	2.3327	2.3134
Port Std Dev/Sum Positions**	0.977	1.2476	1.5398	1.6846	1.676	1.7371	1.6384	1.7721	1.8442	1.9468	2.0753	2.1485	2.2255	2.2817	2.3481	2.2513	2.3063	2.3092	2.3296	2.3214	2.3576	2.3113	2.4118	2.4484
75th-25th Range of Return***	0.925	1.2834	1.4427	1.4653	1.479	1.4233	1.4232	1.5369	1.6192	1.739	1.8358	1.9712	2.0248	2.0526	2.0882	2.0156	2.1173	2.0559	2.0788	2.0316	2.0811	2.0093	2.0869	2.0221

* represents aggregate portfolio standard deviation
** represents the ratio of portfolio standard deviation to sum of individual positions
*** represents the 75th percentile minus the 25th percentile
**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions
***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix A3 - Dispersion Reduction as a Function of the Number of Positions in the Frechet Random Walk Model and Geometric Brownian Motion Model

Table A3.01- Dispersion Reduction as a Function of the Number of Positions for Frechet Random Walk Model

Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.01	1.4257	1.1739	1.178	1.0608	1.092	0.9494	1.0623	1.0752	0.9059	0.9965	0.927	0.9983	0.9912	0.9752	1.0132	1.0376	1.0272	1.0205	1.0035	1.0038	0.9916	1.0226	1.02216
Port Std Dev/Sum Positions**	1.02	1.3846	1.1896	1.178	1.0624	1.093	0.9742	1.0619	1.0728	0.9071	0.9765	0.9454	0.9856	0.9815	0.9757	1.0131	1.0377	1.0281	1.0167	1.0096	1.0041	0.9942	1.0435	1.02447
75th-25th Range of Return***	1.315	1.3272	1.1644	0.982	1.1374	1.069	1.0607	1.0573	1.0528	0.8013	0.9554	0.9605	1.0301	1.0047	0.979	0.9724	1.0273	0.936	1.0175	1.0426	1.045	1.0783	0.9411	0.9578

Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.01	1.4395	1.6898	1.991	2.1124	2.307	2.1903	2.3267	2.5017	2.2664	2.2584	2.0935	2.0899	2.0715	2.0201	2.0467	2.1237	2.1816	2.2262	2.234	2.2424	2.2236	2.2738	2.3242
Port Std Dev/Sum Positions**	1.02	1.4129	1.6807	1.98	2.104	2.299	2.2393	2.3779	2.551	2.3141	2.2597	2.1363	2.1056	2.0665	2.0164	2.0429	2.12	2.1795	2.216	2.2373	2.2465	2.2334	2.3305	2.38753
75th-25th Range of Return***	1.315	1.7454	2.0322	1.997	2.2709	2.428	2.5759	2.7236	2.8675	2.2976	2.1951	2.1083	2.1717	2.1819	2.136	2.077	2.1337	1.9971	2.0321	2.1187	2.2141	2.3874	2.2467	2.15189

Table A3.02- Dispersion Reduction as a Function of the Number of Positions for Geometric Brownian Motion Model

Relative Dispersion Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P2	P21/P22	P22/P23	P23/P24	P24/P25
Aggregate Port Std Dev*	1.407	1.2573	1.1907	1.093	1.0461	1.135	1.0752	1.0377	1.0573	1.023	1.0672	1.0235	1.0368	1.0366	1.0304	1.034	1.0321	1.0315	1.0084	1.0158	1.0191	1.0406	1.001	1.04547
Port Std Dev/Sum Positions**	1.412	1.2559	1.1883	1.094	1.0475	1.135	1.0725	1.0382	1.0569	1.0212	1.0685	1.0237	1.0363	1.0379	1.0304	1.033	1.0324	1.0313	1.0095	1.0158	1.0207	1.0406	1.0435	0.99736
75th-25th Range of Return***	1.337	1.2769	1.2309	1.173	0.9973	1.138	1.1208	1.0367	1.0922	1.0277	1.0446	1.0836	1.1069	1.0477	1.0424	0.9381	1.0214	0.944	1.0347	1.0684	1.0059	1.0302	0.9894	1.01246

Absolute Dispersion Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Aggregate Port Std Dev*	1.407	1.7687	2.106	2.301	2.4073	2.733	2.9388	3.0497	3.2245	3.2986	3.5204	3.6031	3.7356	3.8723	3.9901	4.1256	4.2582	4.3924	4.4293	4.4992	4.5853	4.7717	4.7764	4.99363
Port Std Dev/Sum Positions**	1.412	1.7737	2.1077	2.305	2.4141	2.74	2.9387	3.0511	3.2247	3.2931	3.5188	3.6022	3.7331	3.8747	3.9925	4.1241	4.2579	4.3912	4.433	4.5032	4.5964	4.7832	4.9912	4.978
75th-25th Range of Return***	1.337	1.7071	2.1012	2.464	2.4577	2.797	3.1353	3.2505	3.5503	3.6488	3.8117	4.1303	4.5717	4.7897	4.9925	4.6836	4.784	4.5161	4.6727	4.9923	5.022	5.1735	5.1188	5.18253

* represents aggregate portfolio standard deviation
** represents the ratio of portfolio standard deviation to sum of individual positions
*** represents the 75th percentile minus the 25th percentile
**** P1/P2,…,P24/P25 represents the relative dispersion reduction in terms of sequential adding of positions
***** P1/P2,…,P1/P25 represents the absolute dispersion reduction relative to first position

Appendix B1 - Aggregate Portfolio Risk Estimates for Domestic Portfolios

Table B1.01- Aggregate Portfolio Risk Estimates for Australia																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-72338	-48403	-60311	-54178	-51848	-49154	-47280	-44327	-42044	-41722	-42162	-41729	-43121	-41688	-47764	-45903	-45106	-44982	-45007	-45358	-44958	-44679	-44073	-43983	-44273
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-26742	-24461	-27114	-24329	-22973	-22568	-21452	-20284	-19568	-19262	-18912	-18561	-18450	-17940	-18239	-17787	-17457	-17482	-17621	-17558	-17464	-17330	-17206	-17183	-17202
VAR/COV VaR@98%	-33390	-30542	-33856	-30378	-28684	-28179	-26785	-25327	-24433	-24051	-23614	-23176	-23038	-22401	-22774	-22209	-21797	-21828	-22003	-21924	-21806	-21639	-21484	-21455	-21479
VAR/COV VaR@99%	-37812	-34587	-38339	-34401	-32483	-31910	-30332	-28681	-27669	-27236	-26741	-26246	-26088	-25367	-25790	-25150	-24683	-24719	-24916	-24827	-24693	-24504	-24329	-24297	-24323
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-26742	-24510	-26952	-24105	-22770	-22351	-21292	-20152	-19472	-19167	-18828	-18492	-18369	-17888	-18158	-17714	-17382	-17379	-17537	-17469	-17393	-17269	-17149	-16435	-16454
VAR/COV VaR@98%	-33390	-30604	-33654	-30099	-28431	-27908	-26586	-25162	-24313	-23933	-23509	-23090	-22936	-22336	-22673	-22118	-21703	-21700	-21897	-21813	-21718	-21563	-21413	-20521	-20545
VAR/COV VaR@99%	-37812	-34656	-38110	-34085	-32196	-31604	-30107	-28494	-27533	-27102	-26623	-26148	-25973	-25294	-25676	-25047	-24578	-24573	-24796	-24701	-24594	-24418	-24249	-23238	-23266
Aggregate Portfolio Estimates																									
HVaR@95%**	-24321	-23603	-25746	-23159	-22213	-21389	-20747	-19336	-18709	-18881	-18160	-17665	-17255	-16928	-16728	-16408	-16156	-16183	-16376	-16235	-16142	-16127	-16289	-16115	-16086
HVaR@98%	-33191	-30089	-33204	-31052	-28810	-28913	-27926	-27072	-25805	-25228	-24343	-23438	-23395	-22522	-22479	-21791	-21721	-22472	-22151	-22545	-21752	-21605	-21653	-21502	-21457
HVaR@99%	-43171	-33765	-38150	-34670	-32628	-32597	-31745	-29641	-28527	-28376	-28286	-28353	-27928	-26858	-29089	-28274	-26921	-26369	-26202	-25411	-24659	-24710	-24298	-24133	-24186
ES @ 95%***	-36409	-30858	-34941	-31480	-29775	-29481	-28082	-26340	-25366	-25065	-24631	-24268	-24082	-23388	-23859	-23218	-22905	-23006	-23105	-23030	-22806	-22581	-22398	-22436	-22470
ES @ 98%	-52510	-39150	-46074	-40908	-38641	-37896	-36077	-34098	-32613	-32293	-32210	-31815	-31804	-30780	-33047	-32084	-31490	-31324	-31526	-31131	-30854	-30507	-30185	-30186	-30291
ES @ 99%	-64962	-45266	-55181	-48303	-45698	-44176	-42002	-39678	-37520	-37282	-37196	-36774	-37014	-35887	-39390	-38080	-37486	-37469	-37797	-37699	-37731	-37163	-36644	-36878	-36989

Table B1.02- Aggregate Portfolio Risk Estimates for Brazil																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-1E+05	-1E+05	-1E+05	-97335	-87725	-81608	-73256	-73641	-73838	-74235	-74900	-72699	-74175	-74891	-94389	-92786	-90039	-90001	-87132	-85419	-83354	-81904	-80306	-79438	-79689
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-52942	-55243	-42069	-41168	-40272	-38981	-36414	-36606	-36400	-36491	-36591	-35508	-34957	-35966	-40327	-39405	-38654	-38987	-37627	-36982	-36541	-35784	-35285	-34942	-34521
VAR/COV VaR@98%	-66105	-68978	-52528	-51403	-50284	-48673	-45468	-45708	-45450	-45564	-45688	-44336	-43648	-44908	-50353	-49203	-48264	-48680	-46983	-46177	-45626	-44681	-44058	-43630	-43103
VAR/COV VaR@99%	-74859	-78112	-59484	-58210	-56943	-55118	-51489	-51761	-51469	-51598	-51738	-50207	-49428	-50855	-57021	-55718	-54656	-55127	-53205	-52292	-51668	-50598	-49892	-49408	-48811
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-52942	-53088	-42219	-41604	-40796	-39124	-36494	-36886	-36768	-36874	-37010	-35888	-35162	-36126	-36983	-36082	-35540	-36024	-34851	-34380	-34052	-33380	-32927	-31555	-31363
VAR/COV VaR@98%	-66105	-66287	-52716	-51948	-50939	-48851	-45567	-46057	-45910	-46042	-46212	-44811	-43904	-45108	-46179	-45054	-44377	-44981	-43516	-42928	-42519	-41679	-41113	-39400	-39160
VAR/COV VaR@99%	-74859	-75065	-59697	-58827	-57684	-55321	-51601	-52156	-51990	-52139	-52331	-50745	-49718	-51082	-52294	-51020	-50253	-50938	-49278	-48613	-48149	-47198	-46558	-44618	-44346
Aggregate Portfolio Estimates																									
HVaR@95%**	-50529	-53165	-39960	-41350	-41825	-40166	-37287	-37646	-36719	-37136	-36984	-34388	-34083	-35175	-38738	-37842	-37347	-37955	-37119	-36212	-36344	-35990	-35951	-35168	-35138
HVaR@98%	-70484	-71474	-57913	-62191	-61107	-58583	-57503	-56246	-56587	-55755	-54423	-53203	-51570	-52440	-62461	-59739	-57832	-58138	-55372	-54009	-54207	-53329	-51641	-50934	-50153
HVaR@99%	-90482	-98492	-72866	-72595	-74285	-69720	-66972	-65566	-62020	-63113	-63668	-62173	-60992	-62423	-78903	-76455	-73631	-73420	-70426	-68465	-66634	-64953	-63182	-62599	-61483
ES @ 95%***	-72717	-75413	-60629	-58819	-57875	-55391	-51839	-52233	-51748	-51916	-51966	-50170	-49480	-50796	-59877	-58233	-57037	-57226	-55338	-54156	-53590	-52468	-51447	-50890	-50233
ES @ 98%	-99613	-1E+05	-85559	-77860	-75384	-72351	-67540	-67343	-65986	-66003	-66096	-64280	-64201	-65478	-81364	-79828	-77609	-77477	-74626	-72995	-71877	-70058	-68605	-67951	-67128
ES @ 99%	-1E+05	-1E+05	-1E+05	-87413	-81962	-78958	-72158	-71929	-71127	-71572	-72170	-70042	-70747	-72100	-90178	-87630	-85360	-85702	-82428	-80874	-79940	-77171	-75775	-74894	-74027

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix B1 - Aggregate Portfolio Risk Estimates for Domestic Portfolios (Continued)

Table B1.03- Aggregate Portfolio Risk Estimates for Chile																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-71402	-57602	-59423	-59190	-55670	-49813	-46470	-45164	-42202	-39926	-39099	-38069	-37795	-54946	-52611	-54848	-52725	-51574	-49661	-48287	-47646	-46291	-45353	#####	-43691
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-28911	-28725	-27610	-26798	-25523	-23023	-21820	-20906	-19253	-18425	-18078	-17491	-16929	-17180	-16477	-15907	-15462	-15328	-14924	-14791	-14462	-14211	-14267	#####	-14535
VAR/COV VaR@98%	-36099	-35867	-34475	-33460	-31869	-28747	-27245	-26103	-24040	-23006	-22573	-21839	-21138	-21452	-20574	-19862	-19307	-19138	-18634	-18468	-18058	-17745	-17814	#####	-18149
VAR/COV VaR@99%	-40879	-40617	-39041	-37891	-36089	-32554	-30853	-29560	-27224	-26052	-25562	-24731	-23937	-24293	-23299	-22492	-21863	-21673	-21102	-20914	-20449	-20094	-20173	#####	-20552
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-28911	-27829	-26993	-26309	-24952	-22554	-21429	-20557	-19038	-18271	-17936	-17337	-16726	-16606	-15949	-15375	-14945	-14890	-14512	-14402	-14063	-13824	-13957	#####	-13742
VAR/COV VaR@98%	-36099	-34748	-33704	-32851	-31156	-28162	-26756	-25668	-23771	-22814	-22396	-21647	-20885	-20734	-19914	-19198	-18661	-18592	-18121	-17983	-17560	-17261	-17427	#####	-17158
VAR/COV VaR@99%	-40879	-39350	-38168	-37201	-35281	-31891	-30300	-29067	-26919	-25836	-25362	-24514	-23651	-23480	-22551	-21740	-21132	-21054	-20520	-20365	-19886	-19547	-19734	#####	-19430
Aggregate Portfolio Estimates																									
HVaR@95%**	-26743	-29233	-27176	-26518	-25055	-22578	-21423	-20333	-18524	-18936	-18461	-17564	-17183	-16387	-15681	-15091	-14843	-14723	-14436	-14353	-14015	-13647	-13488	#####	-14042
HVaR@98%	-37278	-39482	-36214	-34400	-33972	-29704	-28578	-27497	-25845	-24403	-23558	-22939	-22430	-21730	-20640	-19989	-19380	-19811	-19261	-19033	-18260	-17813	-18339	#####	-18936
HVaR@99%	-43478	-46815	-39691	-39956	-37982	-34103	-32171	-31571	-29096	-27337	-26766	-25400	-24346	-24578	-23580	-23581	-23267	-23145	-22540	-22013	-21470	-21136	-21245	#####	-22228
ES @ 95%***	-38670	-39164	-36715	-34815	-33722	-30420	-29222	-28102	-26130	-25105	-24371	-23435	-22662	-23540	-22506	-22193	-21809	-21707	-21122	-20928	-20348	-19938	-19973	#####	-20277
ES @ 98%	-52533	-48948	-45755	-44588	-42753	-38193	-37032	-35910	-33027	-31019	-30218	-29047	-28304	-32696	-31236	-31481	-30591	-30503	-29568	-29024	-28377	-27730	-27658	#####	-27746
ES @ 99%	-63362	-53988	-52461	-50785	-48358	-43279	-42574	-41203	-37786	-35579	-34382	-33348	-32500	-41787	-39882	-40708	-39400	-39122	-37799	-37084	-36361	-35281	-35071	#####	-34197

Table B1.04- Aggregate Portfolio Risk Estimates for France																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-77536	-77016	-60221	-52056	-50153	-54675	-55635	-49937	-51117	-48477	-48887	-47620	-48220	-50228	-51730	-52017	-50894	-50065	-50787	-50395	-51336	-51741	-51133	#####	-50617
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-34142	-32929	-28568	-26231	-25994	-27305	-27103	-23913	-24862	-23675	-23813	-23490	-23382	-23260	-25140	-24881	-24620	-24671	-24723	-24405	-24592	-24554	-24048	#####	-24271
VAR/COV VaR@98%	-42631	-41116	-35671	-32753	-32457	-34094	-33841	-29859	-31043	-29561	-29734	-29330	-29196	-29044	-31391	-31067	-30742	-30805	-30870	-30473	-30707	-30659	-30027	#####	-30306
VAR/COV VaR@99%	-48276	-46561	-40395	-37090	-36756	-38609	-38323	-33813	-35154	-33476	-33672	-33214	-33062	-32890	-35548	-35182	-34813	-34885	-34958	-34508	-34773	-34719	-34003	#####	-34319
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-34142	-33052	-28561	-26288	-26127	-27282	-27115	-23980	-24682	-23519	-23592	-23288	-23238	-23126	-24300	-24144	-23932	-24025	-24030	-23810	-24075	-24071	-23594	#####	-22700
VAR/COV VaR@98%	-42631	-41269	-35663	-32824	-32623	-34066	-33857	-29942	-30818	-29367	-29457	-29078	-29015	-28876	-30342	-30147	-29882	-29998	-30005	-29729	-30060	-30055	-29461	#####	-28344
VAR/COV VaR@99%	-48276	-46734	-40385	-37171	-36943	-38577	-38340	-33907	-34899	-33256	-33358	-32929	-32858	-32700	-34360	-34140	-33839	-33971	-33978	-33666	-34041	-34035	-33362	#####	-32097
Aggregate Portfolio Estimates																									
HVaR@95%**	-33045	-30844	-26823	-26204	-26355	-26722	-26037	-23314	-25058	-23589	-24418	-24461	-24179	-24056	-26872	-26194	-25811	-25763	-25771	-25225	-25669	-25369	-25005	#####	-24897
HVaR@98%	-49210	-43728	-36787	-34664	-34889	-39352	-38236	-33253	-34432	-33354	-33665	-32277	-32033	-31623	-34555	-35189	-35361	-35440	-35144	-34771	-34830	-35270	-34112	#####	-34140
HVaR@99%	-54489	-51967	-47604	-40751	-40593	-43662	-43080	-37560	-37774	-36572	-37665	-35961	-35960	-35938	-39300	-38380	-37036	-38047	-37791	-37552	-37562	-37251	-36243	#####	-36730
ES @ 95%***	-46976	-45381	-38102	-34725	-34387	-36835	-36664	-32120	-33657	-32362	-32735	-32239	-32036	-31776	-34528	-34305	-33834	-33871	-33928	-33476	-33782	-33875	-33051	#####	-33278
ES @ 98%	-60423	-60093	-50382	-44136	-42847	-46529	-47000	-41046	-41049	-39756	-40340	-39036	-39050	-39465	-42669	-42570	-41539	-42090	-42047	-41487	-41796	-41767	-40672	#####	-40998
ES @ 99%	-67388	-71858	-57469	-49288	-47032	-50685	-51709	-45403	-45427	-43513	-43992	-43088	-43219	-44027	-47189	-47603	-46442	-46692	-47023	-46171	-46663	-46493	-45675	#####	-45816

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.05- Aggregate Portfolio Risk Estimates for Germany																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-82561	-71099	-46532	-48584	-55797	-54459	-51640	-54513	-54709	-52331	-54780	-51792	-50589	-50093	-49293	-50002	-49911	-47756	-47579	-49369	-49570	-47599	-48357	-48742	-46985
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-45259	-37942	-26026	-24196	-25850	-24973	-23956	-24094	-24262	-23752	-24026	-22255	-21575	-21209	-20830	-21114	-20692	-19816	-19172	-19450	-19205	-18609	-18637	-18932	-18363
VAR/COV VaR@98%	-56512	-47375	-32497	-30212	-32277	-31182	-29913	-30084	-30294	-29657	-30000	-27789	-26939	-26483	-26009	-26364	-25836	-24742	-23939	-24286	-23980	-23236	-23271	-23639	-22928
VAR/COV VaR@99%	-63995	-53649	-36800	-34213	-36552	-35311	-33874	-34068	-34306	-33584	-33973	-31468	-30507	-29990	-29453	-29855	-29258	-28019	-27109	-27502	-27155	-26313	-26353	-26770	-25965
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-45259	-37704	-26122	-24222	-25461	-24674	-23556	-23828	-24057	-23617	-23861	-22108	-21439	-21107	-20730	-21068	-20721	-19770	-19052	-19283	-19071	-18428	-18457	-17688	-17996
VAR/COV VaR@98%	-56512	-47078	-32617	-30245	-31791	-30809	-29412	-29753	-30038	-29489	-29794	-27605	-26769	-26355	-25885	-26306	-25873	-24686	-23788	-24077	-23812	-23010	-23046	-22086	-22470
VAR/COV VaR@99%	-63995	-53313	-36936	-34250	-36001	-34889	-33307	-33692	-34016	-33394	-33739	-31261	-30314	-29845	-29313	-29789	-29299	-27955	-26939	-27265	-26966	-26057	-26098	-25011	-25445
Aggregate Portfolio Estimates																									
HVaR@95%**	-44922	-37519	-25302	-22509	-24522	-23630	-22957	-23290	-24580	-23255	-23441	-21235	-21337	-20949	-20507	-20651	-20705	-19515	-18801	-18888	-18265	-17510	-17669	-17907	-17499
HVaR@98%	-59893	-48631	-34099	-31547	-33766	-32742	-32060	-31784	-32150	-30963	-30905	-28605	-28185	-27823	-28428	-28781	-28396	-27223	-26285	-26283	-25290	-24552	-25026	-24621	-23946
HVaR@99%	-66974	-59146	-39373	-34214	-37160	-35071	-34955	-33801	-35177	-35169	-36249	-33234	-32087	-31940	-32469	-32852	-31859	-30441	-29156	-29557	-29505	-28657	-28565	-29250	-27851
ES @ 95%***	-58463	-49416	-33337	-30937	-33755	-33060	-31968	-32414	-32716	-31576	-31928	-29642	-29082	-28781	-28712	-29165	-29217	-27836	-26887	-27233	-26773	-25869	-25869	-26179	-25229
ES @ 98%	-70665	-61480	-41077	-38752	-43260	-42190	-41291	-41698	-41892	-40931	-42236	-39235	-38015	-37424	-37371	-38066	-38321	-36604	-35690	-36302	-36076	-34820	-34900	-35539	-34134
ES @ 99%	-76040	-67564	-44105	-44246	-50452	-49880	-48012	-50066	-49830	-48086	-50040	-46852	-45158	-44249	-43917	-44987	-45864	-43657	-42697	-43700	-43677	-41793	-42162	-42900	-41054

Table B1.06- Aggregate Portfolio Risk Estimates for Hong Kong																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-62211	-68186	-55986	-59473	-58418	-52191	-45759	-44003	-45641	-50781	-52246	-54092	-54510	-54502	-53409	-53089	-52535	-53763	-52372	-53580	-54543	-52273	-52458	-49229	-46623
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-26730	-28985	-26136	-27559	-28799	-25149	-22408	-21205	-22172	-22839	-23370	-23680	-23751	-23637	-23384	-23458	-23110	-23250	-22474	-22962	-23112	-22000	-21684	-20664	-20079
VAR/COV VaR@98%	-33376	-36192	-32634	-34412	-35960	-31401	-27979	-26478	-27684	-28518	-29181	-29568	-29656	-29514	-29198	-29291	-28856	-29031	-28062	-28671	-28858	-27470	-27075	-25802	-25072
VAR/COV VaR@99%	-37796	-40985	-36956	-38968	-40722	-35560	-31684	-29984	-31350	-32294	-33045	-33484	-33584	-33422	-33064	-33169	-32677	-32875	-31778	-32467	-32680	-31107	-30661	-29219	-28392
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-26730	-28767	-25985	-27334	-28653	-25156	-22474	-21208	-22158	-22727	-23341	-23642	-23716	-23590	-23344	-23316	-23028	-23170	-22340	-22858	-23026	-22140	-21818	-20909	-20189
VAR/COV VaR@98%	-33376	-35920	-32445	-34130	-35778	-31411	-28061	-26481	-27668	-28378	-29144	-29521	-29612	-29456	-29148	-29113	-28754	-28930	-27894	-28541	-28751	-27645	-27242	-26107	-25209
VAR/COV VaR@99%	-37796	-40676	-36742	-38650	-40515	-35571	-31777	-29987	-31331	-32136	-33003	-33430	-33534	-33356	-33008	-32968	-32562	-32762	-31588	-32321	-32559	-31306	-30850	-29565	-28547
Aggregate Portfolio Estimates																									
HVaR@95%**	-24446	-27874	-24650	-26051	-27246	-24078	-21940	-20166	-21494	-22431	-22886	-23418	-23287	-23247	-23153	-22673	-22646	-22928	-22053	-22395	-22665	-21530	-21397	-20692	-20137
HVaR@98%	-35366	-37679	-34114	-34545	-37022	-33334	-30499	-28874	-29526	-28779	-30544	-29994	-30337	-29809	-30079	-30201	-29529	-29485	-28357	-29528	-29783	-28130	-27810	-26365	-25673
HVaR@99%	-41306	-44331	-38835	-40028	-41940	-36923	-34157	-33484	-34968	-35359	-37307	-35567	-35247	-36233	-35519	-36155	-35576	-35818	-34370	-34365	-34822	-33386	-33098	-31999	-31191
ES @ 95%***	-35132	-38342	-33953	-35450	-36541	-32735	-29072	-27775	-29073	-30074	-31074	-31287	-30982	-30984	-30862	-31192	-30897	-30971	-29906	-30612	-30978	-29433	-29262	-28005	-27148
ES @ 98%	-47215	-50346	-43868	-46052	-46805	-41905	-37064	-35518	-37467	-39048	-40641	-41086	-40149	-40479	-39848	-40680	-40448	-40690	-39469	-40205	-40858	-39127	-38895	-37117	-35578
ES @ 99%	-55470	-58932	-50171	-53409	-53554	-47723	-41073	-39494	-41584	-44439	-45880	-47698	-46155	-46153	-45623	-47060	-46623	-47156	-45820	-47005	-47885	-45956	-45822	-43286	-41458

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.07- Aggregate Portfolio Risk Estimates for India																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-79196	-69376	-85078	-78228	-74183	-70104	-62768	-63649	-60111	-60402	-63167	-63231	-62693	-60462	-59016	-58119	-56463	-56053	-56119	-56588	-56804	-55910	-55034	-54354	-55458
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-42238	-31413	-37591	-35095	-32282	-31061	-28571	-28067	-26708	-26777	-26957	-27237	-26364	-25332	-24884	-24561	-24519	-24249	-24212	-24172	-23938	-23388	-22877	-22586	-22912
VAR/COV VaR@98%	-52739	-39223	-46937	-43821	-40308	-38784	-35675	-35046	-33348	-33434	-33659	-34009	-32919	-31630	-31071	-30668	-30616	-30278	-30232	-30182	-29889	-29203	-28565	-28201	-28608
VAR/COV VaR@99%	-59723	-44417	-53153	-49624	-45646	-43919	-40399	-39687	-37764	-37861	-38116	-38513	-37279	-35819	-35186	-34729	-34670	-34287	-34235	-34179	-33847	-33071	-32348	-31936	-32397
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-42238	-31629	-36182	-33645	-30966	-29814	-27307	-27021	-25694	-25939	-26183	-26556	-25779	-24795	-24363	-24062	-24097	-23871	-23867	-23885	-23689	-23118	-22685	-21740	-21528
VAR/COV VaR@98%	-52739	-39493	-45179	-42010	-38666	-37227	-34097	-33740	-32083	-32388	-32693	-33159	-32188	-30959	-30420	-30045	-30088	-29807	-29801	-29823	-29578	-28865	-28326	-27145	-26881
VAR/COV VaR@99%	-59723	-44723	-51161	-47573	-43786	-42156	-38612	-38208	-36331	-36677	-37022	-37550	-36451	-35059	-34449	-34023	-34072	-33754	-33747	-33772	-33495	-32688	-32077	-30740	-30441
Aggregate Portfolio Estimates																									
HVaR@95%**	-38398	-31007	-36432	-35124	-30094	-30670	-27819	-26937	-26186	-27688	-27696	-27476	-26539	-25699	-25000	-24091	-23085	-22225	-22711	-23112	-22623	-22213	-22043	-21927	-22445
HVaR@98%	-56674	-42661	-53750	-49689	-44809	-43847	-39603	-38777	-37801	-37217	-38117	-37926	-37272	-36296	-35567	-34982	-35810	-35006	-34991	-34922	-35494	-34050	-32906	-32183	-31965
HVaR@99%	-67444	-48129	-63716	-60996	-54956	-55731	-50767	-50041	-48839	-49633	-49923	-50822	-48459	-45707	-45036	-43979	-43862	-43074	-43061	-42082	-41287	-40569	-39238	-38691	-39249
ES @ 95%***	-55279	-42672	-52226	-49910	-45599	-44148	-40292	-39367	-37841	-38477	-39153	-39459	-38823	-37228	-36428	-35952	-35748	-35120	-35028	-35052	-34797	-33963	-33254	-32686	-32796
ES @ 98%	-71207	-54582	-68910	-65153	-59970	-57890	-52604	-52362	-50732	-50967	-51828	-52566	-51091	-48768	-47737	-47330	-46821	-46069	-46129	-46144	-46129	-45185	-44176	-43065	-43707
ES @ 99%	-78537	-63001	-78004	-72407	-68498	-64825	-58670	-58596	-56971	-57057	-58680	-59540	-58501	-55954	-54735	-54082	-52954	-52305	-52283	-52489	-52644	-51507	-50318	-49104	-50291

Table B1.08- Aggregate Portfolio Risk Estimates for Indonesia																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-1E+05	-1E+05	-105321	-1E+05	-1E+05	-1E+05	-1E+05	-130721	-1E+05	-1E+05	-1E+05	-118098	-111223	-109540	-110781	-108537	-105897	-1E+05	-1E+05	-104995	-100899	-1E+05	-99211	-99559	-97716
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-46575	-41758	-43184	-46347	-48538	-60349	-58355	-54587	-56444	-55384	-53627	-52351	-49937	-48214	-47916	-47171	-45897	-45697	-45702	-44854	-43243	-43605	-43102	-42742	-43152
VAR/COV VaR@98%	-58155	-52140	-53921	-57871	-60606	-75353	-72864	-68159	-70478	-69155	-66960	-65367	-62353	-60202	-59829	-58899	-57308	-57059	-57065	-56006	-53995	-54446	-53818	-53369	-53881
VAR/COV VaR@99%	-65856	-59045	-61061	-65534	-68632	-85332	-82512	-77185	-79811	-78313	-75827	-74023	-70610	-68174	-67752	-66699	-64897	-64615	-64622	-63423	-61145	-61656	-60945	-60436	-61016
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-46575	-41546	-43168	-47479	-48254	-54140	-52690	-50040	-51246	-50759	-50107	-49499	-46969	-45388	-45469	-44911	-43890	-44014	-44394	-43510	-42161	-42706	-42349	-40584	-40302
VAR/COV VaR@98%	-58155	-51875	-53901	-59283	-60251	-67601	-65790	-62482	-63988	-63380	-62565	-61806	-58647	-56673	-56774	-56077	-54802	-54957	-55432	-54328	-52643	-53324	-52878	-50675	-50323
VAR/COV VaR@99%	-65856	-58745	-61039	-67134	-68230	-76553	-74502	-70756	-72461	-71773	-70850	-69990	-66413	-64178	-64292	-63503	-62059	-62235	-62773	-61523	-59614	-60385	-59880	-57385	-56987
Aggregate Portfolio Estimates																									
HVaR@95%**	-39939	-37928	-40399	-43289	-45840	-59652	-57275	-54944	-54517	-51754	-50672	-50611	-47962	-46667	-46619	-46369	-45328	-44843	-45164	-45265	-43777	-42865	-41911	-41858	-41892
HVaR@98%	-59529	-57974	-62424	-63457	-67976	-82923	-80108	-74145	-79518	-78591	-75479	-72896	-69408	-67396	-66990	-65300	-63392	-62994	-63758	-61926	-60363	-59974	-59477	-59692	-59818
HVaR@99%	-73277	-71312	-73354	-75529	-82366	-96521	-91565	-86491	-90400	-87956	-86533	-84720	-79765	-76811	-75455	-75327	-74846	-75010	-74361	-73045	-70588	-70300	-71440	-71799	-73693
ES @ 95%***	-63090	-58004	-60171	-64587	-67398	-83734	-80863	-75980	-76535	-75467	-73860	-72890	-69357	-66875	-66476	-65112	-63604	-63373	-63541	-62174	-60009	-60392	-59834	-59793	-60097
ES @ 98%	-89963	-80527	-82243	-87511	-90285	-1E+05	-1E+05	-99003	-98877	-97805	-96025	-95134	-90284	-87632	-87331	-85466	-84158	-84087	-84074	-82219	-79257	-79909	-79094	-79108	-79133
ES @ 99%	-1E+05	-91838	-93768	-1E+05	-1E+05	-1E+05	-1E+05	-115090	-1E+05	-1E+05	-1E+05	-107762	-102269	-100260	-100913	-98768	-97101	-97315	-98048	-95906	-92462	-92986	-91012	-90680	-90099

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B1 - Aggregate Portfolio Risk Estimates for Domestic Portfolios (Continued)

Table B1.09- Aggregate Portfolio Risk Estimates for Ireland																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-92574	-73830	-56553	-54794	-49261	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-98229	-93143	-89478	-88259	-86440	-85486	-83483	-81632	-82091	-74450	-72080	-72703	-70891	-69750
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-34440	-31237	-27129	-25079	-21747	-31806	-30540	-28467	-26769	-25702	-25106	-24354	-23259	-23162	-22520	-21992	-21644	-21005	-20723	-20726	-22201	-21817	-21564	-21228	-20916
VAR/COV VaR@98%	-43003	-39003	-33874	-31314	-27154	-39714	-38134	-35544	-33424	-32093	-31348	-30410	-29042	-28921	-28119	-27460	-27025	-26227	-25876	-25879	-27721	-27242	-26926	-26506	-26116
VAR/COV VaR@99%	-48697	-44168	-38360	-35461	-30750	-44973	-43183	-40251	-37851	-36343	-35500	-34437	-32888	-32751	-31842	-31097	-30604	-29700	-29302	-29306	-31392	-30849	-30491	-30016	-29575
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-34440	-31312	-27105	-25100	-21779	-25807	-24586	-22585	-21047	-20159	-19939	-19523	-18575	-18485	-17953	-17619	-17446	-16897	-16795	-16993	-18741	-18520	-18374	-17608	-17458
VAR/COV VaR@98%	-43003	-39097	-33844	-31341	-27194	-32223	-30699	-28201	-26280	-25172	-24896	-24378	-23194	-23081	-22416	-22000	-21784	-21098	-20971	-21218	-23400	-23125	-22942	-21986	-21799
VAR/COV VaR@99%	-48697	-44274	-38326	-35491	-30795	-36490	-34764	-31935	-29760	-28505	-28193	-27606	-26265	-26137	-25385	-24913	-24668	-23891	-23748	-24028	-26499	-26188	-25980	-24898	-24685
Aggregate Portfolio Estimates																									
HVaR@95%**	-31774	-29993	-25664	-24675	-21059	-28105	-26647	-24877	-23185	-22523	-21849	-21672	-20779	-20934	-20438	-19971	-20114	-19453	-18833	-18757	-20866	-20546	-20576	-20239	-19956
HVaR@98%	-44977	-41908	-36361	-33904	-28295	-46691	-43923	-41519	-39240	-38690	-37070	-36239	-34561	-34660	-33357	-31888	-32155	-30661	-30120	-29528	-33388	-32151	-32330	-31584	-31570
HVaR@99%	-54314	-52358	-46329	-43087	-36748	-63913	-59154	-54212	-50703	-46973	-43694	-42577	-40052	-41096	-39363	-37664	-36771	-35210	-35231	-34496	-39814	-39121	-38463	-37639	-37060
ES @ 95%***	-47214	-43559	-36631	-34575	-30001	-49971	-47971	-44575	-42085	-40495	-39351	-38006	-36251	-35935	-35194	-34337	-33765	-32688	-32254	-32026	-34434	-33533	-33755	-33273	-33078
ES @ 98%	-65451	-58790	-48830	-46048	-39734	-77138	-74308	-69841	-66512	-63610	-61446	-58971	-55939	-54962	-53902	-52561	-51609	-50031	-49330	-49023	-50610	-49344	-49282	-48336	-47509
ES @ 99%	-78571	-69129	-52966	-49619	-44224	-97244	-94879	-89841	-86651	-83345	-81266	-78044	-73897	-71106	-70033	-68631	-67493	-65556	-64188	-64522	-63265	-61357	-60969	-59724	-58917

Table B1.10- Aggregate Portfolio Risk Estimates for Israel																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-91709	-83887	-74146	-67890	-63765	-70077	-66866	-63122	-64878	-66460	-66466	-71557	-72830	-68716	-69374	-71237	-71856	-68539	-67410	-65985	-64623	-62064	-59694	-57606	-58079
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-40518	-35390	-30795	-27776	-25599	-26497	-25175	-24363	-24690	-24624	-24480	-25321	-24964	-23674	-23391	-23801	-23588	-22773	-22105	-21750	-21431	-20924	-20363	-19865	-19697
VAR/COV VaR@98%	-50592	-44190	-38452	-34683	-31963	-33085	-31435	-30420	-30829	-30747	-30567	-31617	-31171	-29560	-29206	-29718	-29452	-28435	-27602	-27158	-26759	-26127	-25426	-24804	-24595
VAR/COV VaR@99%	-57292	-50041	-43544	-39275	-36196	-37466	-35598	-34448	-34911	-34818	-34615	-35803	-35298	-33474	-33074	-33654	-33352	-32200	-31257	-30754	-30302	-29587	-28793	-28089	-27852
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-40518	-35363	-52084	-43463	-37655	-35709	-32880	-30820	-30140	-29310	-28531	-29239	-28338	-26776	-26167	-26130	-25713	-24785	-23995	-23454	-22990	-22966	-22361	-21429	-20933
VAR/COV VaR@98%	-50592	-44156	-65034	-54269	-47018	-44587	-41055	-38483	-37634	-36597	-35625	-36509	-35384	-33433	-32672	-32627	-32106	-30947	-29961	-29286	-28706	-28676	-27921	-26757	-26138
VAR/COV VaR@99%	-57292	-50003	-73646	-61456	-53244	-50492	-46492	-43580	-42617	-41443	-40342	-41344	-40070	-37861	-36999	-36948	-36358	-35046	-33929	-33164	-32507	-32474	-31618	-30301	-29600
Aggregate Portfolio Estimates																									
HVaR@95%**	-38964	-34160	-26100	-24523	-22754	-24906	-24025	-23935	-22797	-22629	-23442	-21845	-21659	-20848	-21166	-21922	-22410	-21698	-21339	-21144	-20830	-20556	-19934	-19185	-19088
HVaR@98%	-49612	-46388	-38824	-34741	-34442	-35556	-34120	-33212	-34208	-34254	-34447	-34684	-34475	-32819	-33283	-33779	-33387	-32103	-30692	-30088	-29436	-28865	-29063	-28231	-28559
HVaR@99%	-62603	-52916	-46589	-45473	-40822	-44059	-41479	-39853	-40546	-40378	-39729	-43242	-41886	-39216	-38552	-39597	-38906	-37211	-36456	-34996	-35859	-35214	-33960	-33633	-33415
ES @ 95%***	-53194	-47593	-39480	-36694	-35294	-37482	-35521	-34729	-35369	-35458	-35405	-36607	-36360	-34338	-34061	-35033	-34940	-33660	-32688	-31948	-31501	-30503	-30112	-29304	-29248
ES @ 98%	-70808	-63194	-55013	-51701	-48819	-51980	-48755	-46914	-48092	-49107	-48941	-52217	-51750	-48930	-48148	-49743	-49194	-46884	-45518	-44451	-44079	-42616	-41777	-40830	-41075
ES @ 99%	-84050	-75097	-65987	-62095	-58906	-62907	-58733	-55992	-56896	-59602	-59876	-63492	-63806	-60192	-59135	-61113	-60631	-57589	-56061	-55079	-54074	-52023	-50757	-49488	-49780

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.11- Aggregate Portfolio Risk Estimates for Italy																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-89990	-63605	-57700	-62720	-59666	-61639	-61635	-59843	-64156	-60316	-60128	-62160	-61348	-59233	-55813	-54380	-53876	-54024	-53438	-53316	-53912	-54111	-53007	-52064	-51921
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-37436	-31609	-31518	-32125	-30235	-29438	-28715	-27913	-27961	-26409	-26370	-25778	-25108	-24053	-24440	-23882	-23485	-23600	-23614	-23969	-23560	-23534	-23058	-22628	-22348
VAR/COV VaR@98%	-46744	-39468	-39355	-40112	-37753	-36757	-35855	-34853	-34913	-32975	-32927	-32187	-31351	-30034	-30516	-29820	-29324	-29467	-29486	-29928	-29418	-29385	-28791	-28254	-27904
VAR/COV VaR@99%	-52934	-44694	-44566	-45424	-42752	-41624	-40603	-39469	-39536	-37342	-37287	-36449	-35502	-34011	-34557	-33768	-33207	-33369	-33390	-33891	-33314	-33276	-32604	-31996	-31600
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-37436	-31357	-31495	-32082	-30130	-29458	-28794	-27965	-28030	-26386	-26266	-25598	-24895	-23818	-24070	-23467	-23091	-23207	-23202	-23449	-23019	-23039	-22628	-21686	-21229
VAR/COV VaR@98%	-46744	-39153	-39325	-40059	-37621	-36782	-35953	-34918	-34999	-32946	-32797	-31963	-31085	-29739	-30055	-29301	-28832	-28977	-28971	-29280	-28742	-28767	-28255	-27077	-26507
VAR/COV VaR@99%	-52934	-44338	-44533	-45363	-42603	-41653	-40714	-39542	-39634	-37309	-37140	-36196	-35202	-33678	-34035	-33181	-32650	-32814	-32807	-33157	-32548	-32576	-31996	-30663	-30017
Aggregate Portfolio Estimates																									
HVaR@95%**	-33954	-30049	-29716	-31369	-28899	-28197	-27278	-27241	-26999	-25292	-25113	-24901	-24408	-23053	-24257	-23778	-23024	-22957	-22911	-23481	-22801	-23101	-22829	-22388	-22259
HVaR@98%	-47997	-43428	-45392	-42589	-41426	-40811	-41839	-38200	-37261	-35401	-34547	-34074	-32939	-31106	-32633	-31873	-31524	-32005	-31735	-32280	-31554	-31652	-31083	-30338	-30539
HVaR@99%	-57548	-52666	-50522	-52314	-47420	-46487	-44507	-43753	-44958	-43260	-42112	-39933	-39167	-38056	-39275	-38289	-38102	-38356	-38717	-39134	-38185	-38013	-38035	-37625	-37543
ES @ 95%***	-49216	-42589	-42073	-42309	-40159	-39593	-38776	-37479	-37823	-35788	-36001	-35008	-34220	-32734	-33256	-32525	-31953	-32090	-32092	-32722	-32388	-32391	-31801	-31342	-31115
ES @ 98%	-66441	-54540	-52578	-54737	-51410	-50717	-49915	-48865	-49903	-47713	-48058	-47460	-46449	-44611	-44464	-43323	-42750	-42943	-42696	-43269	-43119	-43041	-42584	-42065	-41778
ES @ 99%	-79101	-60156	-56106	-59200	-56446	-56771	-56279	-54612	-56742	-54246	-55354	-55725	-54592	-52362	-50912	-49442	-48858	-49021	-48559	-48724	-49000	-49007	-48221	-47497	-47271

Table B1.12- Aggregate Portfolio Risk Estimates for Japan																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-84856	-67544	-62486	-63288	-66012	-62160	-61652	-60758	-64119	-59400	-58288	-57816	-58211	-58684	-58596	-56496	-57691	-55375	-55666	-55731	-56004	-55663	-54647	-54025	-55016
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-38875	-35160	-32374	-32118	-31830	-29459	-29683	-29041	-29884	-27629	-27928	-28162	-27832	-27654	-27731	-26642	-27067	-26022	-26463	-26715	-26652	-26548	-26706	-26589	-27028
VAR/COV VaR@98%	-48540	-43901	-40423	-40103	-39743	-36784	-37063	-36261	-37314	-34498	-34871	-35164	-34751	-34529	-34626	-33266	-33797	-32492	-33043	-33357	-33279	-33148	-33346	-33199	-33747
VAR/COV VaR@99%	-54968	-49715	-45776	-45414	-45006	-41655	-41971	-41063	-42255	-39067	-39489	-39820	-39353	-39102	-39212	-37671	-38272	-36795	-37419	-37775	-37686	-37538	-37762	-37596	-38216
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-38875	-34989	-32538	-32337	-31974	-29698	-29772	-29137	-29899	-27821	-27761	-27989	-27665	-27494	-27589	-26552	-26909	-25919	-26356	-26593	-26550	-26457	-26509	-25404	-25352
VAR/COV VaR@98%	-48540	-43689	-40628	-40378	-39923	-37082	-37174	-36381	-37333	-34738	-34663	-34948	-34543	-34330	-34448	-33154	-33600	-32364	-32910	-33204	-33151	-33035	-33099	-31720	-31655
VAR/COV VaR@99%	-54968	-49474	-46008	-45725	-45210	-41992	-42097	-41199	-42277	-39338	-39253	-39576	-39118	-38876	-39010	-37544	-38049	-36649	-37268	-37601	-37541	-37410	-37483	-35921	-35847
Aggregate Portfolio Estimates																									
HVaR@95%**	-36689	-35125	-30756	-30506	-30363	-28103	-28000	-27105	-27477	-26006	-26471	-26560	-26237	-26072	-25999	-25348	-24975	-24125	-24414	-24770	-24396	-24362	-24538	-24724	-24849
HVaR@98%	-50952	-45723	-39422	-41236	-39470	-36616	-37919	-36416	-38590	-34847	-34247	-34596	-34543	-34649	-35288	-33835	-34464	-32904	-33413	-33590	-33511	-33808	-33662	-34755	-34941
HVaR@99%	-57105	-51840	-50455	-47710	-46801	-41148	-44096	-43186	-44825	-40821	-40829	-41360	-40448	-40270	-40789	-39850	-40301	-38830	-39678	-39636	-39481	-39264	-39023	-38265	-39208
ES @ 95%***	-51547	-45478	-41375	-40874	-40981	-37412	-38022	-37381	-38566	-35341	-35705	-35839	-35182	-35168	-35374	-34187	-34451	-33185	-33542	-33716	-33695	-33517	-33479	-33452	-33879
ES @ 98%	-65926	-56700	-53281	-51827	-52805	-47384	-48249	-47842	-49682	-46175	-45951	-45845	-45610	-45556	-45661	-44121	-45071	-43230	-43550	-43560	-43592	-43342	-43291	-43126	-43929
ES @ 99%	-76941	-63763	-59728	-58287	-60289	-54793	-54153	-54042	-56987	-53378	-52679	-52541	-52086	-52189	-52578	-50846	-51479	-49581	-49682	-49526	-49487	-49279	-49372	-48797	-49796

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.13- Aggregate Portfolio Risk Estimates for Mexico																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-109055	-82604	-72972	-74413	-72071	-68979	-67987	-68561	-61517	-58264	-54303	-54068	-51025	-49667	-61094	-61102	-60073	-59257	-56993	-56319	-54565	-52426	-51191	-50721	-50938
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-39258	-34783	-26016	-27761	-28720	-27594	-27155	-26962	-24405	-23434	-22261	-22049	-20839	-20483	-20653	-20180	-19862	-20016	-19288	-18835	-18243	-18401	-18028	-18086	-18728
VAR/COV VaR@98%	-49018	-43432	-32485	-34663	-35861	-34455	-33907	-33666	-30472	-29260	-27795	-27531	-26021	-25575	-25788	-25198	-24801	-24992	-24084	-23518	-22779	-22976	-22510	-22583	-23384
VAR/COV VaR@99%	-55509	-49183	-36787	-39254	-40610	-39017	-38397	-38124	-34508	-33135	-31476	-31177	-29466	-28962	-29203	-28534	-28085	-28302	-27273	-26632	-25795	-26018	-25491	-25573	-26480
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-39258	-34831	-27599	-28949	-29711	-28360	-27776	-27451	-25040	-23985	-22642	-22441	-21326	-20916	-20887	-20530	-20228	-20259	-19527	-19020	-18429	-18349	-17945	-17197	-17354
VAR/COV VaR@98%	-49018	-43491	-34460	-36147	-37099	-35411	-34683	-34276	-31265	-29948	-28271	-28020	-26628	-26116	-26080	-25635	-25257	-25296	-24382	-23749	-23011	-22911	-22406	-21473	-21669
VAR/COV VaR@99%	-55509	-49250	-39024	-40934	-42011	-40100	-39275	-38815	-35406	-33914	-32015	-31731	-30154	-29575	-29534	-29030	-28602	-28646	-27611	-26894	-26058	-25945	-25373	-24316	-24538
Aggregate Portfolio Estimates																									
HVaR@95%**	-36554	-31935	-22843	-25761	-26600	-25883	-25213	-25306	-22856	-21985	-20735	-20568	-19301	-19202	-20382	-19598	-18882	-19156	-18557	-18158	-17610	-17350	-17135	-17334	-17972
HVaR@98%	-50910	-43202	-30492	-36195	-38700	-35585	-34515	-34569	-31756	-30576	-28907	-29094	-26960	-26980	-27874	-27980	-27182	-27207	-26497	-25904	-25297	-25603	-25060	-24862	-26223
HVaR@99%	-59513	-53471	-38204	-44469	-46953	-43339	-44495	-43807	-39182	-38991	-38121	-36261	-34102	-33585	-33828	-34096	-32990	-34350	-32966	-31924	-30887	-35454	-34747	-34882	-33770
ES @ 95%***	-54401	-45359	-33281	-37522	-38979	-37291	-36496	-36598	-33311	-32113	-30564	-30366	-28657	-28440	-30373	-29885	-29321	-29687	-28616	-27825	-26973	-27445	-26871	-26787	-27744
ES @ 98%	-76445	-60880	-46841	-52074	-53866	-51278	-50607	-51727	-46918	-45351	-43192	-42664	-40268	-39681	-43585	-43221	-42252	-42783	-41272	-40398	-39167	-40050	-39069	-38944	-39029
ES @ 99%	-94851	-70803	-58219	-62457	-63343	-60761	-59864	-62143	-56346	-54569	-51624	-51500	-48813	-47599	-54711	-54093	-53284	-53506	-51663	-50861	-49314	-48010	-46837	-46938	-47301

Table B1.14- Aggregate Portfolio Risk Estimates for New Zealand																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-73972	-66805	-60998	-74698	-67901	-60919	-56485	-57605	-55569	-53325	-53013	-51964	-52881	-50232	-50227	-48537	-48775	-50963	-51038	-50882	-49690	-48974	-49628	-49076	-47807
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-31955	-30971	-27456	-28306	-25161	-22980	-21740	-21371	-20694	-20113	-19602	-19211	-19129	-18567	-18238	-18183	-18115	-18149	-18172	-17973	-17855	-17607	-17501	-17323	-17030
VAR/COV VaR@98%	-39900	-38671	-34283	-35343	-31417	-28694	-27145	-26685	-25839	-25113	-24476	-23987	-23885	-23184	-22773	-22703	-22619	-22661	-22690	-22442	-22294	-21985	-21852	-21630	-21265
VAR/COV VaR@99%	-45184	-43792	-38823	-40024	-35577	-32494	-30739	-30219	-29261	-28439	-27717	-27164	-27048	-26254	-25788	-25710	-25615	-25662	-25695	-25413	-25246	-24896	-24746	-24495	-24080
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-31955	-31447	-27688	-29593	-26342	-24064	-22566	-21981	-21171	-20527	-19959	-19534	-19399	-18809	-18452	-18377	-18295	-18325	-18318	-18105	-17966	-17702	-17584	-16851	-16689
VAR/COV VaR@98%	-39900	-39265	-34572	-36950	-32891	-30047	-28176	-27446	-26435	-25631	-24921	-24391	-24223	-23486	-23040	-22947	-22844	-22881	-22872	-22607	-22433	-22103	-21956	-21041	-20838
VAR/COV VaR@99%	-45184	-44465	-39150	-41843	-37247	-34026	-31907	-31080	-29935	-29025	-28222	-27621	-27430	-26596	-26091	-25985	-25869	-25911	-25901	-25601	-25404	-25030	-24864	-23828	-23597
Aggregate Portfolio Estimates																									
HVaR@95%**	-31581	-29187	-26753	-28550	-25684	-23215	-22266	-21339	-20745	-19630	-19084	-18585	-18188	-17588	-17286	-17476	-16865	-16811	-16272	-15968	-16457	-16327	-16015	-15414	-15512
HVaR@98%	-42238	-41254	-36321	-37040	-33743	-30522	-28988	-28057	-26773	-26931	-26205	-26100	-24757	-24248	-23828	-24707	-24592	-24250	-23629	-22895	-22542	-22253	-22008	-22366	-21898
HVaR@99%	-48062	-46533	-43908	-49219	-41553	-38108	-36430	-35615	-33123	-31172	-29683	-29307	-28683	-27415	-26896	-27499	-27466	-27301	-27426	-27122	-27840	-27169	-27007	-26500	-26517
ES @ 95%***	-42950	-41535	-37092	-40577	-36054	-32745	-30802	-30216	-29297	-28455	-27753	-26965	-26818	-25800	-25400	-25494	-25119	-24856	-24745	-24471	-24497	-24220	-24034	-23662	-23384
ES @ 98%	-54762	-53952	-48807	-55360	-48698	-44831	-41901	-41680	-39911	-38390	-37609	-37067	-36981	-35434	-34959	-34697	-34707	-34756	-35108	-34716	-34601	-33940	-33843	-33470	-32977
ES @ 99%	-62746	-62029	-55305	-65377	-58690	-53229	-49940	-50483	-48559	-47040	-46695	-45778	-45946	-44079	-43603	-42707	-42785	-43224	-43748	-43104	-42682	-41801	-41865	-41690	-40766

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B1- Aggregate Portfolio Risk Estimates for Domestic Portfolios (Continued)

Table B1.15- Aggregate Portfolio Risk Estimates for Singapore																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-76845	-72991	-73436	-69071	-68961	-63639	-61632	-64239	-67766	-67780	-65450	-59259	-58455	-56202	-53346	-52154	-51688	-51166	-49819	-49281	-48743	-49515	-50240	-53042	-52195
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-38609	-35277	-33286	-30613	-28810	-27194	-26232	-27206	-27674	-26935	-27000	-24474	-23990	-23057	-22104	-21409	-21246	-21287	-21250	-21393	-21253	-21732	-21505	-21758	-21479
VAR/COV VaR@98%	-48209	-44047	-41562	-38225	-35973	-33955	-32755	-33970	-34555	-33631	-33713	-30559	-29954	-28789	-27600	-26732	-26528	-26579	-26533	-26712	-26537	-27135	-26852	-27167	-26819
VAR/COV VaR@99%	-54593	-49880	-47066	-43287	-40736	-38451	-37092	-38469	-39131	-38085	-38178	-34606	-33921	-32602	-31255	-30272	-30041	-30099	-30047	-30249	-30051	-30729	-30408	-30765	-30371
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-38609	-35309	-33307	-30542	-28809	-26938	-25907	-26853	-27329	-26558	-26668	-24565	-24137	-23170	-22199	-21577	-21370	-21391	-21348	-21427	-21283	-21781	-21541	-20643	-20861
VAR/COV VaR@98%	-48209	-44088	-41588	-38136	-35972	-33636	-32349	-33529	-34123	-33161	-33299	-30673	-30138	-28931	-27718	-26942	-26683	-26709	-26656	-26755	-26575	-27196	-26897	-25776	-26048
VAR/COV VaR@99%	-54593	-49926	-47095	-43186	-40735	-38090	-36633	-37969	-38642	-37552	-37709	-34735	-34129	-32762	-31388	-30509	-30217	-30246	-30186	-30298	-30094	-30798	-30459	-29189	-29497
Aggregate Portfolio Estimates																									
HVaR@95%**	-35360	-32538	-29542	-28746	-26873	-24677	-23359	-23459	-24768	-23296	-23881	-21933	-21356	-20058	-19129	-18797	-18768	-18684	-18896	-19520	-19054	-19695	-19194	-19784	-19225
HVaR@98%	-45841	-43866	-39387	-37211	-34553	-34801	-33007	-34092	-34299	-32321	-32802	-29883	-28951	-28900	-27280	-26017	-25461	-25738	-25404	-25456	-25330	-26265	-25977	-26757	-26010
HVaR@99%	-54039	-51682	-46463	-44528	-42915	-44964	-45236	-44955	-43365	-42163	-42747	-38785	-37857	-36931	-34923	-35374	-35871	-35330	-35074	-37074	-36633	-36120	-35408	-36329	-36566
ES @ 95%***	-47119	-44390	-40980	-38706	-37169	-36123	-34650	-35217	-35690	-34955	-34843	-31669	-31181	-30072	-28705	-27994	-27826	-27841	-27805	-28179	-27990	-28449	-28191	-28685	-28315
ES @ 98%	-59739	-57620	-53728	-51408	-51055	-50080	-48390	-49375	-49819	-49271	-49070	-44591	-44048	-42627	-40578	-40055	-40092	-39766	-39518	-39756	-39338	-39783	-39566	-40783	-40309
ES @ 99%	-67313	-65626	-64041	-61042	-61419	-58753	-56582	-57654	-59990	-59787	-59070	-53569	-53036	-51365	-48816	-47956	-47883	-47846	-47307	-46632	-46167	-46953	-47370	-48617	-47636

Table B1.16- Aggregate Portfolio Risk Estimates for South Africa																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-100801	-60328	-55662	-58404	-65284	-62657	-64186	-66559	-66397	-60775	-63411	-66045	-67685	-68786	-69216	-70377	-70492	-70585	-68375	-68720	-69745	-68978	-66862	-66052	-67030
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-43237	-33735	-30887	-28720	-28523	-28617	-28355	-28506	-28268	-27391	-27273	-27024	-26863	-26972	-26741	-26799	-26305	-26307	-26047	-26138	-26120	-25680	-25273	-25065	-25018
VAR/COV VaR@98%	-53987	-42123	-38566	-35861	-35615	-35732	-35404	-35593	-35296	-34201	-34054	-33743	-33542	-33678	-33390	-33463	-32846	-32848	-32524	-32637	-32614	-32065	-31557	-31297	-31239
VAR/COV VaR@99%	-61136	-47701	-43673	-40610	-40331	-40464	-40093	-40307	-39970	-38731	-38564	-38211	-37984	-38138	-37812	-37894	-37195	-37198	-36831	-36959	-36933	-36311	-35735	-35442	-35375
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-43237	-33852	-30601	-28432	-28259	-28206	-28055	-28179	-28017	-27158	-27029	-26799	-26672	-26803	-26591	-26644	-26159	-26172	-25904	-26103	-26075	-25622	-25275	-24222	-24057
VAR/COV VaR@98%	-53987	-42269	-38209	-35501	-35285	-35219	-35031	-35185	-34983	-33910	-33749	-33462	-33303	-33467	-33202	-33269	-32663	-32680	-32345	-32593	-32558	-31993	-31559	-30244	-30039
VAR/COV VaR@99%	-61136	-47866	-43269	-40202	-39958	-39883	-39670	-39844	-39616	-38401	-38219	-37894	-37713	-37899	-37599	-37674	-36988	-37007	-36628	-36909	-36870	-36230	-35738	-34249	-34017
Aggregate Portfolio Estimates																									
HVaR@95%**	-42781	-33693	-30389	-27944	-26545	-26505	-26032	-26859	-26222	-25578	-25371	-25130	-25600	-25526	-25196	-24964	-24385	-24438	-24753	-24400	-24526	-24163	-24288	-23630	-23302
HVaR@98%	-62046	-43402	-40743	-36284	-34844	-37049	-38298	-40288	-40146	-36403	-37120	-36276	-35954	-36636	-35880	-36271	-35962	-35318	-35031	-36484	-35972	-35343	-35024	-35366	-34836
HVaR@99%	-76796	-47807	-45569	-44906	-44105	-44135	-44807	-44552	-44540	-42944	-40554	-40499	-40586	-41170	-40895	-40554	-39772	-38904	-39732	-38941	-40125	-40774	-39152	-39356	-40493
ES @ 95%***	-61734	-43418	-39672	-37189	-36977	-37216	-37164	-38020	-37769	-36144	-36601	-36639	-36560	-37198	-37069	-36983	-36547	-36345	-36084	-36061	-36555	-36113	-35188	-34955	-34999
ES @ 98%	-81240	-51641	-48369	-48041	-48891	-48794	-49215	-50376	-50227	-48070	-47888	-48023	-48029	-48820	-48490	-48783	-48463	-48150	-47985	-47800	-48862	-48321	-47001	-46684	-47079
ES @ 99%	-90381	-56934	-52075	-53603	-56678	-55840	-55545	-56779	-57065	-55091	-55684	-56617	-56622	-57491	-57269	-57964	-58292	-58345	-57106	-57472	-58921	-58118	-56453	-55817	-56141

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.17- Aggregate Portfolio Risk Estimates for South Korea																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-126066	-1E+05	-98821	-94731	-92637	-89679	-94188	-94597	-94615	-96162	-95354	-92461	-91426	-93922	-87431	-89088	-93155	-92365	-93599	-91547	-91210	-90825	-92553	-94230	-93142
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-60815	-53950	-47104	-43215	-43385	-42384	-43837	-42941	-42179	-42370	-41934	-41526	-41535	-41609	-40219	-41091	-42349	-42226	-42349	-41499	-41404	-42363	-42608	-42266	-41760
VAR/COV VaR@98%	-75935	-67364	-58816	-53960	-54172	-52922	-54736	-53618	-52666	-52904	-52361	-51850	-51862	-51955	-50219	-51307	-52879	-52724	-52878	-51817	-51699	-52896	-53201	-52774	-52143
VAR/COV VaR@99%	-85991	-76284	-66604	-61105	-61346	-59930	-61985	-60718	-59640	-59910	-59295	-58717	-58729	-58835	-56869	-58102	-59881	-59706	-59880	-58679	-58545	-59900	-60246	-59763	-59048
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-60815	-53663	-47061	-43180	-43502	-42579	-44258	-43317	-42189	-42455	-42068	-41588	-41526	-41639	-40297	-41116	-42247	-42174	-42271	-41435	-41398	-41640	-41947	-40200	-39963
VAR/COV VaR@98%	-75935	-67005	-58762	-53916	-54318	-53166	-55262	-54088	-52679	-53011	-52527	-51928	-51851	-51992	-50316	-51338	-52750	-52660	-52781	-51737	-51691	-51994	-52377	-50195	-49899
VAR/COV VaR@99%	-85991	-75879	-66544	-61055	-61511	-60207	-62580	-61250	-59655	-60031	-59483	-58805	-58717	-58876	-56979	-58137	-59736	-59633	-59770	-58588	-58536	-58879	-59313	-56841	-56507
Aggregate Portfolio Estimates																									
HVaR@95%**	-53697	-50315	-45143	-41259	-41474	-40891	-41989	-40166	-41873	-41047	-40715	-39800	-41088	-41406	-40120	-40564	-41325	-41814	-42172	-41600	-40583	-40647	-40098	-40207	-39731
HVaR@98%	-81083	-72962	-65016	-58027	-59380	-55601	-57084	-55171	-53498	-53638	-52907	-52710	-51559	-52757	-51289	-51749	-52394	-52078	-52574	-51843	-53590	-55652	-55515	-54914	-54428
HVaR@99%	-95735	-85701	-72662	-63170	-62556	-62331	-65862	-67095	-62154	-62917	-61941	-62095	-63096	-62759	-60492	-62345	-64288	-64991	-64993	-62672	-61166	-64329	-64980	-65031	-63433
ES @ 95%***	-79078	-72064	-61844	-56177	-56367	-54791	-57620	-56280	-55099	-55045	-54256	-53960	-54443	-54618	-52912	-53669	-55286	-55324	-55537	-54322	-54198	-56141	-56579	-56319	-55407
ES @ 98%	-103995	-94377	-80391	-72364	-71127	-69222	-73476	-72322	-70924	-71027	-69887	-69485	-69972	-70928	-67960	-68894	-71489	-71721	-72103	-69709	-69300	-71716	-72539	-72598	-70850
ES @ 99%	-115374	-1E+05	-91054	-82745	-80629	-78247	-83062	-82256	-81569	-82198	-80974	-79794	-80888	-82403	-77904	-79012	-82623	-82171	-82706	-80434	-79988	-81893	-82702	-82539	-80807

Table B1.18- Aggregate Portfolio Risk Estimates for Spain																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-75695	-79652	-72919	-61186	-55632	-51489	-48564	-46058	-44433	-44572	-43532	-43762	-42509	-43110	-41485	-40683	-40814	-41738	-41502	-41309	-40290	-40187	-40284	-39372	-38412
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-41409	-37111	-36085	-31639	-28777	-25825	-24563	-23845	-22673	-21669	-20409	-20254	-19982	-19816	-19511	-18898	-18795	-18932	-18943	-18747	-18358	-18466	-18540	-18044	-17615
VAR/COV VaR@98%	-51705	-46338	-45057	-39506	-35932	-32246	-30670	-29774	-28310	-27056	-25484	-25290	-24950	-24743	-24362	-23596	-23468	-23639	-23652	-23408	-22923	-23057	-23150	-22531	-21995
VAR/COV VaR@99%	-58552	-52474	-51023	-44737	-40691	-36517	-34732	-33717	-32059	-30639	-28858	-28639	-28254	-28019	-27588	-26721	-26575	-26770	-26784	-26508	-25958	-26111	-26215	-25514	-24908
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-41409	-37078	-36004	-31454	-28809	-25870	-24554	-23816	-22704	-21591	-20383	-20231	-19985	-19819	-19504	-18842	-18753	-18882	-18855	-18680	-18303	-18394	-18473	-17703	-17226
VAR/COV VaR@98%	-51705	-46297	-44956	-39274	-35972	-32302	-30659	-29738	-28349	-26959	-25451	-25261	-24954	-24747	-24353	-23527	-23415	-23576	-23543	-23325	-22853	-22967	-23066	-22105	-21509
VAR/COV VaR@99%	-58552	-52428	-50910	-44475	-40736	-36579	-34719	-33676	-32103	-30529	-28821	-28606	-28258	-28024	-27578	-26642	-26516	-26698	-26660	-26413	-25880	-26009	-26120	-25032	-24358
Aggregate Portfolio Estimates																									
HVaR@95%**	-39959	-35146	-34534	-30265	-27679	-24451	-23389	-23232	-22654	-21151	-20802	-20028	-19739	-20029	-20044	-19075	-18651	-18519	-18928	-18631	-17923	-18031	-18443	-17818	-17227
HVaR@98%	-51310	-47828	-47274	-40582	-39106	-34269	-33362	-32485	-31740	-29765	-27889	-27179	-27137	-27722	-26820	-26860	-26811	-26711	-26980	-26761	-26412	-26455	-26428	-25935	-24960
HVaR@99%	-58887	-55277	-54760	-49047	-44404	-39033	-36346	-35033	-34856	-33143	-31156	-31061	-31098	-30488	-30455	-28968	-29794	-30259	-31170	-30698	-30452	-30557	-30962	-30053	-29334
ES @ 95%***	-51967	-47928	-46439	-41103	-37654	-33820	-32373	-31501	-30576	-29078	-27538	-27138	-26980	-27122	-26692	-26005	-25899	-26321	-26505	-26083	-25565	-25789	-25909	-25150	-24509
ES @ 98%	-64403	-61499	-58779	-51788	-47259	-42416	-40238	-38680	-37558	-36385	-34611	-34111	-33952	-34058	-33400	-32475	-32579	-33052	-33907	-33506	-33078	-33280	-33369	-32293	-31477
ES @ 99%	-71512	-69991	-65961	-56751	-52017	-47462	-44963	-42579	-41122	-40287	-38972	-38315	-37715	-38291	-37118	-36462	-36349	-37231	-37664	-37345	-36758	-36869	-36832	-35874	-34872

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.19- Aggregate Portfolio Risk Estimates for Sweden																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-2E+05	-2E+05	-1E+05	-1E+05	-88048	-77325	-69915	-66979	-62755	-61147	-63978	-63811	-62715	-62217	-61417	-60129	-60872	-60574	-58951	-58432	-59975	-60207	-61482	-61046	-61793
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-47541	-53353	-43169	-38159	-35009	-33861	-31931	-31172	-30852	-30357	-32046	-31583	-30814	-30649	-30703	-30127	-29483	-29168	-28433	-27728	-27899	-27548	-27930	-27257	-26689
VAR/COV VaR@98%	-59361	-66619	-53902	-47646	-43713	-42280	-39870	-38922	-38523	-37905	-40013	-39435	-38475	-38269	-38337	-37617	-36813	-36421	-35502	-34622	-34836	-34397	-34874	-34034	-33325
VAR/COV VaR@99%	-67222	-75440	-61040	-53956	-49502	-47879	-45150	-44077	-43625	-42924	-45312	-44658	-43571	-43337	-43414	-42598	-41688	-41244	-40204	-39207	-39449	-38952	-39492	-38541	-37738
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-47541	-51338	-40352	-35730	-32856	-32050	-30190	-29598	-29506	-29188	-30939	-30550	-29883	-29752	-29901	-29369	-28778	-28500	-27861	-27104	-27311	-26952	-27343	-26203	-25618
VAR/COV VaR@98%	-59361	-64103	-50384	-44613	-41025	-40018	-37696	-36957	-36843	-36445	-38631	-38146	-37313	-37149	-37336	-36671	-35934	-35586	-34789	-33844	-34101	-33654	-34141	-32718	-31987
VAR/COV VaR@99%	-67222	-72591	-57057	-50521	-46458	-45317	-42688	-41851	-41722	-41271	-43747	-43197	-42254	-42069	-42280	-41527	-40692	-40299	-39396	-38325	-38617	-38110	-38662	-37051	-36223
Aggregate Portfolio Estimates																									
HVaR@95%**	-40695	-49873	-41100	-36337	-33055	-32607	-30471	-30177	-29576	-29273	-31101	-31116	-30571	-29981	-29925	-29148	-28457	-28398	-28095	-27159	-27480	-26843	-27345	-26814	-26315
HVaR@98%	-60966	-67997	-56962	-51007	-46680	-45045	-42616	-40414	-40433	-39480	-43304	-42412	-42426	-41526	-42049	-42185	-41021	-39740	-39415	-38543	-38655	-37970	-37421	-37366	-36189
HVaR@99%	-75551	-87656	-71081	-63562	-57385	-51662	-49006	-44754	-42650	-43265	-46756	-47162	-47187	-46814	-46333	-45674	-46013	-45597	-44629	-43565	-44580	-44237	-43508	-42470	-41995
ES @ 95%***	-66608	-75400	-59811	-52125	-47224	-44919	-42200	-40970	-40283	-39752	-41924	-41120	-40549	-40352	-40152	-39788	-39261	-38695	-37809	-37022	-37553	-37047	-37299	-36668	-36182
ES @ 98%	-1E+05	-1E+05	-83295	-71852	-64119	-59351	-55363	-52838	-50968	-50523	-53189	-52855	-51933	-51798	-51099	-50385	-49897	-49407	-47946	-47154	-48210	-47767	-48230	-47400	-47164
ES @ 99%	-1E+05	-1E+05	-1E+05	-84961	-75254	-69381	-64367	-62478	-59712	-58099	-60575	-59833	-58207	-57981	-56878	-55862	-55323	-54837	-52712	-52016	-53299	-53100	-53738	-52908	-53437

Table B1.20- Aggregate Portfolio Risk Estimates for Switzerland																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-59296	-45479	-49210	-47983	-54213	-56421	-67127	-63024	-62984	-62260	-59421	-61611	-59988	-60549	-59129	-61758	-58116	-58229	-56537	-55413	-54875	-53191	-53357	-53029	-51210
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-27096	-23822	-24484	-23387	-25595	-26323	-28130	-27533	-27785	-27129	-26634	-27631	-26698	-26855	-26562	-26686	-25374	-25622	-24781	-24928	-24384	-23652	-23851	-23699	-22979
VAR/COV VaR@98%	-33833	-29745	-30572	-29202	-31959	-32868	-35123	-34379	-34693	-33875	-33256	-34502	-33336	-33532	-33166	-33321	-31683	-31993	-30942	-31126	-30446	-29532	-29781	-29591	-28692
VAR/COV VaR@99%	-38313	-33684	-34620	-33069	-36192	-37220	-39775	-38932	-39288	-38360	-37660	-39070	-37750	-37972	-37558	-37733	-35879	-36229	-35040	-35248	-34478	-33443	-33725	-33510	-32492
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-27096	-23813	-24672	-23527	-25857	-26380	-28117	-27451	-27792	-27140	-26686	-27644	-26648	-26656	-26397	-26453	-25220	-25432	-24601	-24859	-24295	-23622	-23827	-22834	-22730
VAR/COV VaR@98%	-33833	-29733	-30806	-29377	-32285	-32939	-35107	-34276	-34702	-33888	-33320	-34518	-33274	-33284	-32960	-33030	-31491	-31755	-30718	-31040	-30336	-29496	-29751	-28511	-28382
VAR/COV VaR@99%	-38313	-33671	-34886	-33267	-36561	-37301	-39757	-38815	-39298	-38376	-37733	-39089	-37680	-37692	-37325	-37404	-35661	-35960	-34786	-35151	-34353	-33402	-33690	-32286	-32140
Aggregate Portfolio Estimates																									
HVaR@95%**	-24320	-24029	-23364	-22557	-24265	-25600	-26867	-26496	-26564	-26267	-25715	-27392	-26718	-26290	-26014	-26187	-24951	-25459	-24394	-24922	-24171	-23086	-23705	-23274	-22642
HVaR@98%	-36122	-32334	-31395	-29917	-35546	-36233	-39458	-38168	-37901	-35928	-36428	-38007	-37825	-37836	-37486	-37071	-34648	-36310	-35073	-34984	-34965	-33969	-33393	-33204	-32078
HVaR@99%	-45198	-35787	-37895	-37027	-41480	-42227	-44489	-43565	-43628	-43569	-42070	-44658	-43094	-43466	-42118	-41076	-39255	-40060	-39205	-39422	-38086	-37445	-38430	-37753	-36266
ES @ 95%***	-36569	-32041	-32081	-30788	-34430	-35629	-39007	-37572	-37947	-36879	-36333	-38164	-37298	-37646	-37055	-37128	-35129	-35773	-34602	-34676	-34108	-33198	-33363	-33076	-31926
ES @ 98%	-48934	-39108	-40401	-39580	-44796	-45701	-51071	-48636	-48724	-48709	-46581	-49156	-47375	-47928	-46945	-47413	-44790	-45384	-43962	-43837	-43540	-42502	-42921	-42514	-41108
ES @ 99%	-55653	-43027	-45240	-44190	-49862	-50797	-58792	-55411	-54970	-54711	-52281	-55007	-53367	-54068	-53290	-55067	-51822	-51577	-49786	-49481	-49424	-48056	-48119	-47839	-46176

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B1 - Aggregate Portfolio Risk Estimates for Domestic Portfolios (Continued)

Table B1.21- Aggregate Portfolio Risk Estimates for Taiwan

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-83696	-73095	-72519	-71632	-67912	-67174	-68442	-69017	-68930	-70208	-70777	-70865	-71507	-72301	-72519	-72412	-72278	-72028	-72875	-73165	-73173	-73782	-73025	-73191	-73376
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-49248	-37210	-35380	-34204	-31304	-31068	-31024	-31030	-31617	-32297	-31504	-31251	-31363	-31438	-31718	-31701	-31568	-31288	-31728	-31934	-31980	-32191	-31960	-31968	-32110
VAR/COV VaR@98%	-61493	-46462	-44177	-42709	-39087	-38792	-38737	-38745	-39478	-40328	-39337	-39021	-39160	-39255	-39605	-39583	-39416	-39067	-39616	-39873	-39931	-40194	-39907	-39916	-40093
VAR/COV VaR@99%	-69636	-52615	-50027	-48364	-44263	-43929	-43867	-43875	-44705	-45668	-44546	-44189	-44346	-44453	-44849	-44825	-44636	-44240	-44862	-45154	-45219	-45517	-45191	-45202	-45403
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-49248	-37491	-35684	-34433	-31413	-31226	-31153	-31196	-31706	-32291	-31514	-31303	-31395	-31489	-31743	-31748	-31623	-31354	-31727	-31888	-31951	-32144	-31933	-30602	-30662
VAR/COV VaR@98%	-61493	-46812	-44556	-42995	-39224	-38990	-38899	-38953	-39589	-40319	-39349	-39086	-39201	-39318	-39635	-39641	-39485	-39150	-39616	-39816	-39894	-40137	-39872	-38211	-38286
VAR/COV VaR@99%	-69636	-53011	-50457	-48688	-44418	-44153	-44050	-44111	-44832	-45659	-44560	-44262	-44392	-44525	-44884	-44891	-44714	-44334	-44862	-45089	-45177	-45452	-45153	-43271	-43356
Aggregate Portfolio Estimates																									
HVaR@95%**	-49199	-36087	-34467	-32049	-29176	-28790	-29081	-28659	-30065	-30917	-29684	-29421	-28830	-29321	-30308	-30393	-30397	-30616	-31225	-30839	-31451	-32219	-31709	-31374	-31834
HVaR@98%	-65069	-49978	-48065	-47345	-42578	-41007	-39803	-39231	-39295	-40643	-40830	-41277	-41747	-42833	-42308	-41066	-39607	-39088	-39876	-41550	-42301	-42297	-41470	-41221	-41922
HVaR@99%	-70240	-54197	-52366	-52956	-46390	-45949	-45336	-44034	-47211	-48574	-46692	-46109	-46413	-45432	-45658	-46195	-45764	-45481	-46054	-46508	-45447	-46162	-46116	-46601	-47038
ES @ 95%***	-62764	-48044	-46867	-45698	-41312	-40668	-40445	-40194	-40696	-41855	-40970	-40827	-41364	-41720	-41908	-41762	-41194	-40788	-41569	-42177	-42345	-42787	-42304	-42412	-42594
ES @ 98%	-73539	-59504	-58154	-57755	-52720	-51789	-51499	-51223	-52584	-53784	-53056	-52738	-53047	-52965	-53062	-53558	-53288	-52926	-53544	-53948	-53956	-54656	-54179	-54532	-54783
ES @ 99%	-78530	-66020	-65539	-63806	-59814	-59235	-59407	-59477	-60799	-61642	-60978	-60640	-61257	-61396	-61662	-61947	-61785	-61267	-61997	-62322	-62797	-63438	-62981	-63448	-63762

Table B1.22- Aggregate Portfolio Risk Estimates for Thailand

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-1E+05	-1E+05	-74059	-72932	-72932	-72956	-74621	-72178	-72861	-69279	-72020	-74621	-77057	-78154	-76145	-77484	-75009	-75058	-76681	-77524	-76369	-75044	-73018	-70702	-68176
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-49480	-40221	-40815	-40624	-40786	-38777	-39760	-36553	-36948	-35471	-36920	-37705	-36036	-36980	-36336	-37381	-36293	-36751	-36784	-37495	-36395	-35778	-34673	-33764	-32674
VAR/COV VaR@98%	-61783	-50221	-50963	-50724	-50927	-48418	-49646	-45641	-46135	-44290	-46100	-47080	-44996	-46175	-45370	-46675	-45317	-45889	-45930	-46818	-45444	-44673	-43294	-42159	-40797
VAR/COV VaR@99%	-69964	-56872	-57712	-57442	-57671	-54830	-56220	-51685	-52244	-50155	-52205	-53314	-50955	-52289	-51378	-52856	-51318	-51966	-52012	-53018	-51462	-50589	-49028	-47742	-46200
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-49480	-39922	-40004	-39842	-40292	-38272	-39223	-35482	-35774	-34164	-35796	-36505	-35150	-36030	-35429	-36583	-35408	-35861	-36084	-36925	-35667	-34878	-33891	-32479	-31638
VAR/COV VaR@98%	-61783	-49847	-49950	-49748	-50310	-47787	-48975	-44304	-44668	-42658	-44695	-45581	-43889	-44988	-44238	-45679	-44211	-44777	-45056	-46106	-44535	-43549	-42317	-40554	-39504
VAR/COV VaR@99%	-69964	-56448	-56565	-56336	-56972	-54116	-55460	-50170	-50583	-48307	-50614	-51617	-49701	-50945	-50096	-51728	-50066	-50706	-51022	-52211	-50433	-49316	-47921	-45925	-44735
Aggregate Portfolio Estimates																									
HVaR@95%**	-41477	-36912	-37795	-35827	-37347	-34655	-35411	-32287	-33707	-32157	-33329	-33012	-32419	-33189	-32933	-34043	-32830	-33462	-33569	-35386	-34354	-33829	-32263	-31365	-30335
HVaR@98%	-58077	-50513	-51440	-49906	-52618	-49926	-50833	-46341	-49654	-46420	-48042	-47253	-45312	-47169	-47827	-48438	-47427	-47795	-47260	-47356	-46445	-45721	-45498	-43993	-42647
HVaR@99%	-68603	-59977	-59034	-61188	-59403	-59999	-62763	-57865	-55093	-53713	-54234	-56072	-53657	-53833	-53466	-55191	-54053	-55315	-55055	-55528	-54164	-53272	-51075	-50505	-49105
ES @ 95%***	-62564	-52711	-50406	-49764	-50493	-48756	-50148	-46113	-46704	-44721	-46351	-47266	-46046	-46965	-46309	-47438	-46174	-47024	-47617	-48579	-47437	-46629	-45419	-44230	-42668
ES @ 98%	-89538	-71557	-63938	-63404	-63375	-63095	-64352	-60141	-61190	-59018	-60225	-62053	-61403	-62135	-60597	-61903	-60675	-61742	-62763	-63483	-62057	-61257	-59410	-57918	-56083
ES @ 99%	-1E+05	-87243	-71859	-68938	-69587	-70292	-70458	-66478	-68587	-66016	-68129	-69884	-71214	-72111	-70161	-70968	-69587	-70264	-72134	-73260	-72094	-71175	-69172	-67141	-64782

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Table B1.23- Aggregate Portfolio Risk Estimates for Turkey																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-159858	-2E+05	-151359	-1E+05	-2E+05	-1E+05	-1E+05	-2E+05	-2E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-145992	-1E+05
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-74623	-72077	-67900	-66119	-67426	-66754	-66869	-68263	-67867	-67476	-66151	-65874	-64324	-63737	-63737	-63373	-63150	-62674	-62912	-62616	-62257	-62166	-61426	-61315	-60009
VAR/COV VaR@98%	-93176	-89997	-84782	-82558	-84190	-83351	-83495	-85235	-84740	-84253	-82598	-82253	-80317	-79584	-79584	-79129	-78851	-78257	-78555	-78185	-77737	-77623	-76698	-76560	-74929
VAR/COV VaR@99%	-105515	-1E+05	-96009	-93491	-95339	-94388	-94551	-96523	-95962	-95410	-93537	-93145	-90953	-90123	-90123	-89608	-89293	-88620	-88957	-88538	-88031	-87902	-86855	-86698	-84852
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-74623	-71733	-67665	-65923	-67394	-66347	-66451	-67778	-67602	-67198	-65998	-65892	-64254	-63627	-63697	-63273	-63073	-62568	-62793	-62497	-62145	-62067	-61191	-58641	-58664
VAR/COV VaR@98%	-93176	-89568	-84489	-82314	-84151	-82843	-82973	-84630	-84410	-83906	-82408	-82275	-80230	-79447	-79534	-79005	-78755	-78125	-78406	-78036	-77596	-77498	-76405	-73221	-73250
VAR/COV VaR@99%	-105515	-1E+05	-95677	-93215	-95294	-93814	-93960	-95837	-95587	-95017	-93320	-93170	-90854	-89968	-90066	-89467	-89184	-88470	-88789	-88370	-87872	-87761	-86523	-82918	-82950
Aggregate Portfolio Estimates																									
HVaR@95%**	-70487	-66038	-62684	-61521	-63388	-63602	-62140	-64247	-64872	-63280	-62178	-62936	-61657	-60196	-60844	-60745	-60750	-61062	-62065	-62723	-62828	-61915	-61121	-60797	-59355
HVaR@98%	-102203	-1E+05	-96913	-90601	-91070	-89907	-89472	-97096	-95902	-95867	-92491	-92635	-91310	-91242	-90397	-90413	-90027	-88947	-89420	-88626	-87658	-88419	-86944	-86448	-85042
HVaR@99%	-118375	-1E+05	-105844	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-99171	-1E+05	-1E+05	-1E+05	-1E+05	-99543	-99540	-96995
ES @ 95%***	-101946	-1E+05	-93009	-90168	-92576	-90800	-90638	-93616	-93446	-93361	-91360	-91517	-89831	-89508	-89167	-88846	-88675	-88045	-88859	-88606	-88192	-88376	-87510	-87685	-85853
ES @ 98%	-131751	-1E+05	-120409	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-114433	-1E+05
ES @ 99%	-151059	-2E+05	-138495	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-1E+05	-133027	-1E+05

Table B1.24- Aggregate Portfolio Risk Estimates for United Kingdom																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-65959	-63675	-55680	-53924	-50264	-49940	-50175	-49750	-48090	-45603	-44270	-46645	-47083	-47626	-49363	-49275	-47012	-46676	-45576	-45659	-44787	-44569	-45451	-45641	-44745
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-33629	-34867	-29460	-27729	-27219	-25291	-25774	-25040	-23652	-22993	-22888	-23460	-23025	-23276	-23932	-23373	-22963	-23205	-22781	-22587	-22167	-22087	-22236	-22500	-22072
VAR/COV VaR@98%	-41990	-43536	-36784	-34623	-33986	-31580	-32182	-31265	-29533	-28709	-28578	-29293	-28750	-29063	-29883	-29184	-28673	-28975	-28445	-28203	-27679	-27578	-27764	-28094	-27560
VAR/COV VaR@99%	-47551	-49302	-41655	-39208	-38487	-35761	-36443	-35405	-33444	-32511	-32363	-33173	-32558	-32912	-33840	-33049	-32469	-32812	-32212	-31938	-31344	-31230	-31441	-31814	-31209
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-33629	-33960	-28693	-27327	-26957	-25100	-25396	-24691	-23365	-22757	-22687	-23192	-22803	-23089	-23667	-23134	-22720	-22958	-22563	-22375	-21981	-21895	-22044	-21125	-21408
VAR/COV VaR@98%	-41990	-42403	-35827	-34122	-33660	-31340	-31710	-30830	-29175	-28415	-28328	-28958	-28473	-28830	-29551	-28886	-28369	-28666	-28172	-27939	-27447	-27339	-27524	-26378	-26731
VAR/COV VaR@99%	-47551	-48019	-40572	-38640	-38117	-35490	-35910	-34912	-33038	-32177	-32079	-32793	-32244	-32648	-33465	-32712	-32125	-32462	-31903	-31638	-31081	-30959	-31169	-29871	-30271
Aggregate Portfolio Estimates																									
HVaR@95%**	-34509	-32533	-29305	-27975	-27467	-25601	-26145	-25507	-24319	-23778	-23589	-24530	-23216	-23558	-24860	-23853	-23875	-23713	-23138	-22944	-22214	-22339	-22558	-22861	-21959
HVaR@98%	-47915	-45618	-40014	-38767	-37828	-34759	-34333	-32957	-30390	-29896	-30365	-31527	-30876	-31262	-33297	-32315	-32175	-32012	-31810	-31299	-30689	-30907	-31213	-31613	-31121
HVaR@99%	-51639	-53107	-46801	-43740	-42368	-38398	-37960	-36645	-36007	-35215	-34628	-35152	-34751	-35663	-36028	-35131	-34665	-34700	-34312	-34317	-33791	-33578	-33422	-34865	-33911
ES @ 95%***	-46302	-44847	-39517	-37719	-36868	-34575	-34009	-33196	-31466	-30353	-30301	-31460	-31094	-31221	-32482	-31741	-30972	-31266	-30740	-30610	-30010	-30000	-30222	-30520	-29868
ES @ 98%	-56696	-56453	-49121	-46329	-45185	-42205	-41707	-40823	-39218	-37820	-37047	-38479	-38395	-38950	-40053	-39217	-37957	-38293	-37450	-37184	-36697	-36501	-36866	-37670	-36937
ES @ 99%	-62781	-61001	-52411	-49756	-49258	-47193	-46400	-45535	-44447	-42151	-40936	-42958	-43009	-43231	-44678	-44127	-42116	-42567	-41331	-41297	-40574	-40481	-41047	-41574	-40721

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B1 - Aggregate Portfolio Risk Estimates for Domestic Portfolios

Table B1.25- Aggregate Portfolio Risk Estimates for United States																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-81224	-79166	-57692	-52025	-53702	-64882	-63818	-60805	-58281	-59222	-56333	-53795	-51114	-51905	-53495	-51015	-49262	-48090	-47535	-48585	-48825	-48409	-46510	-46154	-45260
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-37053	-35134	-27564	-25641	-26226	-28909	-28070	-27528	-26962	-28178	-26770	-25607	-24856	-26279	-26358	-25316	-24884	-23949	-23926	-24740	-24790	-24401	-23983	-23482	-23176
VAR/COV VaR@98%	-46265	-43869	-34417	-32016	-32746	-36097	-35049	-34372	-33665	-35184	-33426	-31973	-31036	-32812	-32911	-31610	-31071	-29903	-29875	-30892	-30953	-30468	-29945	-29320	-28939
VAR/COV VaR@99%	-52392	-49678	-38975	-36256	-37083	-40877	-39691	-38924	-38124	-39844	-37853	-36208	-35146	-37157	-37270	-35796	-35185	-33863	-33831	-34982	-35052	-34502	-33911	-33203	-32771
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-37053	-35099	-27641	-25724	-26544	-28738	-27908	-27415	-26873	-28016	-26792	-25596	-24926	-26120	-26272	-25304	-24916	-24011	-23987	-24824	-24898	-24513	-24084	-23080	-22613
VAR/COV VaR@98%	-46265	-43826	-34514	-32120	-33143	-35883	-34847	-34231	-33554	-34982	-33454	-31960	-31123	-32614	-32804	-31595	-31111	-29981	-29951	-30996	-31089	-30607	-30072	-28819	-28236
VAR/COV VaR@99%	-52392	-49629	-39084	-36373	-37532	-40635	-39462	-38764	-37998	-39615	-37884	-36192	-35245	-36933	-37148	-35779	-35230	-33951	-33917	-35101	-35205	-34660	-34054	-32635	-31975
Aggregate Portfolio Estimates																									
HVaR@95%**	-35180	-33615	-26739	-24052	-25664	-29153	-28257	-27677	-26609	-28575	-27249	-25130	-24704	-26369	-26268	-26167	-25428	-24847	-25083	-24904	-24933	-24357	-24028	-23065	-23140
HVaR@98%	-48214	-45415	-37485	-34303	-33746	-38239	-37054	-35387	-34685	-36124	-34551	-33404	-32924	-34303	-33863	-32264	-32339	-31176	-31293	-31226	-31297	-30856	-29858	-29213	-29083
HVaR@99%	-56668	-53565	-44319	-39417	-38317	-41865	-39752	-38646	-37791	-38002	-37470	-36702	-35175	-36889	-36807	-35834	-35156	-34727	-34414	-34445	-34893	-34011	-33147	-34734	-34513
ES @ 95%***	-48872	-46485	-36458	-33708	-34215	-38242	-36861	-36144	-35186	-36459	-34824	-33571	-32457	-33885	-34017	-32924	-32539	-31588	-31386	-31670	-31624	-31216	-30372	-30011	-29718
ES @ 98%	-64896	-60526	-47080	-43086	-43396	-48338	-46292	-44693	-43145	-43874	-42260	-41177	-39807	-41145	-41641	-40132	-39446	-38374	-37964	-38504	-38918	-38358	-37165	-37391	-37162
ES @ 99%	-76529	-70640	-52260	-47400	-49513	-55798	-53547	-51600	-49420	-50343	-48199	-46816	-44958	-45928	-47260	-45498	-44455	-43016	-42531	-43685	-44370	-43726	-42220	-42149	-41777

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B2 - Aggregate Portfolio Risk Estimates for Foreign Portfolios

Table B2.01- Aggregate Portfolio Risk Estimates for Companies with Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-72338	-64109	-57322	-52018	-53261	-48279	-44768	-41923	-41169	-38895	-38238	-37692	-38015	-37486	-37491	-39674	-40030	-39866	-40011	-38989	-38323	-37977	-38325	-38387	-37134
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-26742	-29143	-23697	-21151	-22018	-19976	-18735	-17751	-17183	-17016	-17127	-16622	-16707	-16075	-15979	-16000	-16517	-17004	-17293	-16975	-16928	-16970	-17242	-17032	-16810
VAR/COV VaR@98%	-33390	-36389	-29589	-26410	-27492	-24943	-23394	-22164	-21456	-21246	-21386	-20755	-20861	-20072	-19952	-19979	-20624	-21232	-21593	-21195	-21137	-21189	-21528	-21267	-20989
VAR/COV VaR@99%	-37812	-41207	-33507	-29907	-31133	-28246	-26491	-25099	-24297	-24060	-24218	-23503	-23624	-22730	-22594	-22624	-23355	-24044	-24452	-24002	-23936	-23995	-24379	-24083	-23769
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-26742	-30524	-24346	-21630	-22016	-19981	-18691	-17724	-17169	-16958	-17009	-16515	-16639	-16036	-15972	-16006	-16623	-17020	-17223	-16897	-16802	-16767	-16980	-16273	-16080
VAR/COV VaR@98%	-33390	-38113	-30399	-27008	-27490	-24948	-23338	-22131	-21438	-21174	-21238	-20621	-20776	-20024	-19943	-19986	-20757	-21252	-21505	-21098	-20979	-20936	-21202	-20318	-20078
VAR/COV VaR@99%	-37812	-43160	-34425	-30585	-31131	-28252	-26428	-25061	-24277	-23978	-24051	-23352	-23527	-22675	-22584	-22632	-23505	-24066	-24353	-23892	-23757	-23708	-24009	-23009	-22737
Aggregate Portfolio Estimates																									
HVaR@95%**	-24321	-28271	-21778	-20391	-21081	-19055	-18191	-17343	-16646	-16535	-16592	-16030	-16505	-15693	-15638	-15279	-16109	-16735	-16526	-16327	-16303	-16537	-17179	-16688	-16501
HVaR@98%	-33191	-40452	-32660	-28906	-28683	-26506	-24703	-24820	-23848	-23417	-24563	-22529	-21889	-22127	-21581	-21807	-22421	-23056	-23467	-23341	-23532	-23932	-23692	-23637	-23496
HVaR@99%	-43171	-50328	-38880	-32299	-33907	-30644	-29246	-26975	-25430	-27365	-29311	-27251	-27628	-26272	-26140	-27055	-28092	-28413	-28568	-28251	-28575	-28125	-29515	-28599	-28020
ES @ 95%***	-36409	-40538	-32639	-28982	-29434	-26731	-25507	-24273	-23722	-23427	-23512	-22856	-22918	-22208	-22085	-22293	-23099	-23550	-23915	-23416	-23419	-23549	-24125	-23981	-23447
ES @ 98%	-52510	-54367	-44743	-38232	-39048	-35519	-33583	-31430	-30914	-31081	-31402	-30280	-30260	-29576	-29616	-30752	-31653	-31733	-32034	-31487	-31213	-30976	-31905	-31414	-30965
ES @ 99%	-64962	-61464	-52000	-44992	-45436	-41205	-39158	-36739	-36918	-35923	-35226	-34868	-34774	-34241	-34347	-35545	-36550	-36227	-36295	-35508	-35023	-34937	-35633	-35274	-35057

Table B2.02- Aggregate Portfolio Risk Estimates for Companies with Second Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-57127	-1E+05	-91437	-77849	-74152	-67868	-62341	-60728	-57232	-53893	-53384	-52405	-52225	-51889	-50289	-46861	-47922	-47911	-49460	-48250	-47557	-46809	-48223	-48161	-47362
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-33144	-44634	-34522	-30254	-27948	-25599	-23082	-22325	-21238	-20252	-19812	-19067	-18898	-18575	-18340	-17583	-17935	-18050	-19698	-19090	-18571	-18387	-18885	-19064	-18819
VAR/COV VaR@98%	-41385	-55731	-43105	-37776	-34897	-31964	-28821	-27876	-26519	-25287	-24737	-23807	-23596	-23193	-22899	-21955	-22394	-22538	-24596	-23836	-23188	-22959	-23581	-23803	-23498
VAR/COV VaR@99%	-46865	-63112	-48813	-42778	-39518	-36197	-32638	-31567	-30030	-28635	-28013	-26960	-26721	-26265	-25932	-24862	-25359	-25522	-27853	-26993	-26259	-25999	-26703	-26955	-26610
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-33144	-38919	-30832	-26727	-24919	-23081	-20595	-20069	-19408	-18504	-18373	-17827	-17704	-17424	-17296	-16650	-17058	-17289	-18396	-17853	-17443	-17295	-17615	-16881	-17120
VAR/COV VaR@98%	-41385	-48595	-38498	-33372	-31115	-28819	-25716	-25059	-24234	-23105	-22941	-22260	-22106	-21756	-21596	-20789	-21300	-21588	-22970	-22292	-21780	-21595	-21995	-21078	-21376
VAR/COV VaR@99%	-46865	-55031	-43596	-37791	-35236	-32635	-29121	-28377	-27443	-26165	-25979	-25208	-25033	-24637	-24456	-23542	-24120	-24447	-26012	-25245	-24664	-24455	-24908	-23870	-24207
Aggregate Portfolio Estimates																									
HVaR@95%**	-33083	-41522	-32634	-29798	-27487	-25752	-22531	-22328	-20377	-19784	-19220	-18336	-18082	-18411	-17924	-17257	-18151	-18335	-19622	-18967	-18493	-18139	-18546	-19046	-18320
HVaR@98%	-42072	-60490	-45644	-38920	-36166	-32284	-29393	-29639	-28648	-27358	-26370	-25615	-26478	-25628	-25256	-24756	-24605	-24211	-27525	-25791	-24588	-24079	-25929	-27123	-26891
HVaR@99%	-48989	-79668	-58674	-52718	-47080	-42897	-40250	-38590	-37509	-34742	-33260	-31476	-30565	-30038	-29716	-28834	-29056	-29571	-32003	-31430	-31174	-30747	-30534	-30366	-30031
ES @ 95%***	-41718	-63538	-49400	-43239	-39692	-36155	-32693	-32035	-30894	-29120	-28449	-27643	-27220	-26618	-26284	-25411	-25601	-25928	-28021	-27251	-26577	-26234	-26868	-26996	-26606
ES @ 98%	-50949	-91289	-68856	-59877	-55097	-50398	-45832	-44972	-43058	-40597	-39527	-38248	-37540	-36852	-36385	-34834	-34728	-35597	-37729	-36963	-36409	-35863	-36637	-36180	-35437
ES @ 99%	-55123	-1E+05	-81077	-70116	-66638	-61481	-55332	-54417	-51954	-49048	-47411	-46662	-45607	-44842	-44111	-42024	-41929	-42548	-44145	-43326	-42771	-42343	-43841	-42969	-41873

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,...,Port 25 represents the twenty-five portfolios

Table B2.03- Aggregate Portfolio Risk Estimates for Companies with Third Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-1E+05	-166323	-1E+05	-94162	-81466	-69124	-71146	-67786	-62221	-56405	-52436	-50712	-46176	-45387	-45115	-44193	-43055	-42015	-41721	-41678	-41035	-38934	-38297	-37544	-36941
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-47769	-36826	-28646	-25093	-21028	-18541	-21092	-20276	-19151	-18276	-18113	-17548	-16433	-15993	-15794	-15606	-15610	-15758	-15685	-15840	-15654	-15926	-16278	-15961	-15481
VAR/COV VaR@98%	-59646	-45982	-35768	-31332	-26257	-23151	-26336	-25317	-23913	-22820	-22617	-21911	-20519	-19969	-19721	-19486	-19491	-19676	-19584	-19778	-19546	-19886	-20325	-19930	-19330
VAR/COV VaR@99%	-67545	-52071	-40505	-35482	-29734	-26217	-29823	-28670	-27080	-25842	-25612	-24812	-23236	-22614	-22333	-22066	-22072	-22281	-22178	-22398	-22135	-22519	-23016	-22569	-21889
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-47769	-35177	-27688	-24161	-19927	-17618	-18872	-18736	-17893	-22667	-22077	-21148	-20029	-19335	-18956	-18467	-18287	-18198	-17957	-17933	-17561	-17658	-17673	-16937	-16632
VAR/COV VaR@98%	-59646	-43923	-34572	-30169	-24881	-21999	-23565	-23395	-22341	-28302	-27566	-26406	-25009	-24142	-23669	-23059	-22833	-22722	-22422	-22392	-21927	-22049	-22068	-21148	-20768
VAR/COV VaR@99%	-67545	-49740	-39150	-34164	-28176	-24912	-26685	-26493	-25300	-32050	-31217	-29903	-28321	-27339	-26803	-26112	-25857	-25731	-25391	-25357	-24831	-24968	-24990	-23949	-23518
Aggregate Portfolio Estimates																									
HVaR@95%**	-43728	-26250	-22026	-20829	-17769	-16052	-19898	-19227	-18326	-16901	-16887	-16430	-15720	-14629	-14588	-14676	-14662	-14869	-15159	-15355	-14829	-15396	-15451	-15213	-15191
HVaR@98%	-59452	-43662	-34649	-29684	-25527	-23201	-27815	-27181	-27057	-24407	-24125	-24087	-22499	-21275	-20575	-19603	-20692	-20646	-20263	-20496	-20916	-20708	-21737	-20423	-20083
HVaR@99%	-69597	-60310	-48193	-34668	-28346	-25366	-32761	-32495	-30263	-27816	-30314	-27762	-25600	-25190	-25922	-25503	-24000	-24748	-25180	-24467	-23249	-24546	-24917	-24182	-23228
ES @ 95%***	-61940	-50536	-39476	-33940	-28456	-25495	-29744	-28868	-27494	-25421	-25480	-24547	-22786	-22015	-21859	-21545	-21500	-21776	-21630	-21979	-21660	-21930	-22149	-21698	-21164
ES @ 98%	-83539	-86890	-63388	-51850	-43531	-38116	-42947	-41817	-39714	-36730	-36145	-34599	-31900	-31028	-31295	-30983	-30600	-30713	-30517	-30277	-29562	-29615	-29587	-28794	-28099
ES @ 99%	-1E+05	-116893	-83309	-69997	-59599	-51717	-54641	-52804	-49463	-46123	-44188	-42320	-39000	-38211	-37990	-38187	-37926	-37634	-37511	-37202	-36647	-35677	-35245	-34088	-33581

Table B2.04- Aggregate Portfolio Risk Estimates for Companies with Fourth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-48000	-61216	-53260	-52645	-51379	-47516	-44508	-45279	-46192	-42181	-41256	-38370	-38733	-38035	-38253	-38625	-38304	-38707	-38494	-38489	-37293	-37502	-38979	-39097	-37727
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-24900	-32999	-26573	-23900	-21871	-20097	-18847	-19887	-18878	-17817	-17892	-17528	-17477	-17105	-16875	-16829	-16625	-16193	-16183	-15864	-15487	-15692	-16086	-15921	-15575
VAR/COV VaR@98%	-31091	-41203	-33179	-29843	-27308	-25094	-23533	-24831	-23571	-22247	-22341	-21886	-21822	-21358	-21070	-21014	-20758	-20219	-20207	-19808	-19338	-19593	-20085	-19880	-19448
VAR/COV VaR@99%	-35208	-46660	-37573	-33795	-30925	-28417	-26649	-28119	-26692	-25193	-25299	-24784	-24712	-24186	-23861	-23797	-23507	-22897	-22883	-22431	-21899	-22188	-22745	-22512	-22023
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-24900	-31939	-25965	-23153	-21081	-19585	-18320	-20433	-19413	-18215	-18186	-17853	-17728	-17565	-17306	-17275	-17052	-16619	-16583	-16262	-15847	-15991	-16313	-15633	-15458
VAR/COV VaR@98%	-31091	-39880	-32421	-28909	-26322	-24454	-22875	-25514	-24240	-22744	-22707	-22291	-22135	-21932	-21609	-21571	-21292	-20751	-20706	-20305	-19787	-19967	-20369	-19520	-19301
VAR/COV VaR@99%	-35208	-45161	-36715	-32738	-29807	-27692	-25904	-28892	-27450	-25756	-25714	-25243	-25067	-24836	-24470	-24427	-24111	-23499	-23448	-22994	-22407	-22611	-23066	-22105	-21857
Aggregate Portfolio Estimates																									
HVaR@95%**	-24036	-30995	-26992	-23576	-21502	-20845	-18397	-19578	-18757	-18061	-17957	-17812	-18438	-17532	-17324	-17212	-17068	-16357	-16425	-16066	-15655	-15934	-16480	-16162	-16029
HVaR@98%	-31682	-45068	-36380	-33536	-29772	-27507	-25603	-26301	-24568	-23388	-23221	-23346	-23044	-24537	-23924	-23880	-24249	-22835	-23587	-23409	-22843	-22464	-22738	-22387	-21625
HVaR@99%	-38745	-55947	-43096	-37910	-34670	-32035	-31224	-33866	-31087	-28398	-29059	-27839	-26428	-30375	-30274	-29772	-29375	-28435	-28229	-27117	-25497	-25905	-26861	-26163	-25586
ES @ 95%***	-32517	-44031	-36148	-32834	-29911	-28170	-26376	-27406	-26181	-24329	-24297	-23745	-24005	-24333	-24051	-23991	-24019	-23371	-23260	-22809	-22316	-22294	-22771	-22578	-22050
ES @ 98%	-41236	-55730	-44561	-42738	-38794	-36619	-35146	-37045	-35376	-32554	-32693	-31057	-30908	-32393	-32258	-32090	-31931	-31334	-31131	-30436	-29552	-29515	-30487	-30114	-29348
ES @ 99%	-46088	-59698	-48962	-48374	-44818	-42709	-41040	-42711	-41847	-38334	-38259	-35820	-36720	-36161	-36466	-36794	-36188	-35726	-35464	-35183	-34685	-34734	-35498	-35177	-34330

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B2 - Aggregate Portfolio Risk Estimates for Foreign Portfolios (Continued)

Table B2.05- Aggregate Portfolio Risk Estimates for Companies with Fifth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-52601	-72349	-57637	-58209	-59207	-53253	-48983	-55447	-49810	-47221	-47316	-45079	-45942	-43809	-43408	-44389	-44554	-43563	-42736	-44174	-43207	-43870	-45029	-45198	-44914
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-25627	-31832	-26129	-24129	-24293	-22675	-21015	-25602	-23285	-21660	-21166	-20345	-19815	-18796	-18165	-18041	-18103	-17650	-17494	-17857	-17181	-17193	-17721	-17794	-17708
VAR/COV VaR@98%	-31999	-39747	-32626	-30128	-30333	-28312	-26240	-31968	-29074	-27045	-26428	-25403	-24741	-23469	-22681	-22526	-22603	-22038	-21844	-22296	-21452	-21468	-22127	-22218	-22111
VAR/COV VaR@99%	-36236	-45010	-36946	-34118	-34350	-32062	-29714	-36201	-32925	-30627	-29928	-28767	-28017	-26577	-25685	-25509	-25597	-24957	-24737	-25249	-24293	-24310	-25057	-25160	-25039
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-25627	-30770	-24924	-23447	-23535	-22293	-20514	-22919	-20864	-19408	-19058	-18513	-18264	-17377	-16915	-16909	-17273	-16960	-16883	-17309	-16703	-16840	-17318	-16597	-16748
VAR/COV VaR@98%	-31999	-38421	-31121	-29276	-29387	-27836	-25614	-28617	-26052	-24234	-23797	-23116	-22806	-21698	-21121	-21113	-21567	-21176	-21080	-21613	-20856	-21027	-21624	-20723	-20911
VAR/COV VaR@99%	-36236	-43508	-35242	-33153	-33279	-31522	-29006	-32407	-29501	-27443	-26948	-26177	-25826	-24571	-23918	-23909	-24423	-23980	-23872	-24475	-23617	-23812	-24488	-23467	-23681
Aggregate Portfolio Estimates																									
HVaR@95%**	-25603	-30327	-24733	-23479	-23687	-23049	-21158	-26175	-23805	-22051	-21967	-21006	-19609	-19112	-18345	-18043	-18032	-17403	-17614	-17762	-17256	-17548	-17713	-18017	-17695
HVaR@98%	-33175	-41359	-35501	-32417	-31786	-30527	-29461	-34521	-31014	-28733	-28232	-26467	-25655	-24602	-23544	-24188	-24302	-24478	-24538	-25016	-23866	-23512	-23560	-23744	-24330
HVaR@99%	-36633	-46521	-40923	-36507	-37635	-36113	-34056	-37945	-35640	-33209	-32350	-30398	-29377	-28738	-28380	-27342	-27593	-27073	-27178	-28602	-27817	-27138	-28294	-29494	-28638
ES @ 95%***	-33341	-42581	-35404	-33206	-33064	-31547	-29672	-35000	-32052	-29959	-29307	-27711	-27070	-25974	-25239	-25249	-25205	-24558	-24308	-24957	-24150	-24192	-24971	-25213	-25130
ES @ 98%	-41767	-55258	-45909	-43380	-44402	-41144	-38646	-43980	-40494	-38042	-37628	-35664	-35604	-34223	-33388	-33477	-33547	-32754	-32371	-33292	-32380	-32420	-33382	-33819	-33409
ES @ 99%	-47573	-64928	-52713	-50935	-52657	-47602	-44298	-50690	-46649	-44270	-44364	-42563	-42974	-41337	-40312	-41071	-40222	-39178	-38568	-39263	-38406	-38698	-39541	-39773	-39586

Table B2.06- Aggregate Portfolio Risk Estimates for Companies with Sixth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-58809	-63253	-52904	-53112	-47295	-40584	-40224	-65195	-1E+05	-97802	-92442	-88358	-84412	-81782	-79220	-78886	-77401	-73875	-71362	-70136	-68792	-67696	-64841	-63892	-62212
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%	-31858	-29937	-22869	-22903	-21582	-18548	-17728	-31238	-32919	-30944	-29648	-27959	-26812	-25419	-24573	-23964	-23539	-22610	-22271	-22122	-21392	-20972	-20737	-20230	-20043
VAR/COV VaR@98%	-39779	-37380	-28555	-28597	-26948	-23160	-22136	-39005	-41104	-38638	-37020	-34910	-33479	-31739	-30682	-29923	-29391	-28232	-27809	-27623	-26710	-26186	-25893	-25259	-25027
VAR/COV VaR@99%	-45047	-42330	-32337	-32385	-30517	-26227	-25068	-44170	-46547	-43755	-41922	-39533	-37912	-35943	-34745	-33885	-33283	-31970	-31491	-31281	-30247	-29653	-29322	-28604	-28341
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-31858	-29042	-22149	-22099	-20904	-18083	-17002	-26084	-26382	-24809	-23777	-22243	-21278	-20066	-19247	-18733	-18527	-17746	-17693	-17659	-17083	-16768	-16890	-16187	-15817
VAR/COV VaR@98%	-39779	-36263	-27656	-27594	-26102	-22579	-21229	-32570	-32941	-30977	-29689	-27773	-26569	-25055	-24032	-23391	-23133	-22158	-22093	-22050	-21331	-20937	-21090	-20211	-19750
VAR/COV VaR@99%	-45047	-41065	-31319	-31248	-29558	-25570	-24040	-36883	-37304	-35079	-33621	-31451	-30087	-28373	-27215	-26489	-26197	-25093	-25018	-24970	-24155	-23710	-23883	-22888	-22365
Aggregate Portfolio Estimates																									
HVaR@95%**	-30112	-28950	-22125	-21964	-21393	-18743	-17712	-32778	-32041	-30570	-29538	-27529	-26496	-24658	-23771	-23203	-22775	-22075	-21759	-21420	-20907	-20294	-20068	-19641	-19495
HVaR@98%	-40922	-40095	-31168	-30646	-28176	-23912	-25219	-43156	-47568	-44981	-43396	-40430	-39242	-37436	-35710	-35869	-35051	-34272	-33762	-33222	-31742	-31430	-31400	-31059	-29280
HVaR@99%	-45536	-46778	-34805	-36006	-35749	-30264	-28317	-47027	-56869	-54552	-52840	-50336	-47950	-45300	-43350	-41703	-41230	-40103	-40190	-39823	-38582	-38724	-37773	-36535	-36504
ES @ 95%***	-39987	-40488	-30497	-31175	-28894	-25067	-24375	-42734	-49808	-47248	-45690	-42827	-40868	-39000	-37540	-36682	-35916	-34450	-34104	-33778	-32738	-32231	-31734	-31038	-30527
ES @ 98%	-49492	-51268	-39450	-40995	-38000	-32881	-31280	-52281	-70967	-66671	-64106	-60858	-58202	-55569	-53202	-52070	-51199	-49308	-48553	-48363	-47043	-46521	-45189	-44173	-43334
ES @ 99%	-54164	-58206	-45668	-47588	-43043	-37550	-35331	-58410	-86334	-80417	-76477	-73305	-70428	-68288	-65661	-64767	-63660	-61058	-59473	-59215	-57523	-56808	-54823	-53757	-52328

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,...,Port 25 represents the twenty-five portfolios

Table B2.07- Aggregate Portfolio Risk Estimates for Companies with Seventh Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-1E+05	-73795	-60595	-51254	-41635	-36090	-33902	-40315	-36812	-33737	-35037	-33292	-33241	-32289	-32299	-32749	-34735	-33665	-33836	-38778	-37570	-37760	-38360	-37472	-36667
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-29894	-23390	-19643	-19438	-18442	-15833	-14802	-17996	-17306	-16501	-16408	-16254	-15731	-15093	-14769	-14847	-15427	-15086	-14950	-15678	-15419	-15550	-16176	-16268	-15939
VAR/COV VaR@98%	-37327	-29206	-24527	-24271	-23027	-19770	-18482	-22470	-21608	-20604	-20488	-20296	-19642	-18845	-18440	-18538	-19262	-18837	-18667	-19576	-19253	-19417	-20198	-20313	-19902
VAR/COV VaR@99%	-42270	-33074	-27775	-27485	-26076	-22388	-20929	-25445	-24470	-23332	-23201	-22983	-22243	-21341	-20882	-20993	-21813	-21332	-21139	-22168	-21802	-21988	-22873	-23003	-22537
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-29894	-23910	-19942	-19866	-18533	-15951	-15001	-18132	-17308	-16586	-16341	-16144	-15645	-14991	-14686	-14756	-15449	-15067	-14910	-15516	-15293	-15453	-15721	-15066	-15200
VAR/COV VaR@98%	-37327	-29854	-24900	-24806	-23140	-19917	-18731	-22640	-21611	-20710	-20404	-20158	-19535	-18718	-18337	-18424	-19290	-18813	-18617	-19374	-19095	-19295	-19629	-18811	-18979
VAR/COV VaR@99%	-42270	-33808	-28198	-28091	-26205	-22554	-21211	-25638	-24473	-23452	-23105	-22827	-22121	-21197	-20765	-20864	-21845	-21305	-21083	-21940	-21624	-21850	-22229	-21303	-21493
Aggregate Portfolio Estimates																									
HVaR@95%**	-26373	-22620	-17935	-18120	-16910	-15137	-13954	-17043	-17335	-16811	-16514	-16674	-15816	-14949	-14633	-14865	-15498	-15294	-15220	-15627	-15190	-15498	-15849	-16567	-15969
HVaR@98%	-37236	-34705	-29987	-27072	-25625	-21014	-20671	-23493	-22600	-21570	-22458	-21762	-21777	-21005	-20162	-20269	-21542	-20352	-19845	-22033	-21488	-21412	-22107	-22320	-21936
HVaR@99%	-46712	-41025	-33742	-31653	-30469	-25024	-22968	-25701	-25714	-23901	-24799	-25141	-23986	-24077	-23397	-23396	-24328	-23677	-23644	-24831	-24952	-25191	-26329	-26668	-25950
ES @ 95%***	-42789	-34480	-29073	-27028	-25289	-21515	-20195	-23812	-22949	-21830	-22015	-21741	-21367	-20726	-20258	-20327	-21410	-20942	-20812	-22302	-21842	-21954	-22651	-22748	-22335
ES @ 98%	-64145	-49295	-41106	-36249	-33440	-28243	-26149	-30911	-29187	-27095	-27887	-27234	-26488	-25873	-25371	-25861	-27398	-27087	-26976	-29351	-29205	-29404	-30107	-29794	-29104
ES @ 99%	-83278	-59687	-49634	-42100	-37209	-32122	-29698	-36647	-33679	-30840	-31406	-29975	-29667	-28805	-28540	-29260	-31351	-31304	-31210	-34363	-34239	-34736	-34965	-33878	-33048

Table B2.08- Aggregate Portfolio Risk Estimates for Companies with Eighth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-50431	-50331	-41671	-31985	-34364	-32090	-34614	-37297	-36189	-34255	-33604	-31185	-34517	-34429	-35413	-36677	-39088	-36954	-36011	-34911	-35475	-34376	-36523	-36648	-35131
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-23963	-28261	-22417	-17954	-17737	-15683	-15564	-15534	-14663	-14317	-14504	-14182	-14070	-13712	-13991	-14232	-14587	-14235	-14327	-14456	-14186	-13774	-15015	-15067	-14874
VAR/COV VaR@98%	-29921	-35287	-27991	-22418	-22148	-19583	-19434	-19396	-18309	-17877	-18110	-17708	-17568	-17121	-17470	-17771	-18214	-17775	-17889	-18051	-17712	-17198	-18748	-18813	-18572
VAR/COV VaR@99%	-33883	-39960	-31698	-25387	-25080	-22176	-22008	-21964	-20733	-20244	-20508	-20053	-19894	-19389	-19783	-20124	-20626	-20129	-20258	-20441	-20058	-19476	-21230	-21305	-21032
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-23963	-28706	-22900	-18456	-18250	-16096	-15539	-15527	-14706	-14326	-14338	-14015	-13899	-13577	-13923	-14186	-14598	-14260	-14263	-14366	-14074	-13626	-14320	-13723	-13847
VAR/COV VaR@98%	-29921	-35844	-28594	-23045	-22788	-20098	-19402	-19387	-18362	-17888	-17903	-17500	-17355	-16953	-17384	-17713	-18228	-17806	-17809	-17938	-17573	-17014	-17880	-17135	-17290
VAR/COV VaR@99%	-33883	-40590	-32381	-26097	-25805	-22760	-21971	-21954	-20794	-20257	-20274	-19817	-19653	-19198	-19686	-20059	-20641	-20164	-20168	-20313	-19900	-19267	-20248	-19404	-19580
Aggregate Portfolio Estimates																									
HVaR@95%**	-22648	-28155	-21284	-17350	-16727	-14958	-15021	-15973	-14521	-13916	-14420	-13853	-13667	-13506	-14120	-14247	-14412	-14294	-14698	-14497	-14317	-13712	-15218	-15466	-15240
HVaR@98%	-30346	-37014	-31081	-24543	-23672	-22262	-20911	-21526	-21151	-20283	-21365	-20324	-19474	-19105	-19413	-20609	-21605	-21451	-21528	-21930	-21860	-21127	-22312	-22442	-22275
HVaR@99%	-36107	-41737	-35107	-27656	-28215	-24696	-24899	-24044	-23872	-24078	-25273	-24515	-24499	-23614	-24506	-24691	-25353	-26341	-25011	-24589	-24203	-23766	-25501	-26023	-25422
ES @ 95%***	-31118	-36322	-29654	-23279	-23466	-21014	-21009	-21745	-20931	-20438	-20935	-20201	-20186	-19696	-20183	-20819	-21572	-21497	-21396	-21154	-20762	-20298	-21789	-21868	-21502
ES @ 98%	-40637	-44422	-37293	-28599	-29737	-26916	-27443	-28128	-27438	-26382	-27152	-26161	-26781	-26510	-27302	-28036	-29136	-28682	-27711	-27230	-27065	-26499	-28187	-28473	-27909
ES @ 99%	-46500	-48193	-40289	-30393	-32853	-30157	-30936	-33016	-31825	-29979	-30069	-28582	-30231	-30397	-31198	-32294	-34283	-32430	-31318	-30708	-30622	-30172	-32002	-32311	-31379

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix B2 - Aggregate Portfolio Risk Estimates for Foreign Portfolios

Table B2.09- Aggregate Portfolio Risk Estimates for Companies with Ninth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-64748	-1E+05	-73914	-72958	-64951	-56475	-49647	-81438	-75063	-68494	-64823	-60641	-56475	-53746	-51955	-51859	-50957	-49112	-47703	-47964	-47618	-46759	-46893	-45089	-43761
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-29429	-37076	-25781	-26780	-24954	-22759	-20840	-30573	-27964	-26835	-25498	-24412	-22736	-21582	-21037	-20644	-20396	-19493	-19314	-19523	-18996	-18727	-19105	-18455	-18078
VAR/COV VaR@98%	-36746	-46294	-32190	-33438	-31159	-28418	-26021	-38174	-34917	-33508	-31837	-30482	-28390	-26948	-26268	-25777	-25467	-24339	-24117	-24377	-23720	-23384	-23855	-23044	-22573
VAR/COV VaR@99%	-41612	-52425	-36453	-37866	-35285	-32181	-29467	-43229	-39541	-37945	-36053	-34518	-32149	-30516	-29746	-29191	-28839	-27563	-27310	-27605	-26861	-26480	-27014	-26095	-25562
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-29429	-36644	-25741	-25443	-23837	-22002	-20073	-25308	-23080	-22123	-21439	-20665	-19219	-18171	-18034	-17903	-17831	-17093	-17060	-17403	-16986	-16896	-17191	-16475	-15936
VAR/COV VaR@98%	-36746	-45754	-32142	-31769	-29764	-27472	-25064	-31601	-28818	-27623	-26770	-25803	-23997	-22689	-22518	-22354	-22265	-21343	-21302	-21729	-21210	-21097	-21466	-20571	-19898
VAR/COV VaR@99%	-41612	-51813	-36398	-35976	-33706	-31110	-28383	-35786	-32634	-31281	-30315	-29220	-27175	-25694	-25500	-25314	-25213	-24169	-24123	-24607	-24018	-23890	-24308	-23296	-22533
Aggregate Portfolio Estimates																									
HVaR@95%**	-28709	-31445	-23005	-24334	-23126	-22662	-20098	-28721	-26764	-26099	-25315	-24143	-22554	-21744	-21062	-20516	-19988	-19298	-19484	-19147	-18787	-19580	-19558	-18800	-18323
HVaR@98%	-35735	-48025	-32374	-34332	-32822	-31175	-28435	-41138	-36495	-34730	-32905	-32970	-30964	-30045	-30104	-29203	-28288	-26686	-26452	-26827	-26722	-26024	-25937	-24986	-24846
HVaR@99%	-39139	-61423	-42230	-45061	-43033	-40266	-36227	-52552	-48893	-45732	-43253	-39868	-37196	-35609	-34659	-35527	-33141	-32258	-31464	-31647	-31200	-29112	-30774	-29402	-28871
ES @ 95%***	-36801	-51724	-35636	-37459	-34698	-31804	-29037	-43244	-39372	-37660	-35762	-33842	-31692	-30142	-29653	-29243	-28706	-27587	-27259	-27713	-27053	-26744	-27178	-26228	-25535
ES @ 98%	-45900	-76230	-51965	-54340	-48649	-43446	-39110	-59929	-54899	-51250	-48508	-45674	-42636	-40642	-39405	-39429	-38625	-37184	-36213	-36482	-36198	-35058	-35804	-34442	-33493
ES @ 99%	-53420	-91894	-63495	-64654	-56610	-49501	-44516	-70554	-64491	-59422	-56435	-52802	-49268	-46695	-45034	-44938	-44386	-42825	-41757	-42549	-42429	-41757	-42432	-40850	-39578

Table B2.10- Aggregate Portfolio Risk Estimates for Companies with Tenth Highest Market Capitalization																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-62101	-67059	-53034	-41089	-36886	-42327	-37959	-38371	-39456	-37590	-34530	-33373	-30799	-29267	-28749	-30098	-33776	-33490	-32967	-32991	-32577	-30845	-31757	-31769	-30507
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-31375	-32270	-25412	-20561	-18982	-18829	-18887	-19412	-17931	-17211	-16302	-15204	-14668	-14099	-13776	-13497	-13936	-13556	-13548	-13473	-13579	-13342	-13810	-13565	-13643
VAR/COV VaR@98%	-39176	-40293	-31730	-25673	-23701	-23510	-23584	-24238	-22389	-21490	-20355	-18984	-18315	-17604	-17202	-16853	-17402	-16926	-16916	-16823	-16955	-16659	-17243	-16937	-17035
VAR/COV VaR@99%	-44364	-45629	-35932	-29073	-26840	-26624	-26707	-27448	-25354	-24336	-23051	-21498	-20741	-19935	-19480	-19084	-19706	-19168	-19156	-19051	-19200	-18865	-19526	-19180	-19291
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%*	-31375	-32943	-25760	-20907	-19148	-18945	-18135	-19947	-18421	-17612	-16663	-15623	-15040	-14470	-14145	-13770	-14238	-13846	-13827	-13736	-13748	-13556	-13814	-13238	-13052
VAR/COV VaR@98%	-39176	-41133	-32164	-26105	-23909	-23656	-22643	-24906	-23001	-21991	-20806	-19507	-18779	-18068	-17663	-17193	-17778	-17289	-17265	-17152	-17166	-16927	-17248	-16529	-16297
VAR/COV VaR@99%	-44364	-46580	-36424	-29562	-27076	-26788	-25642	-28204	-26047	-24903	-23561	-22090	-21266	-20460	-20001	-19470	-20132	-19579	-19551	-19423	-19439	-19168	-19532	-18718	-18455
Aggregate Portfolio Estimates																									
HVaR@95%**	-29749	-32069	-26640	-21648	-19179	-17619	-19032	-18844	-16901	-16300	-15528	-14960	-14502	-13885	-13883	-13020	-13214	-12724	-12729	-12676	-12857	-13056	-13843	-13522	-13901
HVaR@98%	-39871	-43696	-36358	-28466	-24589	-25779	-27557	-26755	-23853	-23993	-23006	-21106	-21936	-21118	-20503	-19374	-20720	-19788	-20428	-19772	-20109	-19916	-19159	-18598	-19485
HVaR@99%	-48020	-51152	-39822	-32802	-29391	-29986	-30195	-32907	-32251	-29488	-28973	-26565	-25233	-24142	-24264	-23149	-24348	-24274	-24236	-24258	-25069	-24644	-25758	-25511	-24116
ES @ 95%***	-39139	-43335	-35152	-28395	-25030	-25180	-25816	-26819	-24807	-23878	-22572	-21022	-20564	-20051	-19523	-19072	-19924	-19497	-19612	-19322	-19606	-18997	-19654	-19458	-19244
ES @ 98%	-50167	-54882	-43660	-34928	-31665	-33794	-32570	-34624	-33815	-31927	-30218	-28079	-26495	-25702	-25179	-25020	-26720	-26502	-26628	-26692	-26901	-26013	-26553	-26362	-25544
ES @ 99%	-55577	-61430	-48089	-38311	-35498	-39156	-35571	-37888	-37678	-35826	-33300	-31445	-29136	-27694	-27224	-28034	-30503	-30510	-30513	-30312	-29947	-28598	-29321	-29145	-28386

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents twenty-five portfolios

Appendix B3 - Aggregate Portfolio Risk Estimates for Frechet Random Walk Model and Geometric Brownian Motion Model

Table B3.01- Aggregate Portfolio Risk Estimates for Frechet Random Walk Model																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-30307	-56404	-34964	-27385	-18600	-15054	-12116	-10290	-9670	-8508	-7294	-6356	-13629	-13423	-13051	-11855	-11001	-9611	-9726	-7912	-8029	-7912	-7924	-7354	-7396
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-8697	-8613	-6042	-5147	-4368	-4117	-3770	-3971	-3738	-3476	-3837	-3851	-4154	-4161	-4198	-4305	-4249	-4095	-3987	-3907	-3893	-3878	-3911	-3825	-3742
VAR/COV VaR@98%	-10859	-10755	-7544	-6426	-5453	-5141	-4707	-4958	-4667	-4341	-4792	-4808	-5187	-5196	-5242	-5376	-5306	-5113	-4978	-4878	-4861	-4843	-4884	-4776	-4672
VAR/COV VaR@99%	-12298	-12179	-8543	-7277	-6176	-5821	-5330	-5614	-5285	-4916	-5426	-5445	-5874	-5884	-5936	-6088	-6008	-5791	-5637	-5524	-5505	-5484	-5530	-5408	-5291
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-8697	-8523	-6156	-5175	-4391	-4134	-3783	-3884	-3657	-3409	-3758	-3849	-4071	-4130	-4209	-4313	-4257	-4102	-3990	-3925	-3887	-3871	-3894	-3732	-3643
VAR/COV VaR@98%	-10859	-10642	-7686	-6461	-5483	-5161	-4724	-4849	-4567	-4257	-4693	-4806	-5083	-5157	-5255	-5386	-5316	-5122	-4983	-4901	-4854	-4834	-4862	-4660	-4548
VAR/COV VaR@99%	-12298	-12051	-8704	-7317	-6209	-5845	-5350	-5492	-5172	-4821	-5314	-5442	-5757	-5840	-5951	-6099	-6020	-5801	-5642	-5550	-5497	-5474	-5506	-5277	-5151
Aggregate Portfolio Estimates																									
HVaR@95%**	-5051	-4567	-5424	-4731	-3795	-4340	-3773	-3909	-3850	-3539	-4134	-4111	-3916	-3822	-4147	-4141	-4170	-3944	-4100	-3818	-4270	-3927	-4302	-4046	-4032
HVaR@98%	-9579	-10234	-8232	-6860	-6075	-5791	-6672	-5688	-5471	-5201	-5924	-5444	-5502	-5371	-5534	-5723	-5113	-5285	-4690	-4755	-5025	-5335	-6039	-5798	-4939
HVaR@99%	-13444	-13793	-10532	-8177	-6855	-8750	-7345	-7742	-7350	-7060	-6183	-6016	-6122	-5477	-6633	-5817	-6045	-5993	-5370	-5546	-6394	-6456	-6829	-6126	-5697
ES @ 95%***	-11006	-12929	-10249	-8275	-6924	-6784	-6155	-5792	-5608	-5220	-5391	-5202	-5943	-5678	-6184	-5647	-5908	-5484	-5349	-5079	-5374	-5211	-5737	-5461	-5158
ES @ 98%	-17841	-24428	-16503	-13047	-10838	-10295	-8889	-8271	-7643	-7334	-6553	-6072	-8001	-7748	-8147	-7342	-8174	-7636	-7233	-6415	-6929	-6770	-7033	-6589	-6227
ES @ 99%	-22922	-36546	-22824	-18000	-14960	-12523	-10702	-9361	-8533	-7887	-7050	-6245	-9990	-10020	-9849	-8876	-10691	-9476	-9126	-7671	-7730	-7321	-7404	-7106	-6877

Table B3.02- Aggregate Portfolio Risk Estimates for Geometric Brownian Motion Model																									
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-18435	-12225	-11191	-9927	-8554	-7551	-8133	-5970	-6276	-5263	-5092	-5360	-5518	-6368	-6524	-5131	-4720	-5185	-5030	-4876	-4836	-4057	-3999	-4072	-4205
Aggregate Diversified Portfolio VaR																									
VAR/COV VaR@95%*	-11612	-8255	-6565	-5514	-5046	-4824	-4248	-3951	-3808	-3601	-3520	-3298	-3223	-3108	-2999	-2910	-2815	-2727	-2644	-2622	-2581	-2532	-2433	-2431	-2325
VAR/COV VaR@98%	-14499	-10307	-8198	-6885	-6301	-6023	-5304	-4934	-4754	-4496	-4395	-4119	-4024	-3881	-3744	-3634	-3514	-3405	-3301	-3273	-3223	-3162	-3039	-3035	-2903
VAR/COV VaR@99%	-16419	-11672	-9283	-7796	-7135	-6820	-6007	-5587	-5384	-5092	-4977	-4664	-4557	-4395	-4240	-4115	-3980	-3856	-3738	-3707	-3649	-3581	-3441	-3437	-3288
Diversified Portfolio VaR/Sum Individual Positions																									
VAR/COV VaR@95%	-11612	-8222	-6546	-5509	-5038	-4810	-4238	-3951	-3806	-3601	-3526	-3300	-3224	-3110	-2997	-2908	-2816	-2727	-2644	-2619	-2579	-2526	-2428	-2326	-2333
VAR/COV VaR@98%	-14499	-10266	-8174	-6879	-6291	-6006	-5292	-4934	-4752	-4496	-4403	-4120	-4025	-3884	-3742	-3631	-3516	-3405	-3302	-3271	-3220	-3154	-3031	-2905	-2913
VAR/COV VaR@99%	-16419	-11625	-9257	-7790	-7124	-6801	-5992	-5587	-5381	-5092	-4986	-4666	-4558	-4398	-4237	-4112	-3981	-3856	-3739	-3704	-3646	-3572	-3433	-3290	-3298
Aggregate Portfolio Estimates																									
HVaR@95%**	-10561	-8444	-6493	-5456	-5166	-4971	-4393	-3997	-3783	-3497	-3694	-3540	-3348	-3279	-3146	-3230	-2989	-2791	-2602	-2629	-2760	-2731	-2590	-2534	-2511
HVaR@98%	-16444	-10715	-8316	-6767	-6398	-6506	-5409	-4740	-4329	-4250	-4229	-3996	-3951	-3858	-4003	-3945	-3803	-3983	-3932	-3762	-4052	-3798	-3596	-3504	-3384
HVaR@99%	-17632	-11839	-9337	-7580	-7362	-6570	-5600	-5363	-4638	-4534	-4685	-4355	-4027	-4219	-4104	-4375	-4363	-4294	-4164	-4691	-4555	-3854	-3795	-3606	-3960
ES @ 95%***	-14686	-10218	-8166	-6848	-6262	-6163	-5311	-4684	-4470	-4252	-4214	-4061	-4019	-3945	-3939	-3901	-3741	-3710	-3660	-3729	-3770	-3470	-3460	-3341	-3253
ES @ 98%	-17738	-11910	-9958	-8275	-7662	-6910	-6214	-5432	-5233	-4740	-4785	-4680	-4576	-4736	-4731	-4497	-4481	-4469	-4452	-4740	-4606	-3938	-3861	-3815	-3971
ES @ 99%	-18068	-12103	-10864	-9099	-8093	-7277	-6881	-5780	-5908	-5066	-5063	-5156	-5141	-5333	-5398	-4812	-4685	-4742	-4773	-4808	-4696	-4040	-3948	-4052	-4186

* VAR/COV VaR@95%, VAR/COV VaR@98%, VAR/COV VaR@99% represents the variance/covariance VaR at the 95% confidence level, variance/covariance VaR at the 98% confidence level, and variance/covariance VaR at the 99% confidence level respectively

** HVaR@95%, HVaR@98%, HVaR@99% represents the historical VaR at the 95% confidence level, historical VaR at the 98% confidence level and historical VaR at the 99% confidence level respectively

*** ES @ 95%, ES @ 98%, ES @ 99% represents the expected shortfall at the 95% confidence level, expected shortfall at the 98% confidence level, and expected shortfall at the 99% confidence level respectively

**** Port 1,…,Port 25 represents portfolio

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates For Domestic Portfolios

Table C1.01- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Australia

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-26742	-33144	-47769	-24900	-25627	-31858	-29894	-23963	-29429	-31375	-27078	-25570	-30934	-19732	-44054	-18383	-24245	-35220	-37219	-35886	-31539	-27731	-29384	-35456	-36176
UVaR**	-26742	-29943	-35885	-33139	-31636	-31673	-31419	-30487	-30370	-30470	-30162	-29779	-29868	-29144	-30138	-29403	-29100	-29440	-29849	-30151	-30217	-30104	-30073	-30297	-30532
PVaR/Summed DVaR***	-26742	-24461	-27114	-24329	-22973	-22568	-21452	-20284	-19568	-19262	-18912	-18561	-18450	-17940	-18239	-17787	-17457	-17482	-17621	-17558	-17464	-17330	-17206	-17183	-17202
DPVaR/SP****	-26742	-24510	-26952	-24105	-22770	-22351	-21292	-20152	-19472	-19167	-18828	-18492	-18369	-17888	-18158	-17714	-17382	-17379	-17537	-17469	-17393	-17269	-17149	-16435	-16454
UVaR/ADPVaR*****	1	1.2241	1.3277	1.3669	1.3826	1.41	1.4712	1.508	1.5556	1.5852	1.5965	1.6064	1.6221	1.6273	1.6546	1.655	1.6681	1.686	1.6951	1.7187	1.733	1.7399	1.7506	1.766	1.7775
UVaR/DPVaR/SP******	1	1.2218	1.3347	1.3787	1.3943	1.424	1.4814	1.5179	1.5633	1.5931	1.6037	1.6124	1.629	1.6317	1.6612	1.6609	1.6745	1.695	1.7028	1.727	1.739	1.7453	1.7556	1.8456	1.8583

Table C1.02- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Brazil

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-52942	-69402	-46267	-57420	-53120	-49078	-34359	-51410	-64880	-56494	-56981	-58834	-50708	-65129	-1E+05	-57185	-62447	-66180	-40301	-48769	-69008	-89173	-66535	-53605	-83459
UVaR**	-52942	-61172	-56204	-56508	-55830	-54705	-51798	-51750	-53209	-53537	-53850	-54266	-53992	-54787	-60593	-60380	-60501	-60817	-59737	-59189	-59656	-60998	-61239	-60921	-61822
PVaR/Summed DVaR***	-52942	-55243	-42069	-41168	-40272	-38981	-36414	-36606	-36400	-36491	-36591	-35508	-34957	-35966	-40327	-39405	-38654	-38987	-37627	-36982	-36541	-35784	-35285	-34942	-34521
DPVaR/SP****	-52942	-53088	-42219	-41604	-40796	-39124	-36494	-36886	-36768	-36874	-37010	-35888	-35162	-36126	-36983	-36082	-35540	-36024	-34851	-34380	-34052	-33380	-32927	-31555	-31363
UVaR/ADPVaR*****	1	1.1199	1.3428	1.3875	1.405	1.42	1.4415	1.4363	1.4806	1.4881	1.4926	1.559	1.5751	1.5541	1.573	1.608	1.6446	1.634	1.6655	1.6736	1.711	1.793	1.833	1.8418	1.8903
UVaR/DPVaR/SP******	1	1.1632	1.3417	1.3747	1.3886	1.416	1.4431	1.4292	1.4751	1.4809	1.4833	1.5459	1.5669	1.5487	1.6761	1.7138	1.7453	1.728	1.7585	1.7641	1.797	1.8775	1.9177	1.9911	2.0344

Table C1.03- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Chile

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-28911	-36224	-34045	-31992	-32419	-31162	-32672	-27743	-16915	-34668	-28181	-26173	-24763	-49321	-17630	-20692	-24509	-34374	-23003	-29316	-28387	-22177	-36899	-52446	-32319
UVaR**	-28911	-32567	-33060	-32793	-32718	-32459	-32489	-31896	-30231	-30675	-30448	-30092	-29682	-31085	-30188	-29594	-29295	-29577	-29231	-29236	-29195	-28876	-29225	-30193	-30278
PVaR/Summed DVaR***	-28911	-28725	-27610	-26798	-25523	-23023	-21820	-20906	-19253	-18425	-18078	-17491	-16929	-17180	-16477	-15907	-15462	-15328	-14924	-14791	-14462	-14211	-14267	-14515	-14535
DPVaR/SP****	-28911	-27829	-26993	-26309	-24952	-22554	-21429	-20557	-19038	-18271	-17936	-17337	-16726	-16606	-15949	-15375	-14945	-14890	-14512	-14402	-14063	-13824	-13957	-13375	-13742
UVaR/ADPVaR*****	1	1.1377	1.2005	1.2242	1.2828	1.407	1.4865	1.5257	1.5691	1.6651	1.6855	1.7209	1.7543	1.8333	1.8554	1.8807	1.9131	1.948	1.9772	1.9921	2.033	2.0464	2.0612	2.0902	2.094
UVaR/DPVaR/SP******	1	1.1695	1.2264	1.2455	1.3093	1.435	1.5121	1.5489	1.5868	1.6793	1.6991	1.7359	1.7752	1.8807	1.9005	1.9286	1.9625	1.99	2.0183	2.0334	2.078	2.0915	2.0964	2.2611	2.2086

Table C1.04- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for France

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-34142	-41690	-40873	-37396	-43046	-46324	-41974	-25102	-52452	-30385	-39194	-34723	-41593	-36027	-71373	-44033	-38768	-41443	-48484	-32219	-45040	-42032	-31688	-55655	-48090
UVaR**	-34142	-37916	-38902	-38525	-39429	-40579	-40778	-38818	-40333	-39338	-39325	-38942	-39146	-38923	-41086	-41271	-41123	-41141	-41528	-41062	-41252	-41287	-40870	-41486	-41750
PVaR/Summed DVaR***	-34142	-32929	-28568	-26231	-25994	-27305	-27103	-23913	-24862	-23675	-23813	-23490	-23382	-23260	-25140	-24881	-24620	-24671	-24723	-24405	-24592	-24554	-24048	-24138	-24271
DPVaR/SP****	-34142	-33052	-28561	-26288	-26127	-27282	-27115	-23980	-24682	-23519	-23592	-23288	-23238	-23126	-24300	-24144	-23932	-24025	-24030	-23810	-24075	-24071	-23594	-22611	-22700
UVaR/ADPVaR*****	1	1.1564	1.3613	1.4755	1.5329	1.517	1.5411	1.6619	1.6683	1.7112	1.7154	1.7234	1.7397	1.7348	1.6944	1.7148	1.7273	1.725	1.7381	1.7477	1.742	1.7471	1.7678	1.7903	1.7875
UVaR/DPVaR/SP******	1	1.152	1.3614	1.4725	1.5274	1.523	1.5448	1.6585	1.6808	1.7225	1.729	1.735	1.7478	1.7433	1.755	1.7698	1.7803	1.775	1.7912	1.7949	1.782	1.7841	1.803	1.9153	1.9202

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Continued)

Table C1.05- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Germany

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-45259	-40991	-19349	-35590	-43115	-33362	-34884	-41840	-39674	-34779	-38887	-13121	-42106	-34019	-43295	-40511	-49794	-23108	-32424	-41176	-35867	-29783	-33645	-43046	-31622
UVaR**	-45259	-43125	-35200	-35297	-36861	-36278	-36078	-36799	-37118	-36884	-37066	-35071	-35612	-35498	-36018	-36299	-37093	-36316	-36111	-36364	-36341	-36042	-35938	-36234	-36050
PVaR/Summed DVaR***	-45259	-37942	-26026	-24196	-25850	-24973	-23956	-24094	-24262	-23752	-24026	-22255	-21575	-21209	-20830	-21114	-20692	-19816	-19172	-19450	-19205	-18609	-18637	-18932	-18363
DPVaR/SP****	-45259	-37704	-26122	-24222	-25461	-24674	-23556	-23828	-24057	-23617	-23861	-22108	-21439	-21107	-20730	-21068	-20721	-19770	-19052	-19283	-19071	-18428	-18457	-17688	-17996
UVaR/ADPVaR*****	1	1.1448	1.3688	1.4748	1.4534	1.487	1.537	1.562	1.5632	1.587	1.58	1.612	1.6853	1.707	1.7656	1.758	1.8185	1.859	1.9126	1.8951	1.9132	1.9587	1.9492	1.9367	1.9842
UVaR/DPVaR/SP******	1	1.1527	1.356	1.4703	1.4725	1.5007	1.562	1.5786	1.5766	1.596	1.591	1.62	1.6926	1.713	1.7711	1.7615	1.8183	1.8645	1.9245	1.9144	1.9298	1.9796	1.9699	2.0719	2.0272

Table C1.06- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Hong Kong

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-26730	-37505	-27301	-36264	-41434	-20009	-20167	-25825	-39943	-53293	-43140	-40993	-41940	-33321	-37615	-41334	-40735	-38352	-21726	-43278	-47325	-24591	-44234	-57514	-58510
UVaR**	-26730	-32118	-30512	-31950	-33847	-31540	-29916	-29404	-30575	-32847	-33783	-34384	-34965	-34847	-35032	-35426	-35738	-35883	-35138	-35545	-36106	-35583	-35959	-36857	-37723
PVaR/Summed DVaR***	-26730	-28985	-26136	-27559	-28799	-25149	-22408	-21205	-22172	-22839	-23370	-23680	-23751	-23637	-23384	-23458	-23110	-23250	-22474	-22962	-23112	-22000	-21684	-20664	-20079
DPVaR/SP****	-26730	-28767	-25985	-27334	-28653	-25156	-22474	-21208	-22158	-22727	-23341	-23642	-23716	-23590	-23344	-23316	-23028	-23170	-22340	-22858	-23026	-22140	-21818	-20909	-20189
UVaR/ADPVaR*****	1	1.1091	1.1712	1.1622	1.1777	1.2557	1.34	1.3959	1.3848	1.439	1.445	1.453	1.4746	1.476	1.5	1.5129	1.5496	1.5472	1.5677	1.5517	1.5662	1.6159	1.6559	1.7744	1.8672
UVaR/DPVaR/SP******	1	1.1181	1.1785	1.1725	1.1842	1.2622	1.347	1.4085	1.3948	1.451	1.452	1.461	1.4819	1.484	1.5076	1.5274	1.5616	1.5587	1.5841	1.565	1.578	1.6171	1.6576	1.7694	1.8727

Table C1.07- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for India

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-42238	-35319	-69284	-42247	-39764	-44534	-38561	-47003	-37433	-52767	-45792	-46710	-37593	-30917	-45641	-41968	-48923	-43025	-41513	-45575	-39321	-30121	-32653	-32306	-52729
UVaR**	-42238	-38779	-48947	-47272	-45770	-45564	-44564	-44869	-44043	-44915	-44995	-45138	-44557	-43583	-43720	-43611	-43923	-43873	-43749	-43840	-43625	-43011	-42561	-42134	-42557
PVaR/Summed DVaR***	-42238	-31413	-37591	-35095	-32282	-31061	-28571	-28067	-26708	-26777	-26957	-27237	-26364	-25332	-24884	-24561	-24519	-24249	-24212	-24172	-23938	-23388	-22877	-22586	-22912
DPVaR/SP****	-42238	-31629	-36182	-33645	-30966	-29814	-27307	-27021	-25694	-25939	-26183	-26556	-25779	-24795	-24363	-24062	-24097	-23871	-23867	-23885	-23689	-23118	-22685	-21740	-21528
UVaR/ADPVaR*****	1	1.2313	1.3037	1.3479	1.4249	1.4829	1.583	1.6297	1.6828	1.708	1.699	1.689	1.7246	1.765	1.8019	1.8287	1.8423	1.8655	1.8629	1.866	1.8819	1.9005	1.9275	1.9407	1.9294
UVaR/DPVaR/SP******	1	1.2236	1.3524	1.4111	1.4926	1.5551	1.665	1.7005	1.7572	1.769	1.753	1.737	1.7705	1.807	1.8454	1.867	1.8771	1.8978	1.8926	1.8909	1.9038	1.9249	1.9457	2.0078	2.0569

Table C1.08- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Indonesia

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-46575	-54664	-59521	-80683	-1E+05	-2E+05	-87857	-58674	-1E+05	-77243	-88390	-97588	-45975	-62137	-81497	-1E+05	-49330	-79497	-78566	-77004	-23197	-1E+05	-73010	-81957	-1E+05
UVaR**	-46575	-50619	-53587	-60361	-69528	-85447	-85791	-82401	-88685	-87541	-87618	-88449	-85182	-83536	-83400	-85011	-82912	-82722	-82503	-82228	-79417	-82286	-81882	-81885	-84276
PVaR/Summed DVaR***	-46575	-41758	-43184	-46347	-48538	-60349	-58355	-54587	-56444	-55384	-53627	-52351	-49937	-48214	-47916	-47171	-45897	-45697	-45702	-44854	-43243	-43605	-43102	-42742	-43152
DPVaR/SP****	-46575	-41546	-43168	-47479	-48254	-54140	-52690	-50040	-51246	-50759	-50107	-49499	-46969	-45388	-45469	-44911	-43890	-44014	-44394	-43510	-42161	-42706	-42349	-40584	-40302
UVaR/ADPVaR*****	1	1.1966	1.2328	1.2964	1.4295	1.4368	1.486	1.5247	1.598	1.603	1.654	1.709	1.7327	1.762	1.7667	1.8308	1.8399	1.8415	1.8294	1.8613	1.8671	1.9214	1.9369	1.9458	1.9821
UVaR/DPVaR/SP******	1	1.2072	1.2405	1.2693	1.4419	1.5871	1.635	1.6552	1.7478	1.739	1.77	1.81	1.8399	1.87	1.8617	1.9215	1.9225	1.9125	1.8871	1.9212	1.9158	1.9617	1.9698	2.0586	2.1146

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Continued)

Table C1.09- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Ireland

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-34440	-37555	-34624	-33934	-21171	-88431	-44278	-31093	-33451	-31279	-51840	-42991	-23110	-47656	-33064	-42533	-39146	-38559	-48479	-86945	-171446	-63804	-58406	-65853	-65495
UVaR**	-34440	-35997	-35539	-35138	-32345	-41692	-42062	-40691	-39886	-39025	-40190	-40424	-39092	-39704	-39261	-39466	-39447	-39397	-39875	-42229	-48382	-49083	-49488	-50170	-50783
PVaR/Summed DVaR***	-34440	-31237	-27129	-25079	-21747	-31806	-30540	-28467	-26769	-25702	-25106	-24354	-23259	-23162	-22520	-21992	-21644	-21005	-20723	-20726	-22201	-21817	-21564	-21228	-20916
DPVaR/SP****	-34440	-31312	-27105	-25100	-21779	-25807	-24586	-22585	-21047	-20159	-19939	-19523	-18575	-18485	-17953	-17619	-17446	-16897	-16795	-16993	-18741	-18520	-18374	-17608	-17458
UVaR/ADPVaR*****	1	1.153	1.3112	1.403	1.488	1.506	1.5738	1.6499	1.74	1.772	1.861	1.908	1.9359	1.9448	1.9749	2.028	2.051	2.1161	2.1564	2.2691	2.3528	2.413	2.4484	2.5186	2.5835
UVaR/DPVaR/SP******	1	1.15	1.3113	1.401	1.486	1.622	1.7154	1.8087	1.908	1.95	2.031	2.088	2.1222	2.1662	2.2045	2.2586	2.284	2.3597	2.4019	2.5145	2.6065	2.6696	2.7133	2.8819	2.9252

Table C1.10- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Israel

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-40518	-40554	-1E+05	-33707	-33554	-43022	-45120	-40573	-61636	-44907	-42576	-89276	-40019	-29832	-50706	-47343	-50073	-29784	-46095	-40646	-44471	-88506	-41509	-30190	-41716
UVaR**	-40518	-40536	-65879	-57836	-52979	-51320	-50434	-49202	-50583	-50016	-49339	-52667	-51694	-50133	-50171	-49994	-49999	-48876	-48729	-48325	-48142	-49977	-49608	-48799	-48516
PVaR/Summed DVaR***	-40518	-35390	-30795	-27776	-25599	-26497	-25175	-24363	-24690	-24624	-24480	-25321	-24964	-23674	-23391	-23801	-23588	-22773	-22105	-21750	-21431	-20924	-20363	-19865	-19697
DPVaR/SP****	-40518	-35363	-52084	-43463	-37655	-35709	-32880	-30820	-30140	-29310	-28531	-29239	-28338	-26776	-26167	-26130	-25713	-24785	-23995	-23454	-22990	-22966	-22361	-21429	-20933
UVaR/ADPVaR*****	1	1.151	1.9046	1.929	1.966	1.86	1.9484	1.9861	2.021	2.014	2.002	2.074	2.0628	2.1079	2.1371	2.0909	2.117	2.1434	2.2029	2.2217	2.2471	2.3928	2.4437	2.4648	2.4747
UVaR/DPVaR/SP******	1	1.152	1.3436	1.401	1.466	1.46	1.56	1.6101	1.69	1.713	1.729	1.803	1.8248	1.8713	1.9164	1.9104	1.943	1.9698	2.0302	2.059	2.0924	2.1667	2.2111	2.2707	2.3151

Table C1.11- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Italy

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-37436	-36777	-42965	-47873	-37244	-38284	-36601	-37906	-45020	-32394	-44011	-43265	-38500	-22730	-48967	-34068	-37662	-41063	-44919	-50590	-36656	-41641	-35328	-28592	-36392
UVaR**	-37436	-37107	-39060	-41263	-40459	-40097	-39597	-39386	-40012	-39250	-39683	-39981	-39867	-38643	-39331	-39002	-38924	-39043	-39352	-39914	-39759	-39844	-39648	-39187	-39075
PVaR/Summed DVaR***	-37436	-31609	-31518	-32125	-30235	-29438	-28715	-27913	-27961	-26409	-26370	-25778	-25108	-24053	-24440	-23882	-23485	-23600	-23614	-23969	-23560	-23534	-23058	-22628	-22348
DPVaR/SP****	-37436	-31357	-31495	-32082	-30130	-29458	-28794	-27965	-28030	-26386	-26266	-25598	-24895	-23818	-24070	-23467	-23091	-23207	-23202	-23449	-23019	-23039	-22628	-21686	-21229
UVaR/ADPVaR*****	1	1.177	1.2461	1.288	1.344	1.371	1.3895	1.4259	1.446	1.5	1.517	1.565	1.6022	1.6199	1.6251	1.65	1.675	1.6742	1.6854	1.6819	1.7034	1.7112	1.7365	1.7492	1.7672
UVaR/DPVaR/SP******	1	1.186	1.2481	1.291	1.351	1.372	1.388	1.4254	1.444	1.502	1.524	1.576	1.6167	1.6357	1.6497	1.6775	1.702	1.7008	1.7137	1.7193	1.7431	1.7473	1.7687	1.8243	1.8573

Table C1.12- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Japan

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-38875	-43732	-48123	-47119	-44337	-36327	-44948	-36965	-51620	-29642	-48554	-43616	-41838	-38727	-42471	-25921	-57505	-23845	-51934	-45370	-41220	-41792	-50599	-49726	-52168
UVaR**	-38875	-41303	-43577	-44462	-44437	-43086	-43352	-42553	-43561	-42169	-42749	-42822	-42746	-42459	-42460	-41426	-42372	-41343	-41900	-42074	-42033	-42022	-42395	-42700	-43079
PVaR/Summed DVaR***	-38875	-35160	-32374	-32118	-31830	-29459	-29683	-29041	-29884	-27629	-27928	-28162	-27832	-27654	-27731	-26642	-27067	-26022	-26463	-26715	-26652	-26548	-26706	-26589	-27028
DPVaR/SP****	-38875	-34989	-32538	-32337	-31974	-29698	-29772	-29137	-29899	-27821	-27761	-27989	-27665	-27494	-27589	-26552	-26909	-25919	-26356	-26593	-26550	-26457	-26509	-25404	-25352
UVaR/ADPVaR*****	1	1.175	1.3481	1.387	1.404	1.473	1.4715	1.4759	1.465	1.531	1.53	1.521	1.5391	1.5394	1.5352	1.5578	1.567	1.5895	1.5838	1.5762	1.5788	1.5852	1.5875	1.608	1.5946
UVaR/DPVaR/SP******	1	1.181	1.343	1.379	1.398	1.46	1.4671	1.4713	1.465	1.525	1.544	1.534	1.5524	1.5521	1.547	1.5678	1.582	1.6021	1.5961	1.5894	1.5906	1.596	1.6053	1.6874	1.7086

* Raw PVaR represents raw position VaR

** UVaR represents undiversified VaR

*** PVaR/Summed DVaR represents position VaR/summed delta VaR

**** DPVaR/SP represents diversified portfolio VaR/sum individual positions

***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Continued)

Table C1.13- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Mexico

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-39258	-42728	-31559	-46393	-43349	-38842	-35886	-38678	-15091	-42839	-32824	-45406	-24771	-43603	-52735	-43102	-23036	-47030	-9419	-26012	-9419	-68380	-20657	-46970	-65807
UVaR**	-39258	-40993	-37848	-39984	-40657	-40355	-39716	-39587	-36865	-37462	-37041	-37738	-36740	-37231	-38264	-38566	-37653	-38174	-36660	-36128	-34856	-36380	-35696	-36166	-37352
PVaR/Summed DVaR***	-39258	-34783	-26016	-27761	-28720	-27594	-27155	-26962	-24405	-23434	-22261	-22049	-20839	-20483	-20653	-20180	-19862	-20016	-19288	-18835	-18243	-18401	-18028	-18086	-18728
DPVaR/SP****	-39258	-34831	-27599	-28949	-29711	-28360	-27776	-27451	-25040	-23985	-22642	-22441	-21326	-20916	-20887	-20530	-20228	-20259	-19527	-19020	-18429	-18349	-17945	-17197	-17354
UVaR/ADPVaR*****	1	1.1819	1.431	1.4429	1.43	1.48	1.487	1.5005	1.545	1.6381	1.7049	1.7616	1.7997	1.867	1.9038	1.9633	1.9537	1.974	1.964	1.9867	1.9762	2.035	2.0392	2.0622	2.0582
UVaR/DPVaR/SP******	1	1.1774	1.355	1.3818	1.38	1.4389	1.453	1.4723	1.508	1.6034	1.6758	1.7312	1.7658	1.8356	1.8801	1.9261	1.9187	1.95	1.942	1.9678	1.9582	2.0509	2.0586	2.1768	2.2332

Table C1.14- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for New Zealand

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-31955	-41829	-34897	-56287	-30136	-29653	-28650	-33414	-28015	-28548	-28082	-29567	-50563	-29247	-31874	-60787	-38751	-55467	-60416	-33124	-52176	-41330	-37354	-55977	-25416
UVaR**	-31955	-36892	-36227	-41242	-39021	-37459	-36201	-35853	-34982	-34338	-33770	-33419	-34738	-34346	-34181	-35844	-36015	-37096	-38323	-38063	-38735	-38853	-38788	-39504	-38941
PVaR/Summed DVaR***	-31955	-30971	-27456	-28306	-25161	-22980	-21740	-21371	-20694	-20113	-19602	-19211	-19129	-18567	-18238	-18183	-18115	-18149	-18172	-17973	-17855	-17607	-17501	-17323	-17030
DPVaR/SP****	-31955	-31447	-27688	-29593	-26342	-24064	-22566	-21981	-21171	-20527	-19959	-19534	-19399	-18809	-18452	-18377	-18295	-18325	-18318	-18105	-17966	-17702	-17584	-16851	-16689
UVaR/ADPVaR*****	1	1.1908	1.319	1.4517	1.549	1.628	1.663	1.6752	1.69	1.706	1.7229	1.7401	1.8181	1.8523	1.8759	1.9745	1.9917	2.048	2.113	2.1218	2.173	2.2102	2.2191	2.282	2.2889
UVaR/DPVaR/SP******	1	1.1778	1.31	1.4031	1.496	1.5672	1.611	1.6364	1.659	1.6781	1.6982	1.717	1.7981	1.8335	1.8587	1.9581	1.9771	2.033	2.102	2.1117	2.1648	2.2035	2.2132	2.3518	2.3402

Table C1.15- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Singapore

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-38609	-40358	-38389	-39334	-37641	-37960	-36893	-50937	-46638	-37457	-54464	-18247	-51093	-23459	-33315	-37672	-33070	-37694	-40185	-46557	-35457	-49356	-33792	-53282	-33977
UVaR**	-38609	-39484	-39119	-39173	-38866	-38715	-38455	-40015	-40751	-40422	-41698	-39744	-40617	-39391	-38986	-38904	-38561	-38513	-38601	-38999	-38830	-39308	-39069	-39661	-39434
PVaR/Summed DVaR***	-38609	-35277	-33286	-30613	-28810	-27194	-26232	-27206	-27674	-26935	-27000	-24474	-23990	-23057	-22104	-21409	-21246	-21287	-21250	-21393	-21253	-21732	-21505	-21758	-21479
DPVaR/SP****	-38609	-35309	-33307	-30542	-28809	-26938	-25907	-26853	-27329	-26558	-26668	-24565	-24137	-23170	-22199	-21577	-21370	-21391	-21348	-21427	-21283	-21781	-21541	-20643	-20861
UVaR/ADPVaR*****	1	1.1202	1.178	1.2806	1.347	1.4218	1.467	1.4753	1.481	1.5113	1.5537	1.6231	1.6925	1.7093	1.7596	1.8145	1.817	1.816	1.825	1.8329	1.8401	1.8252	1.8338	1.8434	1.8575
UVaR/DPVaR/SP******	1	1.1194	1.178	1.2831	1.347	1.437	1.487	1.4958	1.501	1.5335	1.5717	1.6235	1.69	1.7101	1.7621	1.8121	1.817	1.818	1.826	1.841	1.848	1.8317	1.8415	1.9537	1.9237

Table C1.16- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for South Africa

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-43237	-46552	-43388	-44142	-42893	-46122	-41225	-45243	-47047	-59541	-42725	-39079	-41134	-41545	-37190	-40295	-32719	-44285	-40425	-65065	-40074	-34573	-50396	-38273	-41842
UVaR**	-43237	-44895	-44392	-44330	-44042	-44389	-43937	-44100	-44428	-45939	-45647	-45100	-44794	-44562	-44071	-43835	-43181	-43242	-43094	-44193	-43997	-43568	-43865	-43632	-43560
PVaR/Summed DVaR***	-43237	-33735	-30887	-28720	-28523	-28617	-28355	-28506	-28268	-27391	-27273	-27024	-26863	-26972	-26741	-26799	-26305	-26307	-26047	-26138	-26120	-25680	-25273	-25065	-25018
DPVaR/SP****	-43237	-33852	-30601	-28432	-28259	-28206	-28055	-28179	-28017	-27158	-27029	-26799	-26672	-26803	-26591	-26644	-26159	-26172	-25904	-26103	-26075	-25622	-25275	-24222	-24057
UVaR/ADPVaR*****	1	1.3281	1.436	1.5398	1.542	1.5503	1.55	1.5502	1.576	1.6787	1.6774	1.6727	1.6723	1.658	1.6541	1.641	1.6496	1.651	1.663	1.6983	1.6933	1.7076	1.7467	1.7538	1.7553
UVaR/DPVaR/SP******	1	1.3235	1.45	1.557	1.558	1.5729	1.566	1.5676	1.589	1.6931	1.6919	1.6859	1.6834	1.6676	1.6628	1.6502	1.658	1.659	1.671	1.7016	1.6968	1.7119	1.7471	1.8127	1.8233

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Continued)

Table C1.17- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for South Korea

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-60815	-61539	-50724	-46923	-66506	-54248	-69006	-64195	-70610	-58980	-57387	-63250	-81554	-68369	-59091	-70463	-79827	-62724	-64645	-60671	-66626	-84062	-66423	-57277	-57698
UVaR**	-60815	-61177	-57692	-55000	-57301	-56792	-58537	-59244	-60507	-60355	-60085	-60349	-61980	-62436	-62213	-62729	-63734	-63678	-63729	-63576	-63722	-64646	-64723	-64413	-64144
PVaR/Summed DVaR***	-60815	-53950	-47104	-43215	-43385	-42384	-43837	-42941	-42179	-42370	-41934	-41526	-41535	-41609	-40219	-41091	-42349	-42226	-42349	-41499	-41404	-42363	-42608	-42266	-41760
DPVaR/SP****	-60815	-53663	-47061	-43180	-43502	-42579	-44258	-43317	-42189	-42455	-42068	-41588	-41526	-41639	-40297	-41116	-42247	-42174	-42271	-41435	-41398	-41640	-41947	-40200	-39963
UVaR/ADPVaR*****	1	1.1344	1.2249	1.2791	1.325	1.3442	1.3342	1.3767	1.425	1.4156	1.4236	1.4448	1.4829	1.4923	1.54	1.5188	1.497	1.5015	1.499	1.5267	1.534	1.5204	1.5132	1.5174	1.5302
UVaR/DPVaR/SP******	1	1.1382	1.2249	1.2763	1.319	1.3364	1.3217	1.3654	1.4238	1.4126	1.4193	1.4432	1.4828	1.4904	1.537	1.5183	1.5	1.5035	1.502	1.5291	1.5345	1.5492	1.5392	1.5975	1.601

Table C1.18- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Spain

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-41409	-41355	-39734	-32110	-30169	-24960	-30384	-34599	-34643	-28516	-23501	-37638	-32949	-38463	-32527	-24943	-38494	-36792	-40222	-30729	-33792	-35096	-47161	-20022	-23289
UVaR**	-41409	-41382	-40833	-38652	-36955	-34956	-34303	-34340	-34374	-33788	-32853	-33252	-33228	-33602	-33530	-32994	-33317	-33510	-33864	-33707	-33711	-33774	-34356	-33759	-33340
PVaR/Summed DVaR***	-41409	-37111	-36085	-31639	-28777	-25825	-24563	-23845	-22673	-21669	-20409	-20254	-19982	-19816	-19511	-18898	-18795	-18932	-18943	-18747	-18358	-18466	-18540	-18044	-17615
DPVaR/SP****	-41409	-37078	-36004	-31454	-28809	-25870	-24554	-23816	-22704	-21591	-20383	-20231	-19985	-19819	-19504	-18842	-18753	-18882	-18855	-18680	-18303	-18394	-18473	-17703	-17226
UVaR/ADPVaR*****	1	1.1242	1.1502	1.252	1.323	1.3851	1.4243	1.4572	1.5306	1.5742	1.6237	1.6554	1.6767	1.7091	1.729	1.7556	1.783	1.7819	1.804	1.8139	1.8523	1.8433	1.8638	1.8817	1.9028
UVaR/DPVaR/SP******	1	1.1261	1.1538	1.2587	1.322	1.3837	1.4262	1.4632	1.5323	1.5818	1.6283	1.6595	1.6788	1.7112	1.731	1.7621	1.788	1.7884	1.813	1.8211	1.8587	1.851	1.8708	1.918	1.9459

Table C1.19- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Sweden

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-47541	-74215	-34341	-36680	-37041	-45025	-31917	-47313	-42655	-36385	-67527	-40556	-36653	-38477	-44796	-38223	-43923	-40006	-44876	-26427	-48907	-32198	-63952	-35265	-47916
UVaR**	-47541	-60878	-52032	-48194	-45964	-45807	-43823	-44259	-44081	-43311	-45513	-45100	-44450	-44023	-44075	-43709	-43722	-43515	-43587	-42729	-43023	-42531	-43462	-43121	-43313
PVaR/Summed DVaR***	-47541	-53353	-43169	-38159	-35009	-33861	-31931	-31172	-30852	-30357	-32046	-31583	-30814	-30649	-30703	-30127	-29483	-29168	-28433	-27728	-27899	-27548	-27930	-27257	-26689
DPVaR/SP****	-47541	-51338	-40352	-35730	-32856	-32050	-30190	-29598	-29506	-29188	-30939	-30550	-29883	-29752	-29901	-29369	-28778	-28500	-27861	-27104	-27311	-26952	-27343	-26203	-25618
UVaR/ADPVaR*****	1	1.149	1.2204	1.2843	1.341	1.3854	1.4052	1.4557	1.4619	1.4586	1.4549	1.4622	1.4767	1.4694	1.465	1.4785	1.509	1.5172	1.56	1.5678	1.5673	1.5696	1.5835	1.6089	1.6493
UVaR/DPVaR/SP******	1	1.1891	1.3015	1.365	1.422	1.4567	1.4795	1.5288	1.525	1.5145	1.5012	1.5064	1.5192	1.5093	1.502	1.514	1.543	1.5499	1.589	1.6005	1.599	1.6024	1.614	1.6711	1.7168

Table C1.20- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Switzerland

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-27096	-26743	-36753	-27018	-45238	-38393	-50380	-40268	-50257	-49248	-48200	-66493	-35675	-62920	-37701	-38218	-32698	-47418	-20395	-63050	-39431	-24876	-48576	-40272	-21713
UVaR**	-27096	-26920	-30197	-29403	-32570	-33540	-35946	-36486	-38016	-39140	-39963	-42174	-41674	-43192	-42826	-42538	-41959	-42262	-41111	-42208	-42076	-41294	-41611	-41555	-40761
PVaR/Summed DVaR***	-27096	-23822	-24484	-23387	-25595	-26323	-28130	-27533	-27785	-27129	-26634	-27631	-26698	-26855	-26562	-26686	-25374	-25622	-24781	-24928	-24384	-23652	-23851	-23699	-22979
DPVaR/SP****	-27096	-23813	-24672	-23527	-25857	-26380	-28117	-27451	-27792	-27140	-26686	-27644	-26648	-26656	-26397	-26453	-25220	-25432	-24601	-24859	-24295	-23622	-23827	-22834	-22730
UVaR/ADPVaR*****	1	1.1308	1.2402	1.2683	1.284	1.288	1.2906	1.3448	1.3922	1.4678	1.5339	1.5539	1.5882	1.6382	1.644	1.6299	1.691	1.6869	1.692	1.7309	1.7593	1.7745	1.7738	1.7806	1.8009
UVaR/DPVaR/SP******	1	1.1312	1.2326	1.2621	1.274	1.286	1.2944	1.3514	1.3952	1.4717	1.5351	1.5601	1.598	1.6581	1.661	1.6499	1.707	1.7064	1.711	1.7399	1.7704	1.7827	1.7822	1.8565	1.8309

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Continued)

Table C1.21- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Taiwan

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-49248	-38349	-45679	-42726	-34524	-40296	-41909	-45153	-49943	-52549	-40407	-43088	-49614	-45966	-47811	-51158	-44877	-39952	-52196	-48862	-45541	-50287	-42644	-46463	-55107
UVaR**	-49248	-43799	-44426	-44001	-42105	-41804	-41819	-42236	-43092	-44038	-43708	-43656	-44114	-44247	-44484	-44901	-44900	-44625	-45024	-45216	-45231	-45461	-45338	-45385	-45774
PVaR/Summed DVaR***	-49248	-37210	-35380	-34204	-31304	-31068	-31024	-31030	-31617	-32297	-31504	-31251	-31363	-31438	-31718	-31701	-31568	-31288	-31728	-31934	-31980	-32191	-31960	-31968	-32110
DPVaR/SP****	-49248	-37491	-35684	-34433	-31413	-31226	-31153	-31196	-31706	-32291	-31514	-31303	-31395	-31489	-31743	-31748	-31623	-31354	-31727	-31888	-31951	-32144	-31933	-30602	-30662
UVaR/ADPVaR*****	1	1.179	1.2583	1.2878	1.3459	1.3455	1.3486	1.3623	1.3645	1.3645	1.388	1.398	1.4074	1.4082	1.4033	1.4172	1.423	1.4269	1.4201	1.4174	1.4159	1.4139	1.4207	1.4216	1.4279
UVaR/DPVaR/SP******	1	1.171	1.2486	1.2803	1.3422	1.3393	1.3434	1.3556	1.361	1.3653	1.389	1.396	1.4067	1.4066	1.403	1.4157	1.4212	1.4245	1.4205	1.4198	1.4176	1.4163	1.4223	1.486	1.495

Table C1.22- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Thailand

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-49480	-46568	-59086	-50822	-60502	-45415	-57592	-44717	-53436	-41790	-66091	-56682	-40473	-60752	-51339	-72390	-59311	-56584	-78311	-79846	-49334	-51488	-54476	-29164	-37462
UVaR**	-49480	-48024	-51712	-51489	-53292	-51979	-52781	-51773	-51958	-50941	-52318	-52682	-51743	-52386	-52316	-53571	-53909	-54057	-55334	-56559	-56215	-56000	-55934	-54819	-54125
PVaR/Summed DVaR***	-49480	-40221	-40815	-40624	-40786	-38777	-39760	-36553	-36948	-35471	-36920	-37705	-36036	-36980	-36336	-37381	-36293	-36751	-36784	-37495	-36395	-35778	-34673	-33764	-32674
DPVaR/SP****	-49480	-39922	-40004	-39842	-40292	-38272	-39223	-35482	-35774	-34164	-35796	-36505	-35150	-36030	-35429	-36583	-35408	-35861	-36084	-36925	-35667	-34878	-33891	-32479	-31638
UVaR/ADPVaR*****	1	1.2	1.2866	1.2857	1.3236	1.3607	1.3401	1.442	1.4278	1.4603	1.437	1.417	1.4515	1.4336	1.4538	1.4417	1.4954	1.4813	1.5143	1.5163	1.5496	1.5696	1.6132	1.6225	1.6534
UVaR/DPVaR/SP******	1	1.21	1.3087	1.3061	1.3365	1.3737	1.3571	1.4755	1.4645	1.5005	1.47	1.452	1.4837	1.4673	1.4882	1.4717	1.5306	1.5158	1.5431	1.5405	1.5813	1.6121	1.6551	1.6908	1.7147

Table C1.23- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Turkey

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-74623	-77023	-71479	-74080	-84232	-85127	-82385	-91782	-80965	-75159	-66521	-80767	-79761	-74966	-78874	-72404	-69575	-71071	-81918	-72634	-68160	-84541	-66904	-71996	-53502
UVaR**	-74623	-75823	-74375	-74301	-76287	-77761	-78421	-80091	-80188	-79685	-78489	-78679	-78762	-78491	-78516	-78134	-77631	-77266	-77511	-77267	-76834	-77184	-76737	-76539	-75618
PVaR/Summed DVaR***	-74623	-72077	-67900	-66119	-67426	-66754	-66869	-68263	-67867	-67476	-66151	-65874	-64324	-63737	-63737	-63373	-63150	-62674	-62912	-62616	-62257	-62166	-61426	-61315	-60009
DPVaR/SP****	-74623	-71733	-67665	-65923	-67394	-66347	-66451	-67778	-67602	-67198	-65998	-65892	-64254	-63627	-63697	-63273	-63073	-62568	-62793	-62497	-62145	-62067	-61191	-58641	-58664
UVaR/ADPVaR*****	1	1.052	1.0999	1.1296	1.1369	1.1731	1.1807	1.1819	1.1903	1.1901	1.196	1.204	1.2355	1.2413	1.2417	1.2433	1.2397	1.2435	1.2422	1.2448	1.2455	1.2546	1.2641	1.2635	1.277
UVaR/DPVaR/SP******	1	1.059	1.1044	1.1342	1.1394	1.1833	1.1908	1.1933	1.1977	1.1977	1.201	1.205	1.2399	1.2463	1.245	1.248	1.2437	1.2483	1.2473	1.25	1.2504	1.2584	1.27	1.3215	1.3057

Table C1.24- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for United Kingdom

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-33629	-51133	-34294	-34418	-42434	-35206	-49977	-40653	-39658	-34635	-38609	-45020	-37113	-44955	-46233	-37115	-40715	-42367	-32327	-42740	-33597	-40548	-51936	-43176	-30802
UVaR**	-33629	-42381	-39685	-38368	-39181	-38519	-40156	-40218	-40156	-39604	-39513	-39972	-39752	-40124	-40531	-40318	-40341	-40453	-40026	-40161	-39849	-39881	-40405	-40520	-40132
PVaR/Summed DVaR***	-33629	-34867	-29460	-27729	-27219	-25291	-25774	-25040	-23652	-22993	-22888	-23460	-23025	-23276	-23932	-23373	-22963	-23205	-22781	-22587	-22167	-22087	-22236	-22500	-22072
DPVaR/SP****	-33629	-33960	-28693	-27327	-26957	-25100	-25396	-24691	-23365	-22757	-22687	-23192	-22803	-23089	-23667	-23134	-22720	-22958	-22563	-22375	-21981	-21895	-22044	-21125	-21408
UVaR/ADPVaR*****	1	1.219	1.3561	1.3966	1.4604	1.5487	1.5859	1.6388	1.7314	1.7538	1.759	1.742	1.7675	1.7614	1.7346	1.7628	1.7971	1.7823	1.796	1.8196	1.8409	1.8503	1.8659	1.8505	1.8669
UVaR/DPVaR/SP******	1	1.251	1.3981	1.4228	1.4813	1.567	1.6194	1.6694	1.7583	1.7786	1.78	1.767	1.7887	1.7791	1.7568	1.7833	1.819	1.8041	1.8164	1.8397	1.8594	1.8697	1.8865	1.9719	1.9317

* Raw PVaR represents raw position VaR

** UVaR represents undiversified VaR

*** PVaR/Summed DVaR represents position VaR/summed delta VaR

**** DPVaR/SP represents diversified portfolio VaR/sum individual positions

***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C1 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios

Table C1.25- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for United States																								
Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-37053	-44851	-28616	-36042	-42150	-63993	-38207	-41185	-35993	-58769	-32565	-28826	-37852	-62060	-47109	-31660	-40937	-38604	-38532	-70555	-46397	-38239	-33197	-33471	-35330
UVaR**	-37053	-40952	-36840	-36640	-37742	-42117	-41559	-41512	-40899	-42686	-41766	-40687	-40469	-42011	-42351	-41683	-41639	-41471	-41316	-42778	-42950	-42736	-42321	-41953	-41688
PVaR/Summed DVaR***	-37053	-35134	-27564	-25641	-26226	-28909	-28070	-27528	-26962	-28178	-26770	-25607	-24856	-26279	-26358	-25316	-24884	-23949	-23926	-24740	-24790	-24401	-23983	-23482	-23176
DPVaR/SP****	-37053	-35099	-27641	-25724	-26544	-28738	-27908	-27415	-26873	-28016	-26792	-25596	-24926	-26120	-26272	-25304	-24916	-24011	-23987	-24824	-24898	-24513	-24084	-23080	-22613
UVaR/ADPVaR*****	1	1.1646	1.346	1.4444	1.4575	1.4712	1.4938	1.523	1.536	1.5316	1.5819	1.6117	1.656	1.6177	1.6237	1.6646	1.6908	1.7488	1.7428	1.7429	1.749	1.7683	1.7813	1.8026	1.8153
UVaR/DPVaR/SP******	1	1.1668	1.342	1.438	1.4402	1.4808	1.502	1.5295	1.54	1.541	1.5799	1.613	1.65	1.6304	1.6315	1.6683	1.6927	1.7495	1.7431	1.7405	1.743	1.7634	1.778	1.8399	1.8652

* Raw PVaR represents raw position VaR

** UVaR represents undiversified VaR

*** PVaR/Summed DVaR represents position VaR/summed delta VaR

**** DPVaR/SP represents diversified portfolio VaR/sum individual positions

***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C2 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Foreign Portfolios

Table C2.01- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-26742	-52942	-28911	-34142	-45259	-26730	-42238	-46575	-34440	-40518	-37436	-38875	-39258	-31955	-38609	-43237	-60815	-41409	-47541	-27096	-49248	-49480	-74623	-33629	-37053
UVaR**	-26742	-39842	-36198	-35684	-37599	-35788	-36709	-37942	-37553	-37850	-37812	-37901	-38005	-37573	-37642	-37992	-39334	-39449	-39875	-39236	-39713	-40157	-41656	-41321	-41150
PVaR/Summed DVaR***	-26742	-29143	-23697	-21151	-22018	-19976	-18735	-17751	-17183	-17016	-17127	-16622	-16707	-16075	-15979	-16000	-16517	-17004	-17293	-16975	-16928	-16970	-17242	-17032	-16810
DPVaR/SP****	-26742	-30524	-24346	-21630	-22016	-19981	-18691	-17724	-17169	-16958	-17009	-16515	-16639	-16036	-15972	-16006	-16623	-17020	-17223	-16897	-16802	-16767	-16980	-16273	-16080
UVaR/ADPVaR*****	1	1.3641	1.5415	1.7007	1.712	1.797	1.963	2.1316	2.1804	2.2208	2.2031	2.2768	2.268	2.3309	2.3489	2.37	2.374	2.3134	2.299	2.3057	2.341	2.3599	2.4108	2.4225	2.445
UVaR/DPVaR/SP******	1	1.326	1.5241	1.682	1.7248	1.81	1.976	2.1455	2.1903	2.2343	2.2234	2.2983	2.283	2.3416	2.3554	2.377	2.365	2.3156	2.313	2.321	2.3616	2.3926	2.4524	2.5395	2.562

Table C2.02- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Second Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-33144	-69402	-36224	-41690	-40991	-37505	-35319	-54664	-37555	-40554	-36777	-43732	-42728	-41829	-40358	-46552	-61539	-41355	-74215	-26743	-40735	-46568	-77023	-51133	-44851
UVaR**	-33144	-51273	-46257	-45115	-44290	-43159	-42039	-43617	-42944	-42705	-42166	-42297	-42330	-42294	-42165	-42439	-43563	-43440	-45060	-44144	-43982	-44099	-45531	-45764	-45727
PVaR/Summed DVaR***	-33144	-44634	-34522	-30254	-27948	-25599	-23082	-22325	-21238	-20252	-19812	-19067	-18898	-18575	-18340	-17583	-17935	-18050	-19698	-19090	-18571	-18387	-18885	-19064	-18819
DPVaR/SP****	-33144	-38919	-30832	-26727	-24919	-23081	-20595	-20069	-19408	-18504	-18373	-17827	-17704	-17424	-17296	-16650	-17058	-17289	-18396	-17853	-17443	-17295	-17615	-16881	-17120
UVaR/ADPVaR*****	1	1.1825	1.3863	1.5493	1.6386	1.742	1.894	2.0192	2.0787	2.1596	2.1771	2.2698	2.289	2.3248	2.3445	2.453	2.457	2.4349	2.308	2.3348	2.3935	2.4205	2.4401	2.4285	2.458
UVaR/DPVaR/SP******	1	1.3282	1.5138	1.7053	1.7914	1.885	2.065	2.2058	2.243	2.333	2.324	2.4033	2.416	2.4537	2.4626	2.571	2.566	2.5276	2.466	2.4929	2.5468	2.574	2.6086	2.7382	2.696

Table C2.03- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Third Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-47769	-46267	-34045	-40873	-19349	-27301	-69284	-59521	-34624	-1E+05	-42965	-48123	-31559	-34897	-38389	-43388	-50724	-39734	-34341	-36753	-45679	-59086	-71479	-34294	-28616
UVaR**	-47769	-47018	-42694	-42239	-37661	-35934	-40698	-43051	-42115	-49560	-48960	-48890	-47557	-46653	-46102	-45932	-46214	-45854	-45248	-44823	-44864	-45511	-46640	-46125	-45425
PVaR/Summed DVaR***	-47769	-36826	-28646	-25093	-21028	-18541	-21092	-20276	-19151	-18276	-18113	-17548	-16433	-15993	-15794	-15606	-15610	-15758	-15685	-15840	-15654	-15926	-16278	-15961	-15481
DPVaR/SP****	-47769	-35177	-27688	-24161	-19927	-17618	-18872	-18736	-17893	-22667	-22077	-21148	-20029	-19335	-18956	-18467	-18287	-18198	-17957	-17933	-17561	-17658	-17673	-16937	-16632
UVaR/ADPVaR*****	1	1.3051	1.5071	1.7006	1.8155	1.955	1.933	2.1191	2.1934	2.6568	2.6613	2.7544	2.866	2.8893	2.8923	2.918	2.939	2.8976	2.876	2.8275	2.865	2.8594	2.8591	2.8901	2.937
UVaR/DPVaR/SP******	1	1.3421	1.5404	1.7469	1.8902	2.034	2.151	2.286	2.3451	2.3397	2.3381	2.423	2.479	2.5173	2.5193	2.571	2.597	2.5805	2.579	2.5542	2.6043	2.6132	2.6714	2.7593	2.771

Table C2.04- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Fourth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-24900	-57420	-31992	-37396	-35590	-36264	-42247	-80683	-33934	-33707	-47873	-47119	-46393	-56287	-39334	-44142	-46923	-32110	-36680	-27018	-42726	-50822	-74080	-34418	-36042
UVaR**	-24900	-41160	-38104	-37927	-37459	-37260	-37973	-43311	-42269	-41413	-42000	-42427	-42732	-43700	-43409	-43455	-43659	-43017	-42684	-41901	-41940	-42344	-43724	-43336	-43044
PVaR/Summed DVaR***	-24900	-32999	-26573	-23900	-21871	-20097	-18847	-19887	-18878	-17817	-17892	-17528	-17477	-17105	-16875	-16829	-16625	-16193	-16183	-15864	-15487	-15692	-16086	-15921	-15575
DPVaR/SP****	-24900	-31939	-25965	-23153	-21081	-19585	-18320	-20433	-19413	-18215	-18186	-17853	-17728	-17565	-17306	-17275	-17052	-16619	-16583	-16262	-15847	-15991	-16313	-15633	-15458
UVaR/ADPVaR*****	1	1.2569	1.4423	1.6008	1.7284	1.871	2.033	2.1891	2.2514	2.337	2.3571	2.4328	2.455	2.568	2.5859	2.593	2.634	2.6669	2.652	2.6584	2.7277	2.7131	2.7252	2.7328	2.775
UVaR/DPVaR/SP******	1	1.2923	1.4689	1.6443	1.7873	1.915	2.083	2.1456	2.2039	2.2972	2.3275	2.395	2.427	2.509	2.5297	2.535	2.575	2.6056	2.594	2.5983	2.6696	2.6698	2.6989	2.7915	2.809

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C2 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Foreign Portfolios (Continued)

Table C2.05- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Fifth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-25627	-53120	-32419	-43046	-43115	-41434	-39764	-1E+05	-21171	-33554	-37244	-44337	-43349	-30136	-37641	-42893	-66506	-30169	-37041	-45238	-34524	-60502	-84232	-42434	-42150
UVaR**	-25627	-39373	-37055	-38553	-39465	-39793	-39789	-48090	-45099	-43945	-43335	-43419	-43414	-42465	-42143	-42190	-43621	-42873	-42566	-42700	-42311	-43138	-44924	-44821	-44714
PVaR/Summed DVaR***	-25627	-31832	-26129	-24129	-24293	-22675	-21015	-25602	-23285	-21660	-21166	-20345	-19815	-18796	-18165	-18041	-18103	-17650	-17494	-17857	-17181	-17193	-17721	-17794	-17708
DPVaR/SP****	-25627	-30770	-24924	-23447	-23535	-22293	-20514	-22919	-20864	-19408	-19058	-18513	-18264	-17377	-16915	-16909	-17273	-16960	-16883	-17309	-16703	-16840	-17318	-16597	-16748
UVaR/ADPVaR*****	1	1.242	1.4278	1.6155	1.6503	1.7784	1.9132	1.8933	1.9491	2.0367	2.0542	2.1375	2.1906	2.2577	2.3174	2.3405	2.4103	2.4287	2.4324	2.395	2.4687	2.5153	2.5397	2.5284	2.5366
UVaR/DPVaR/SP******	1	1.2819	1.4899	1.6549	1.6972	1.8069	1.9593	2.0955	2.1588	2.2608	2.274	2.3453	2.3778	2.4449	2.4924	2.4993	2.5304	2.5348	2.5302	2.4848	2.5508	2.5819	2.6137	2.7208	2.6957

Table C2.06- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Sixth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-31858	-49078	-31162	-46324	-33362	-20009	-44534	-2E+05	-88431	-43022	-38284	-36327	-38842	-29653	-37960	-46122	-54248	-24960	-45025	-38393	-40296	-45415	-85127	-35206	-63993
UVaR**	-31858	-40468	-37366	-39606	-38357	-35299	-36618	-52671	-56645	-55282	-53737	-52286	-51252	-49709	-48926	-48751	-49074	-47734	-47592	-47132	-46806	-46743	-48412	-47862	-48507
PVaR/Summed DVaR***	-31858	-29937	-22869	-22903	-21582	-18548	-17728	-31238	-32919	-30944	-29648	-27959	-26812	-25419	-24573	-23964	-23539	-22610	-22271	-22122	-21392	-20972	-20737	-20230	-20043
DPVaR/SP****	-31858	-29042	-22149	-22099	-20904	-18083	-17002	-26084	-26382	-24809	-23777	-22243	-21278	-20066	-19247	-18733	-18527	-17746	-17693	-17659	-17083	-16768	-16890	-16187	-15817
UVaR/ADPVaR*****	1	1.3721	1.6531	1.7333	1.7807	1.908	2.0673	1.7599	1.8468	1.9169	1.9362	2.0139	2.0595	2.12	2.1554	2.1977	2.2512	2.2886	2.3092	2.2875	2.3538	2.4025	2.4961	2.5334	2.5763
UVaR/DPVaR/SP******	1	1.4001	1.6862	1.7985	1.8426	1.9603	2.1571	2.0228	2.1537	2.2355	2.2692	2.3623	2.42	2.4889	2.5554	2.6118	2.6584	2.7009	2.7059	2.6911	2.7633	2.8113	2.8849	2.9762	3.0918

Table C2.07- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Seventh Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-29894	-34359	-32672	-41974	-34884	-20167	-38561	-87857	-44278	-45120	-36601	-44948	-35886	-28650	-36893	-41225	-69006	-30384	-31917	-50380	-41909	-57592	-82385	-49977	-38207
UVaR**	-29894	-32126	-32308	-34725	-34756	-32325	-33216	-40046	-40516	-40976	-40579	-40943	-40554	-39704	-39516	-39623	-41351	-40742	-40278	-40783	-40836	-41598	-43371	-43647	-43429
PVaR/Summed DVaR***	-29894	-23390	-19643	-19438	-18442	-15833	-14802	-17996	-17306	-16501	-16408	-16254	-15731	-15093	-14769	-14847	-15427	-15086	-14950	-15678	-15419	-15550	-16176	-16268	-15939
DPVaR/SP****	-29894	-23910	-19942	-19866	-18533	-15951	-15001	-18132	-17308	-16586	-16341	-16144	-15645	-14991	-14686	-14756	-15449	-15067	-14910	-15516	-15293	-15453	-15721	-15066	-15200
UVaR/ADPVaR*****	1	1.3757	1.6472	1.7852	1.8846	2.0452	2.2455	2.25	2.3568	2.5025	2.4813	2.5275	2.5858	2.6357	2.678	2.6717	2.6741	2.6947	2.6878	2.5995	2.6484	2.6743	2.675	2.6782	2.7196
UVaR/DPVaR/SP******	1	1.3555	1.6331	1.7503	1.8819	2.042	2.227	2.2288	2.3554	2.482	2.4935	2.5475	2.6089	2.663	2.7037	2.6989	2.6813	2.7121	2.7109	2.6465	2.6916	2.7139	2.7798	2.9222	2.8793

Table C2.08- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Eighth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-23963	-51410	-27743	-25102	-41840	-25825	-47003	-58674	-31093	-40573	-37906	-36965	-38678	-33414	-50937	-45243	-64195	-34599	-47313	-40268	-45153	-44717	-91782	-40653	-41185
UVaR**	-23963	-37686	-34372	-32055	-34012	-32647	-34698	-37695	-36961	-37323	-37376	-37341	-37444	-37156	-38075	-38523	-40033	-39731	-40130	-40137	-40376	-40573	-42800	-42710	-42649
PVaR/Summed DVaR***	-23963	-28261	-22417	-17954	-17737	-15683	-15564	-15534	-14663	-14317	-14504	-14182	-14070	-13712	-13991	-14232	-14587	-14235	-14327	-14456	-14186	-13774	-15015	-15067	-14874
DPVaR/SP****	-23963	-28706	-22900	-18456	-18250	-16096	-15539	-15527	-14706	-14326	-14338	-14015	-13899	-13577	-13923	-14186	-14598	-14260	-14263	-14366	-14074	-13626	-14320	-13723	-13847
UVaR/ADPVaR*****	1	1.3437	1.556	1.8146	1.9384	2.106	2.2533	2.4454	2.5301	2.6169	2.5819	2.6379	2.6706	2.7165	2.7299	2.7207	2.7548	2.8003	2.8156	2.7932	2.8645	2.962	2.8611	2.8475	2.8842
UVaR/DPVaR/SP******	1	1.3235	1.5221	1.7655	1.8815	2.0486	2.2504	2.441	2.5207	2.6105	2.6123	2.6695	2.7021	2.743	2.7491	2.7346	2.7595	2.8011	2.8326	2.8132	2.8884	2.9952	3.0081	3.1331	3.0997

* Raw PVaR represents raw position VaR

** UVaR represents undiversified VaR

*** PVaR/Summed DVaR represents position VaR/summed delta VaR

**** DPVaR/SP represents diversified portfolio VaR/sum individual positions

***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C2 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Foreign Porfolios

Table C2.09- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Ninth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-29429	-64880	-16915	-52452	-39674	#####	#####	-138952	#####	-61636	#####	-51620	#####	#####	-46638	-47047	-70610	-34643	-42655	#####	-49943	-53436	-80965	-39658	-35993
UVaR**	-29429	-47155	-37075	-40919	-40670	#####	#####	-52460	#####	-51477	#####	-50950	#####	#####	-46743	-46762	-48165	-47414	-47163	#####	-47443	-47716	-49161	-48765	-48254
PVaR/Summed DVaR***	-29429	-37076	-25781	-26780	-24954	#####	#####	-30573	#####	-26835	#####	-24412	#####	#####	-21037	-20644	-20396	-19493	-19314	#####	-18996	-18727	-19105	-18455	-18078
DPVaR/SP****	-29429	-36644	-25741	-25443	-23837	#####	#####	-25308	#####	-22123	#####	-20665	#####	#####	-18034	-17903	-17831	-17093	-17060	#####	-16986	-16896	-17191	-16475	-15936
UVaR/ADPVaR*****	1	1.3112	1.489	1.554	1.647	1.798	1.948	1.8134	1.886	2.006	2.082	2.178	2.219	2.262	2.314	2.347	2.439	2.509	2.51	2.479	2.553	2.6	2.6059	2.676	2.704
UVaR/DPVaR/SP******	1	1.3047	1.472	1.623	1.718	1.86	2.02	2.0877	2.191	2.333	2.383	2.48	2.523	2.589	2.61	2.628	2.72	2.791	2.781	2.741	2.82	2.851	2.8841	2.987	3.056

Table C2.10- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Companies with Tenth Highest Market Capitalization

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-31375	-56494	-34668	-30385	-34779	#####	#####	-77243	#####	-44907	#####	-29642	#####	#####	-37457	-59541	-58980	-28516	-36385	#####	-52549	-41790	-75159	-34635	-58769
UVaR**	-31375	-43935	-40846	-38231	-37540	#####	#####	-46375	#####	-44719	#####	-42436	#####	#####	-41205	-42351	-43329	-42506	-42184	#####	-43014	-42958	-44358	-43953	-44546
PVaR/Summed DVaR***	-31375	-32270	-25412	-20561	-18982	#####	#####	-19412	#####	-17211	#####	-15204	#####	#####	-13776	-13497	-13936	-13556	-13548	#####	-13579	-13342	-13810	-13565	-13643
DPVaR/SP****	-31375	-32943	-25760	-20907	-19148	#####	#####	-19947	#####	-17612	#####	-15623	#####	#####	-14145	-13770	-14238	-13846	-13827	#####	-13748	-13556	-13814	-13238	-13052
UVaR/ADPVaR*****	1	1.36	1.613	1.875	1.993	2.141	2.223	2.3842	2.488	2.594	2.67	2.786	2.892	2.937	2.984	3.137	3.107	3.132	3.114	3.16	3.175	3.227	3.2264	3.254	3.281
UVaR/DPVaR/SP******	1	1.3366	1.598	1.854	1.984	2.132	2.317	2.3592	2.466	2.57	2.645	2.747	2.86	2.895	2.942	3.113	3.069	3.091	3.074	3.121	3.156	3.199	3.2429	3.353	3.45

* Raw PVaR represents raw position VaR
** UVaR represents undiversified VaR
*** PVaR/Summed DVaR represents position VaR/summed delta VaR
**** DPVaR/SP represents diversified portfolio VaR/sum individual positions
***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR
****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix C3 - Position, Diversified, and Undiversified VAR/COV VaR@95% Confidence Level Estimates for Frechet Random Walk Model and Geometric Brownian Motion Model

Table C3.01- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Frechet Random Walk Model

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-8697	-14809	-8842	-8528	-11166	-10596	-9714	-15610	-9919	-10210	-23337	-21606	-22438	-18456	-23070	-22643	-21862	-19705	-18415	-20504	-19724	-21347	-21967	-19762	-18916
UVaR**	-8697	-11753	-10783	-10219	-10408	-10440	-10336	-10995	-10876	-10809	-11948	-12753	-13498	-13852	-14467	-14978	-15382	-15623	-15770	-16006	-16183	-16418	-16659	-16789	-16874
PVaR/Summed DVaR***	-8697	-8521.1	-6142	-5165	-4384	-4126	-3777	-3874	-3648	-3401	-3749	-3830	-4051	-4103	-4177	-4287	-4233	-3735	-3642	-3641	-3596	-3580	-3621	-3533	-3452
DPVaR/SP****	-8697	-8523	-6156	-5175	-4391	-4134	-3783	-3884	-3657	-3409	-3758	-3849	-4071	-4130	-4209	-4313	-4257	-4102	-3990	-3925	-3887	-3871	-3894	-3732	-3643
UVaR/ADPVaR*****	1	1.3645	1.7847	1.9856	2.3831	2.536	2.742	2.7691	2.9095	3.1092	3.1135	3.3116	3.249	3.3287	3.4457	3.479	3.62	3.8148	3.956	4.0971	4.1571	4.2332	4.2594	4.3893	4.509
UVaR/DPVaR/SP******	1	1.379	1.7517	1.9748	2.3702	2.526	2.732	2.831	2.9735	3.1705	3.1791	3.3134	3.315	3.3536	3.4374	3.473	3.613	3.8081	3.952	4.0783	4.1632	4.2409	4.2781	4.4987	4.632

Table C3.02- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Geometric Brownian Motion Model

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Raw PVaR*	-11612	-11884	-11188	-10878	-11229	-11829	-10764	-10624	-11014	-10970	-11569	-11153	-11949	-11498	-12125	-11199	-10761	-11224	-11406	-11545	-11134	-12559	-11739	-11723	-11450
UVaR**	-11612	-11748	-11561	-11390	-11358	-11436	-11340	-11251	-11225	-11199	-11233	-11226	-11282	-11297	-11352	-11343	-11309	-11304	-11309	-11321	-11312	-11369	-11385	-11399	-11401
PVaR/Summed DVaR***	-11612	-8207.9	-6538	-5504	-5033	-4806	-4233	-3946	-3801	-3593	-3519	-3292	-3216	-3103	-2991	-2901	-2809	-2580	-2510	-2496	-2473	-2435	-2340	-2349	-2253
DPVaR/SP****	-11612	-8221.7	-6546	-5509	-5038	-4810	-4238	-3951	-3806	-3601	-3526	-3300	-3224	-3110	-2997	-2908	-2816	-2727	-2644	-2619	-2579	-2526	-2428	-2326	-2333
UVaR/ADPVaR*****	1	1.4232	1.761	2.0658	2.2508	2.371	2.669	2.8475	2.948	3.1099	3.1909	3.4035	3.501	3.6343	3.7858	3.898	4.018	4.1453	4.278	4.3184	4.3831	4.4893	4.6784	4.6889	4.903
UVaR/DPVaR/SP******	1	1.4288	1.766	2.0675	2.2544	2.378	2.676	2.8474	2.9493	3.1101	3.1856	3.4019	3.5	3.632	3.7881	3.9	4.016	4.145	4.277	4.322	4.387	4.5002	4.6897	4.8997	4.888

* Raw PVaR represents raw position VaR

** UVaR represents undiversified VaR

*** PVaR/Summed DVaR represents position VaR/summed delta VaR

**** DPVaR/SP represents diversified portfolio VaR/sum individual positions

***** UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

****** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios

Table D1.01- Incremental Historical VaR Estimated from Delta VaR for Australia

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-16086	44.95	-198.3	-175.9	-54.19	-277.8	124.01	17.97	186.11	122.77	-138.5	66.206	44.59	-12.36	-4.257	-173.4	112.93	52.654	-69.034	-127.94	-62.408	-53.476	57.469	-160.3	246.16	-134.69
IHVaR @98	-21457	35.75	276.9	-931.6	69.07	-115.2	-276.8	19.07	301.56	346.15	-37.07	169.78	239.7	112.72	265.3	-133.9	452.28	140.3	-272.53	34.7275	530.84	553.56	-79.06	-31.39	-53.25	-23.732
IHVaR @99	-24186	-33.87	8.096	225.02	142.7	57.013	-258	55.65	692.31	285.52	52.669	126.76	63.86	228.71	488.6	1585.4	339.87	690.85	331.94	13.9733	417.39	582.13	347.8	115.06	78.535	-110
IES @95**	-22470	79.06	-40.4	-415.5	90.79	-18.43	-131.3	216.5	281.91	77.714	-97.19	100.62	102	13.257	271.6	-206.5	315.82	187.48	-55.784	-142.34	33.8	234.63	199.23	165.38	-45.95	53.735
IES @98	-30291	-1.893	-16.63	-589.1	319.1	186.69	-7.192	389.2	386.32	68.559	45.632	-14.13	105	-76.76	527.5	-686.3	501.9	391.25	5.0871	-270.01	188.76	227.21	264.8	277.25	-125.7	15.6493
IES @99	-36989	109.3	2.846	-1079	455.3	253.85	66.16	563	297.04	58.785	148.86	-35.87	115.1	-250.8	660.8	-2105	733.91	424.04	64.324	-502.87	-27.864	-62.813	531.17	493.69	-216.7	63.5539

Table D1.02- Incremental Historical VaR Estimated from Delta VaR for Brazil

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-35138	-57.4	-1764	315.48	-253.9	20.5	518.27	636.4	-460.44	158.17	20.292	-690.5	702.1	117.43	-776.2	-2113	1187.5	326.74	-436.15	562.274	591.71	26.807	15.049	66.969	383.74	30.8775
IHVaR @98	-50153	110.8	-587.8	1734.7	383.6	670.04	291.7	1850	211.53	869.56	533.23	-84.09	1429	278.15	-848.4	-6127	505.74	162.62	155.62	1469.24	302.33	-796.52	1453.8	1177.4	432.96	781.001
IHVaR @99	-61483	191.7	236.1	2063.8	-639.6	496.65	633.01	1219	586.31	979.08	142.08	356.1	995.6	653.54	252.8	-6610	441.96	784.06	-48.435	1553.99	1596.3	179.08	1415.8	1568.5	273.14	1116.23
IES @95**	-50233	94.24	-418.2	1767.4	19.53	177.39	542.61	1048	138.58	164.74	158.2	126.57	927.2	504.15	-342.9	-5174	715.86	617.22	-279.6	1386.36	815.97	311.05	987.68	900.17	535.3	657.074
IES @98	-67128	107.7	-729.3	2363.6	-187.4	354.76	902.19	1157	375.4	416.76	252.68	99.918	896.4	701.29	213.9	-8186	506.79	974.77	-273.98	1800.45	1143.8	747.3	1522.3	1251.2	672.26	822.663
IES @99	-74027	-275.7	-147.7	3281.3	287.3	346.63	1161.6	1281	393.91	372.4	435.57	27.666	1168	743.73	328.9	-10188	1397.5	1249	-229.14	2401.19	985.7	1358.7	2378.6	1273	1164.7	866.688

Table D1.03- Incremental Historical VaR Estimated from Delta VaR for Chile

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-14042	-269	-878	-23.5	-390	-506.8	285.81	-83.09	82.287	265.74	399.75	-163.6	136.6	306.46	354.6	317.88	242.09	421.27	-210.72	489.403	348.63	287.8	246.39	104.22	-441.1	-137.3
IHVaR @98	-18936	-250.7	-155.1	-302.6	-93.83	-150.3	386.01	-229.9	35.887	386.16	309.77	-73.51	-234.4	-42.24	-188	465.97	377.35	104.38	-304.68	409.032	264.81	581.78	389.27	-17.3	-613.4	-6.6134
IHVaR @99	-22228	-59.48	-739.8	-892	-505.2	-84.7	202.56	84.66	98.325	414.35	612.44	449.01	288.1	436.86	-2.981	644.84	-129.2	504.85	-37.441	276.413	510.11	326.03	433.02	327.97	-1278	142.092
IES @95**	-20277	-160.8	-452.3	-341.8	-226.4	-138.1	298.1	-34.93	19.365	379.73	391.29	18.461	318.2	288.17	-634.4	532.7	194.48	268.02	26.813	392.168	137.61	487.58	378.57	-4.247	-264.6	19.3972
IES @98	-27746	62.51	-211.1	-319.8	-182.5	32.88	439.94	-187.4	253.41	674.23	611.4	412.69	658.7	453.28	-2395	762.27	-69.88	590.87	120.86	659.902	435.13	552.58	592.7	127.81	-279.6	189.023
IES @99	-34197	257.9	-77.82	-59.64	-104.1	122.86	769.12	-138.2	559.72	837.37	631.44	587.78	939.9	465.32	-4581	896.57	-39.42	771.72	189.01	919.976	345.69	514.55	915.19	49.221	343.49	394.718

Table D1.04- Incremental Historical VaR Estimated from Delta VaR for France

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-24897	390.9	604.5	526.55	261.5	50.108	-628.9	127.1	731.16	-639	1313.3	254.83	584.9	224.81	429.3	-1081	686.64	452.72	348.57	442.926	144.46	100	154.1	502.3	482.3	72.3776
IHVaR @98	-34140	240.4	219.1	374.87	153.6	42.818	-397.8	292.8	1483.1	-2323	958.75	-721	494.4	308.67	567.1	-1492	139.35	551.85	-31.02	-470.86	196.53	372.43	-865.6	919.75	-851.2	143.252
IHVaR @99	-36730	512.4	967.9	449.14	-397.3	-416.7	-788.6	-360.1	1412.9	-258.9	652.28	-293.8	807.9	-37.32	78.71	-1863	220.29	165.83	-204.75	-128.61	432.43	-114.25	1168	1304.1	-317.8	-75.841
IES @95**	-33278	408.3	654.3	361.12	16.72	-226	-484.9	-87.12	1231.6	-395.5	514	-94.75	220.3	131.71	117.4	-1626	80.352	309.28	-102.05	-159.03	436.69	-220.48	-95.87	830.71	35.067	-241.14
IES @98	-40998	757.3	1119	366.68	23.01	-344.5	-880.3	-201	1499.5	22.3	565.95	-91.6	677.7	18.931	-42.67	-2018	-15.7	467.85	-242.57	-130.36	531.25	-391.76	358.74	1039.8	5.0661	-163.8
IES @99	-45816	892.7	1573	373.65	269.5	-521.6	-1118	-152.8	1752	642.44	517.15	222.9	580.3	20.422	-220.7	-2381	-80.08	709.08	-89.181	-60.654	688.96	-587.73	221.4	991.45	189.3	-452.52

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Continued)

Table D1.05- Incremental Historical VaR Estimated from Delta VaR for Germany

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-17499	-368.8	-139	413.94	128.4	-259.2	-201.2	-23	-404.5	-279.3	339.3	-548.6	702.8	279.5	-106.1	-8.644	-445.3	365.02	599.74	595.44	-301.8	201.12	419.42	-61.23	-421.5	407.68
IHVaR @98	-23946	339.3	37.735	1052.6	-314	-313.5	224.74	-86.2	-83.54	-126.2	-376.2	135.88	311	-123.1	-124.1	-247.1	132.62	496.2	683.43	505.1	-278.7	374.73	829.77	-749.8	188.44	675.37
IHVaR @99	-27851	-149.9	-473.4	1057.6	250.1	-1036	-209	-69	-278.2	-286.1	36.54	-876.7	1034	456.1	198.57	-236.8	-539.6	-8.193	874.38	804.65	-452	0.8411	685.74	-7.691	-505.4	1399.2
IES @95**	-25229	-348.6	-448	909.17	83.34	-694.6	-140.7	-70.9	-339.1	-267.6	142.5	-395.5	785.8	187.9	112.07	-18.58	-356.2	-144.3	812.24	657.09	-406.5	239.49	778.55	-72.81	-303.6	949.3
IES @98	-34134	-423.5	-527.5	1213	18.47	-1209	-147	22.92	-433.2	-415.7	384.5	-843	1142	321.9	268.38	-62.27	-872.6	-382.1	1128.8	592.95	-604.6	141.19	1086.8	-154.2	-695	1405
IES @99	-41054	-673.8	-501.5	1495.6	97.2	-1243	-186.6	217.4	-589.4	-522.5	874.1	-1010	1356	313	375.65	203.27	-884.6	-659.2	1425	641.83	-839.8	140.89	1519.4	-283.3	-873.9	1846.7

Table D1.06- Incremental Historical VaR Estimated from Delta VaR for Hong Kong

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-20137	163	-203.3	55.999	-112	-590.6	670.49	446.8	484.83	-156.1	-197.7	-425.6	-247.8	-686.8	-190.9	-98.02	68.728	240.77	-321	500.37	-607.6	-283.2	1403.9	-106.3	233.97	554.53
IHVaR @98	-25673	318.7	-345.6	798.36	-193	-364.4	691.42	1045	844.18	-57.6	-683.8	-709.9	286.9	-405.2	301.87	-262.1	340.96	204.01	179.01	910.47	-965.2	-511.4	1388	930.61	677.34	691.66
IHVaR @99	-31191	-544.8	-528.2	-147.3	-502	-838.9	658.39	982	659.08	-852.4	-185.6	-877.1	-110.1	-221.9	-984.9	14.806	-918.4	37.571	-213.4	965.28	-195.6	-446.1	1082.5	142.82	166.66	808.38
IES @95**	-27148	51.52	-459	298.01	-369	-495.8	628.52	837.4	478.44	-335.2	-415.6	-658.3	-230.3	-15.06	-94.4	-47.33	-328.5	182.83	-113.8	635.89	-653.1	-444.4	1200.9	178.31	752.39	857.35
IES @98	-35578	-39.38	-624.1	325.51	-554	-647.1	856.04	1201	577.3	-561.7	-712	-842.4	-333.9	256.4	-83.31	125.1	-661.2	28.705	-231.8	823.74	-759.5	-479.2	1526.7	179.41	1099.3	1539.3
IES @99	-41458	160.5	-483.9	455.61	-587	-608.5	1070.3	1481	773.45	-462	-1275	-726.5	-862.5	576.7	169.48	91.181	-930.9	301.53	-572.2	913.98	-900.8	-491.7	1824.4	90.972	1833.5	1828.1

Table D1.07- Incremental Historical VaR Estimated from Delta VaR for India

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-22445	-525.3	278.94	-1354	-439	438.79	243.99	63.65	-97.08	-415.8	-517.6	-569.5	-230.8	-134.3	487.84	798.82	186.56	396.9	-83.82	-89.99	-168.2	23.571	354.67	73.876	167.42	-517.7
IHVaR @98	-31965	376.4	212.06	-956	-267	120.61	-793.8	1177	-253.1	401.85	43.92	-371.5	-776.9	151.9	349.95	848.7	-112.5	-135.6	389.88	114.76	145.39	-383.9	1187.2	743.17	1232.3	218.33
IHVaR @99	-39249	-447.5	672.39	-1408	-1365	240.81	115.13	1268	-629.5	36.934	-545	-423.8	-1068	594.4	680.57	-182.9	-53.4	-507.5	149.52	-210.5	-148.9	520.49	416.19	513.52	195.65	-557.9
IES @95**	-32796	-148.8	395.29	-1302	-200	153.61	-241.4	637.1	-58.73	237.75	-604.1	-487	-450.9	140.1	544.17	363.46	165.29	43.96	318.93	1.5135	-93.35	64.693	685.94	629.99	559.07	-110.4
IES @98	-43707	-55.82	244.6	-1634	-555	168.79	198.15	783.8	-179.7	296.68	-672.7	-563.5	-737.4	423.4	1006.6	420.58	137.19	47.395	236.26	1.1304	-29.16	162.92	732.64	857.42	894.6	-641.9
IES @99	-50291	111.1	300.38	-2337	-246	433.66	276.39	567.5	185.72	542.02	-907	-1105	-734.4	82.31	1567.4	802.35	475.16	679.85	481.69	-21.73	-185.5	-48.9	938.57	1119.2	1170.5	-1187

Table D1.08- Incremental Historical VaR Estimated from Delta VaR for Indonesia

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-41892	1175	297.78	420.83	-119	966.05	186.18	993.7	785.94	-189.3	-49.43	829.59	-819	907.3	784.46	-104.6	648.27	1258.5	162.74	165.03	984.25	1252.6	125.99	507.33	721.96	-33.77
IHVaR @98	-59818	233.6	884.46	953.93	162.5	-371.3	-4700	718.7	860.12	-1932	8.036	-315.7	-734.8	1637	848.45	565.69	1032.7	1187.7	56.473	314.11	680.82	1310.6	-474	-91.11	-276.7	-125.7
IHVaR @99	-73693	-833.8	102.52	81.641	-487	-984.1	-3810	-246	130.26	-1823	-1241	-2278	267	1497	1359.3	-790.8	900.38	-328.5	-512.1	-275.5	940.96	1741.8	-262.6	731.35	-158.8	-1894
IES @95**	-60097	776.4	607.97	385.97	-93	-158.3	-2132	-259	556.03	-712.7	-158.1	-123.4	-86.88	1354	1077	-74.66	629	683.66	53.318	-193.3	990.19	1776.3	-304.6	558.03	0.2775	-303.5
IES @98	-79133	619.8	520.86	243.03	-316	-5.682	-3185	-181	607.97	-311.2	-650.1	-193.3	161.5	2111	1268.4	-244.2	1197.4	485.07	-204	-321.4	1304.5	2473.1	-230.4	1003.1	-217.3	-24.97
IES @99	-90099	1059	445.41	21.932	-628	-131.8	-3940	-334	490.62	797.88	-994.3	527.37	-855.4	2513	863.45	-647	1201.9	699.93	-257	-809.7	1446.8	2911.6	-202.5	1785.5	-372.7	581.15

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Continued)

Table D1.09- Incremental Historical VaR Estimated from Delta VaR for Ireland

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-19956	394.5	218.2	526.6	412.8	367.2	-1633	-15.48	471.6	296.9	68.476	260.1	756	266.17	189.39	-99.52	80.773	237.4	297.7	481.67	-283.04	-1668	354.39	-95.17	356.13	283.72
IHVaR @98	-31570	773.5	483.7	465	680	982.9	-1821	1207.3	601	577.5	491.64	782.4	220.8	437.9	1262.6	531.7	314.85	-113.5	791.2	1021	-437.24	-1809	733.58	-241.5	650.44	13.524
IHVaR @99	-37060	1027	1371	979	673.1	1337	-1850	621.44	377.2	839.6	711.73	1107	1420	988.92	371.17	743.6	1356.7	695.7	1075	1022.1	-1118	-2897	1381.9	50.558	281.97	579.12
IES @95**	-33078	629.6	552	705	701.9	812.7	-4528	473	665.6	674.3	510.22	689.8	718.5	826.34	598.47	502.8	721.6	355	956.2	616.55	-163.56	-1840	861.14	-150.9	489.53	194.48
IES @98	-47509	894.3	746.6	1031	990.6	1226	-9003	569.01	820.4	747.1	868.54	1166	1047	1321.5	1019.8	607.8	1006.8	545.3	1141	934.63	96.966	80.35	1335.2	499.96	975.01	826.67
IES @99	-58917	1178	661	1558	1406	1341	-15956	472.14	1285	832.4	1131.6	1335	1781	1593.9	1634.6	509.1	877.63	808.7	1375	1288.8	932.67	2987.2	1778.3	1334.2	1429.2	807.29

Table D1.10- Incremental Historical VaR Estimated from Delta VaR for Israel

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-19088	293.8	153.2	317.4	-457.9	-401.7	-913	-286.4	-178.9	-36.02	-338.3	-516.6	-225.4	62.407	188.44	-863.6	-568.2	-1580	164.3	-564.7	-386.57	-105.6	410.61	505.17	331.31	96.574
IHVaR @98	-28559	-492	-425	793.9	149	405.6	-630.9	66.043	91.61	-172.9	-919.3	-651	-1423	-65.11	661.89	377.6	-348.3	-163.6	531	500.68	219.44	654.61	443.06	69.355	924.08	-327.8
IHVaR @99	-33415	-130	-266	944.9	-330.2	-685	-549.7	728.68	552	-769.2	291.31	-211.8	-333.5	-235.2	1161.2	631	-1368	427.7	1317	1417.4	945	-241.6	706.45	568.49	616.35	218.09
IES @95**	-29248	-383	-189	560.4	-19.83	129.9	-902.3	330.6	203.5	-522.7	-401.1	-209.2	-717	-131.9	818.54	376.5	-848.7	0.499	663.2	605.23	478.05	280.24	811.42	292.17	816.86	55.519
IES @98	-41075	-415	-392	1090	29.47	-136.7	-1074	805.85	469.1	-1140	-474.1	-146.8	-1820	-180	1348.1	544.7	-1544	412.1	1176	967.52	771.71	283.94	1043.7	616.31	896.81	-244.2
IES @99	-49780	-325	-612	1295	-149.6	6.321	-1440	693.57	654.2	-992.9	-879.5	-293.2	-2365	-630.1	1582.1	238.2	-1764	332.2	1602	908.38	928.88	682.76	1358.6	1257.4	1408.9	-292

Table D1.11- Incremental Historical VaR Estimated from Delta VaR for Italy

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-22259	-227	-187	113.2	-329.3	-131.1	-570.2	100.67	89.33	91.16	859.97	15.67	394.2	127.41	441.84	-509.7	590.5	88.77	-175	33.094	-490.98	313.88	145.4	288.78	422.52	129.13
IHVaR @98	-30539	213.8	-25.9	-219.8	-515	-155.5	55.168	60.847	165.3	-454.3	992.33	97.98	410.6	-161.9	814.96	-853.8	725.49	-239.6	-278	11.38	-982.79	116.13	-282.8	397.99	957.83	-201.3
IHVaR @99	-37543	-85.6	-229	-1068	113.4	-584.9	-308.7	-648.3	118.6	-913.9	653.05	-195.6	463	414.79	994.33	-1396	712.5	94.24	510.7	-371.4	-462.14	465.42	-44.7	33.376	285.1	82.669
IES @95**	-31115	-82.9	71.73	-205.3	-426.3	-69.11	-98.96	-17.9	3.838	-408.2	638.29	-286.3	385.4	213.61	731.9	-439.1	443.58	161.9	-120	-58.8	-554.99	202.24	-68.02	532.17	456.86	226.4
IES @98	-41778	-9.29	-249	-333.7	-448.4	-95.89	-257.5	-317.5	-82.31	-855.6	585.9	-458.7	78.02	449.85	1001.3	-115.2	604.46	270.1	-24.1	-81.16	-430.62	95.602	4.2789	395.36	487.85	287.14
IES @99	-47271	150.3	11.65	169.5	-488.9	183.1	-319.2	-77.04	-48.28	-1104	496.27	-681.9	-3.761	292.45	980.47	993.5	646.18	238.2	-362	196.76	-211.58	27.651	-151.5	722.78	611.44	225.56

Table D1.12- Incremental Historical VaR Estimated from Delta VaR for Japan

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-24849	-241	-28.9	419.7	99.14	203.2	695.81	319.63	382	-391.7	1000.3	96.1	297.9	422.06	274.66	62.25	589.3	475.9	640.8	-131.9	242.2	530.01	599.26	42.456	-106.5	-124.6
IHVaR @98	-34941	428.7	-800	-65.09	-279.4	-1272	142.92	-563.8	-75.84	-1535	998.29	-486	36.99	-268.9	97.523	111.3	1126	-465.7	1109	-500.7	-28.004	-391.3	-509.1	-670.6	-980.7	-185.5
IHVaR @99	-39208	-35.4	-221	632.7	-177.3	484	924.07	-688.5	149.1	-1125	1180.6	171.5	-485.8	208.02	-114.2	-707.1	792.96	-862.4	986	-324.4	328.52	-168.3	454.43	919.2	737.91	-943
IES @95**	-33879	28.63	-73.3	267.1	-133.2	-81.99	652.41	-358.1	94.71	-573.9	899.81	-170.5	-146	336.54	22.59	-172.2	754.17	-227	967.5	-200.3	-135.53	138.7	185.55	37.494	102.23	-426.9
IES @98	-43929	1.05	127.2	259.6	-334.4	-180.5	777.29	-534.5	-70.26	-638.8	1023.1	88.62	-151.9	161.47	-117.3	-314.9	881.46	-627.6	1309	-149.9	-9.492	45.68	243.62	270.42	164.86	-803.2
IES @99	-49796	-138	418.8	244.6	-626.6	-386.7	1071	-451.1	-137.4	-590.6	880.13	-108.4	-115.7	282.14	-199.2	-365	766.44	-610.9	1423	-261.7	21.622	97.989	156.04	-28.33	594.47	-998.4

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Continued)

Table D1.13- Incremental Historical VaR Estimated from Delta VaR for Mexico

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-17972	151	-341.98	365.81	-404.29	-362.9	-120.8	35.74	-96.4	332.37	193.83	210.4	188	355.2	156.07	-694.37	303.75	89.6	-451.6	365.81	472.35	365.81	-57.78	429.33	-336.93	-638.13
IHVaR @98	-26223	-195	-100.12	667.68	-628.38	-167.3	555.81	61.57	28.62	689.92	573.3	395.4	-422	638.1	129.49	-1609.7	589.21	585.9	-706.5	707.59	647.07	707.59	-373.4	531.26	188.09	-1360.9
IHVaR @99	-33770	365	-444.97	958.53	-885.88	-346.7	58.891	343.5	-202	911.95	-1590	664.3	584.4	750.8	-772.8	-1473.3	-1270	515.2	-251.3	889.34	653.19	889.34	-2848	622.31	-175.18	1111.27
IES @95**	-27744	60.17	-152.61	791.83	-605.62	-420.8	205.33	119.7	-259	699.8	166.2	635.5	55.85	756.6	171.1	-1088.9	340.41	291.6	-303.6	753.69	597.28	753.69	-327.7	552.87	13.463	-957.2
IES @98	-39029	176.3	-81.98	1179.7	-740.27	-418.6	472.34	301.2	-239	1024.1	356.22	928.1	201.5	1129	404.69	-1658.9	10.503	540	-209.8	1101.7	658.29	1101.7	-379.5	865.03	152.28	-85.737
IES @99	-47301	97.16	-157.36	1341.8	-924.79	-630.2	407.8	171.6	-849	1203.6	1127.3	1035	-18.89	1467	1234.7	-2206.3	238.49	470.6	-136.8	1274.5	573.72	1274.5	1144	1080.1	-59.052	-363.45

Table D1.14- Incremental Historical VaR Estimated from Delta VaR for New Zealand

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-15512	-165	-114.8	-88.37	-417.07	157.77	-156.9	-163	-166	283.95	-169.3	107.8	-42.91	-79.8	230	-125.17	359.34	83.1	-254.3	-101.4	47.812	-217.1	-120	55.5	619.95	-98.087
IHVaR @98	-21898	510.9	-159.6	465.36	230.66	170.77	359.27	77.8	-249	479.23	237.8	367.7	278.4	-0.78	620.65	460.22	332.61	407.9	287.71	600.91	829.46	-248	400.01	309.48	-237.24	467.562
IHVaR @99	-26517	110.7	-278.45	-298.9	-247.16	91.419	847.6	118	-316	3.2967	147.82	198.2	115.4	433.8	429.8	13.458	392.6	-421.6	-166.2	262.91	323.12	-1284	811.58	145.14	536.47	-16.768
IES @95**	-23384	-9.03	-228.02	-68.54	-742.44	111.22	286.73	86.89	-167	188.68	90.732	133.6	110.3	199.2	413.97	176.94	75.024	61.97	47.905	58.327	225.17	-108.3	284.92	152.63	331.64	277.145
IES @98	-32977	-44	-542.64	-158.6	-1100.6	103.12	596.75	268.7	-388	52.806	158.95	115.2	217.8	206.9	553.32	83.399	70.86	-52.53	-124.9	-195.9	325.34	-123.9	549.42	34.484	346.07	492.662
IES @99	-40766	-175	-655.27	-176.2	-2457.3	159.21	818.35	436.8	-444	340.28	255.46	-85.57	229.1	-53.2	859.8	123.35	492.37	-26.91	-388.5	-550.5	469.69	719.07	647.82	-149.5	145.12	923.443

Table D1.15- Incremental Historical VaR Estimated from Delta VaR for Singapore

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-19225	-194	-311.4	4.3574	-80.656	221.62	273.12	-84.1	-803	-176	98.684	-565.7	781.2	-107	186.01	521.18	230.47	-69.27	30.971	-222	-440.6	-86.91	-489.2	236.57	-323.69	559.133
IHVaR @98	-26010	733.1	588.98	177.23	99.131	412.96	223.64	358.5	250.1	-406.5	-265.1	652.2	1145	-68.5	788.97	810.2	908.58	-209.2	280.44	209.4	-813.7	307.6	-213.6	925.13	-949.85	746.949
IHVaR @99	-36566	-65.3	-683.88	-112.4	-304.55	124.28	-124.4	-254	-1218	-542.8	-3.679	-476.8	1840	-528	235.87	1400	337.99	-262.5	608.52	-140.5	24.777	615.81	-413.2	371.8	-1276.5	-236.47
IES @95**	-28315	-121	-210.95	-126.3	-122.79	90.714	61.31	76.39	-452	-511.8	91.359	-214.8	1295	76.27	620.41	893.83	493.88	178.7	80.647	82.78	-192.7	221.72	-334.8	292.94	-499.41	369.902
IES @98	-40309	-92.5	-349.39	-222.4	-200.49	-253.2	-89.61	73.91	-909	-817.4	-91.73	-191.1	1891	-3.46	584.44	1374.9	566.37	5.15	189.69	191.75	74.476	433.87	-396.7	-10.67	-1175.5	473.612
IES @99	-47636	-235	-420.6	-434.4	38.929	-542.4	-80.39	236.9	-735	-1092	-285.3	85.05	2234	244.9	824.26	1450.3	585.47	16.23	38.08	390.93	618.56	396.31	-456.8	-326.4	-1180.5	981.178

Table D1.16- Incremental Historical VaR Estimated from Delta VaR for South Africa

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-23302	25.56	224.2	-46.6	-263.32	-368.3	-380.6	-250	-132	24.009	23.632	-228.6	-231.7	152.9	-119.1	43.073	2.2944	226.5	35.997	-60.36	192.91	-202.4	95.073	494.39	735.66	327.796
IHVaR @98	-34836	-672	-308.29	-753.3	-525.36	-621.6	-95.03	-924	-919	52.666	212.05	-377.6	-73.13	-183	-614.8	-598.66	-229.7	125	-195.8	-182.5	-1244	-281.4	818.46	-782.7	49.894	529.278
IHVaR @99	-40493	-129	1940.7	602.02	-314.85	-252.6	887.3	-299	-412	-862.3	2275.7	-1088	-482.4	344.6	-894.6	208.6	-906.6	-200.1	466.46	-60.39	-164.2	-1040	-150.7	1390.8	-254.83	-1137.2
IES @95**	-34999	229.1	583.39	221.68	-197.45	-264.4	299.95	-223	-379	61.411	707.57	-397.9	-128.5	-11.2	-497.3	-57.521	-8.726	174.5	-1.638	176.2	-112.9	-400.6	310.42	841.89	217.38	-44.106
IES @98	-47079	230.4	1238.9	810.44	-328.65	-310.4	447.92	-303	-564	-0.758	1476.1	-755.6	-219.4	195.6	-632.6	154.56	-303.7	-1.288	333.35	229.53	113.05	-754.3	343.12	1361.6	222.43	-395.49
IES @99	-56141	403.3	1146.5	1250.6	-228.5	-410.9	437.67	-189	-344	210.24	1349.1	-1123	-423.8	35	-749.5	11.97	-176.1	25.45	555.76	503.46	62.192	-1095	370.19	1735.6	624.84	-324.06

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Continued)

Table D1.17- Incremental Historical VaR Estimated from Delta VaR for South Korea

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-39731	-308.4	477.29	440.6	352.94	415.41	240.82	-67.95	-33.5	1247.6	88.3	271.17	31.6	900.63	-663.8	715.09	162.7	531	374.5	-176.7	950.06	398.59	482.99	-472.1	94.64	476.12
IHVaR @98	-54428	-180	274.39	-347.9	634.07	-312.3	423.9	-235.6	723	1251.5	614.1	892.97	94.51	864.98	-355.7	499.34	-738.4	-511.7	-531.2	442.96	216.82	-1321	-1088	-473	555.9	486.48
IHVaR @99	-63433	-153.1	-224.7	458.13	1777.3	-613.7	91.522	-434.3	-26.2	-497.1	-129.3	350.78	-100.7	-408.7	-254.8	1109.2	-917.2	-1520	-631.9	-16.17	1262.6	1112	-4397	-834	-270	1597.4
IES @95**	-55407	223.02	702.47	526.33	985.23	-139.3	288.8	-14.19	46.2	406.73	134.3	298.62	194.8	-204.1	-311.6	1139.2	-724.8	-1114	-43.31	-196.9	865.28	144.73	-1955	-451	218.9	911.91
IES @98	-70850	-50.41	665.48	791.27	1296.2	-179.2	313.4	-321	-423	49.184	48.45	345.38	433.2	-458.1	-628.4	1834.9	-739.6	-1748	-20.01	-291.7	1805.4	468.59	-2036	-772.8	29.67	1747.9
IES @99	-80807	-407.6	936.54	1303.4	1207.2	24.938	334.92	-434	-440	273.82	-144.4	382.51	765.1	-412.4	-876.3	2616.3	-423	-1950	421.35	-544.1	2045.8	366.37	-797.1	-791.1	38.87	1731.8

Table D1.18- Incremental Historical VaR Estimated from Delta VaR for Spain

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-17227	-296.8	-516.4	-285.5	60.064	237.86	727.8	80.994	197.2	341.1	342.5	561.94	-161.1	226.16	340.19	487.51	495.5	701.7	-61.87	177.41	433.97	436.05	177.15	-51.08	530.1	591.23
IHVaR @98	-24960	-801.5	-778.3	-722.2	-632.3	-340.4	524.9	423.08	-99.2	71.804	685.3	824.95	30.74	-330.5	11.969	163.04	630.6	459.3	-103.2	-138	264.1	526.11	-355.7	254.09	824.8	974.78
IHVaR @99	-29334	-565.8	-1060	-1059	75.315	382.61	214.67	-230.5	-116	-284.2	292.1	674.62	119.4	-260.9	-588.1	62.532	457.7	-372.2	-847.5	-693.8	180.05	516.81	-453.9	-451.3	773.1	718.81
IES @95**	-24509	-477.1	-573.5	-570.8	71.511	29.43	364.21	-11.32	-60.3	149.85	363.1	476.5	15.26	3.8326	-194.9	85.269	375.1	-90.98	-299	-218.8	265.83	384.2	-202.4	-186.2	682	641.12
IES @98	-31477	-295.5	-659.4	-396.5	276.14	104.47	396.5	-113.2	-1.46	-66.93	390.2	572.16	-27.22	-7.795	-559.4	242.95	394.6	-159.9	-544	-513.7	201.16	410.16	-201	-143.6	856.8	815.86
IES @99	-34872	-138.7	-678.4	-41.39	368.43	117.38	611.76	-67.21	119.4	-29.81	242	564.38	-186.3	126.16	-485.3	400.16	311.9	-62.97	-689.4	-574.7	245.96	544.92	-153.9	-122.3	870.6	1001.8

Table D1.19- Incremental Historical VaR Estimated from Delta VaR for Sweden

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-26315	-108.1	-1323	446.12	98.418	339.91	147.28	574.91	189.4	-146	142.3	-785.9	45.52	161.25	177.49	-215.9	126.3	-89.02	-122.3	408.34	393.57	-574.4	188.28	-305.5	395.2	499.73
IHVaR @98	-36189	-832.6	-542.6	-166	637.2	508.36	-451	538.85	-892	206.02	173.9	-1390	102.7	715.59	49.17	248.74	117.3	378.9	-24.17	345.05	606.53	-213.1	475.64	726.01	324.4	1176.6
IHVaR @99	-41995	372.21	-2546	621.99	971.05	656.42	582.55	609.51	338.4	361.82	67.57	-994	388.2	95.18	-555.8	191.59	512.9	455.2	321.01	493.48	950.81	-1041	518.72	411.16	1052	475.09
IES @95**	-36182	-107.9	-1189	290.5	265.59	195.48	56.908	400.77	105.6	8.936	-3.767	-1212	43.01	121.44	69.56	-52.8	12.97	314.6	260.85	580	575.83	-470.4	421.69	-345	607	486.68
IES @98	-47164	-264.3	-1208	503.04	420.37	348.28	553.18	608.04	97.42	359.26	-12.29	-1382	98.19	56.182	-226.6	289.66	244	260.9	342.87	986.71	676.29	-848.3	435.32	-338.9	767.9	236.36
IES @99	-53437	-635.1	-46.05	520.02	147.77	207.53	456.26	406.76	157.1	274.13	-162.2	-1133	-7.335	175.55	136.52	270.86	170.4	-145.7	158.71	1400.2	499.88	-812.7	333.9	-385.2	696.9	-528.6

Table D1.20- Incremental Historical VaR Estimated from Delta VaR for Switzerland

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-22642	-14.05	288.57	1.0732	2.7683	70.601	-350.7	-355.5	2.877	-327.7	86.78	-140.5	-987.5	233.05	217.92	119.4	-90.28	373.3	-284.5	495.42	-252.2	480.56	873.31	-349.9	331.9	631.63
IHVaR @98	-32078	406.04	478.79	144.47	322.66	-269.2	-253.9	-1204	511.5	-232.1	462.6	427.38	-583.3	240.44	203.93	206.52	-906.4	1493	-1001	915.52	-189.5	-327.7	1007.2	299.23	134.8	1126.5
IHVaR @99	-36266	833.04	1034.8	-7.643	443.99	-351.2	777.56	-1006	732.7	-278.4	409.8	388	-346.8	775.77	118.11	-94.71	765.6	1354	-1397	1346.4	176.35	918.43	754.7	-339.4	648.8	1487.1
IES @95**	-31926	437.61	472.77	-117.3	349.69	-543.6	-201	-969.4	281.7	-401.4	273.2	-26.4	-905.5	233.53	-15.07	90.99	-380.4	1191	-666.3	745.54	-151.3	349.32	756.51	-219.8	228.2	1150.1
IES @98	-41108	552.54	462.4	-64.15	379.45	-759.4	-459.1	-1544	345.3	-725.1	112.8	483.27	-1188	349.06	-241.8	-67.14	-743	1495	-803.5	886.75	-51.63	236.23	815.3	-421.6	333.5	1405.7
IES @99	-46176	572.35	596.4	132.76	630.99	-671.5	-882.3	-1905	523	-781.6	356	703.93	-1106	372.69	-16.72	155.06	-1437	1853	-11.53	1153.2	35.753	102.19	1038	-177.2	201	1662.5

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Continued)

Table D1.21- Incremental Historical VaR Estimated from Delta VaR for Thailand

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-30335	150.5	306.2	-1053	-372.7	-817.4	910.86	-773.18	1175.6	-293.78	372.5	-930.6	-804.3	662.04	-915.2	-434.9	-1106.8	739.34	-1280.8	-408.91	-1477.7	642.42	394.44	968.32	809.03	1029.5
IHVaR @98	-42647	36.1	278.3	-497.7	-132.1	-214.3	-345.1	-669.42	879.27	-796.25	713.8	-723.9	-403.1	951.3	-248.9	165.03	-1155.7	857.95	-692.26	516.27	-518.81	272.3	375.25	-117.7	1309.1	1345.7
IHVaR @99	-49105	868	1069	-707.7	52.368	-1166	730.2	-662.28	859.2	44.952	296.4	-541.3	109.43	1749.6	-916	-904	-438.2	687.05	-1021.3	-481.64	-167.58	974.91	704.75	2128.9	542.26	1399.3
IES @95**	-42668	360.9	574.2	-600	-207.8	-330.8	482.45	-588.78	1178.2	-524.44	729.7	-791.1	-507.4	367.45	-660.1	185.08	-797.28	604.3	-663.4	-596.95	-855.05	742.73	601.34	1036.1	1092.8	1561.5
IES @98	-56083	693.2	719.3	-835.6	-192.7	-593.4	659.14	-885.51	1410.5	-761.29	736.2	-780.5	-863	878.26	-1160	45.718	-951.97	732.39	-796.41	-1007.6	-690.34	780.39	606.24	1525.4	1343.1	1835.4
IES @99	-64782	508.9	687.2	-635.9	-264.9	-464	677.97	-1156.3	1845.4	-1029.7	845.9	-790.6	-1257	625.27	-1043	901.95	-1216.2	821.1	-797.06	-1674.7	-1159.4	689.02	666.78	1611.6	1828.7	2358.3

Table D1.22- Incremental Historical VaR Estimated from Delta VaR for Taiwan

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-31834	256.9	325	231.23	5.9407	388.12	142.74	-257.42	-173.8	-283.08	-571.3	496.36	224.49	189.33	-2.417	-717.3	63.644	404.33	153.7	-352.81	-548.45	-413	-452.7	-92.92	-226.9	-460.78
IHVaR @98	-41922	162.4	504.2	-383.8	132.1	1143.1	851.27	280.27	-270.8	668.43	-773.6	199.77	118.31	-706.2	-841.4	697.03	547.41	389.13	437.07	-866.3	-933.79	992.69	-1307	829.48	-632.1	-700.52
IHVaR @99	-47038	49.56	687.4	324.75	-10.76	1310.8	92.767	121.21	173.22	8.521	258.5	-158.9	-154	-79.99	459.92	309.05	-384.07	872.76	478.86	207.22	-399.45	-74.76	-588	188.82	-231.4	-437.17
IES @95**	-42594	123.4	335.1	269.23	3.225	736.05	307.5	68.65	50.735	-167.37	-157.3	218.42	49.21	-74.92	-68.91	-238.3	62.033	382.49	185.67	-588.71	-351.89	-59.93	-432.1	472.67	-31.69	-182.85
IES @98	-54783	-64.18	437.1	212.48	57.833	877.65	210.18	195.88	313.82	-144.72	-178.7	202.22	99.683	69.458	-4.616	29.381	-243.99	277.05	390.33	-451.75	-238.3	-74.34	-588.6	469.52	-279.9	-250.85
IES @99	-63762	-14.62	429.4	194.78	121.42	818.24	192.09	207.62	268.47	-126	-147.4	240.88	73.341	135.9	-312.2	-205.3	-149.43	58.448	313.57	-589.9	-187.56	-103.2	-618.1	305.91	-434.7	-314.91

Table D1.23- Incremental Historical VaR Estimated from Delta VaR for Turkey

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-59355	-307.1	-22.34	665.84	-182.3	-28.04	252.71	699.02	-808.3	571.85	41.11	-1035	-214.7	-258.3	263.51	-882.2	-616.58	-678.4	245.82	-1364.4	-493.68	401.59	550.29	1090.1	71.128	1441.6
IHVaR @98	-85042	-952.8	-682.2	174.47	139.48	-853.3	452.81	-52.286	-1907	598.98	-575.7	639.7	476.48	-372.8	-16.6	-21.83	-1055.1	-195.8	1160.7	-726.66	953.132	391.03	-365	1121.3	166.3	1405.4
IHVaR @99	-96995	-28.61	-486.7	612.96	-78.93	-865.6	306.71	-973.32	-826.2	-964.84	-332.7	689.26	-292.4	1464.4	-259.4	162.8	773.2	-290.2	626.15	-1329.4	6.08086	653.96	-355.3	679.1	203.22	2544.9
IES @95**	-85853	-260.3	-210.9	331.7	131.29	-685.4	306.55	-169.95	-1064	-173.5	-191.2	601.78	-374.7	680.99	-46.61	-133.2	-30.295	-33.78	240.38	-744.12	98.1586	251.08	-263.3	700.25	-229.8	1832.5
IES @98	-1E+05	-467.5	-467	596.93	298.95	-853.1	443.04	-477.18	-1281	-666.79	-355.7	639.17	-294.1	950.01	75.871	-68.46	735.81	-109.1	560.48	-1183	310.062	452.91	-962.8	748.08	159.38	2915.6
IES @99	-1E+05	-430.9	-786.1	742.48	138.67	-458.6	439.19	7.9656	-922	-514.96	-150.9	177.91	-665.9	847.52	241.57	-350.3	1137	-300.5	389.81	-1200.9	475.405	381.46	-1280	833.43	18.281	3707.8

Table D1.24- Incremental Historical VaR Estimated from Delta VaR for United Kingdom

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-21959	236.7	-243.8	305.64	222.87	-141.9	401.57	-212.76	248.04	343.2	98.71	165.04	-166.3	472.06	-49.49	-568.8	365.37	412.55	-288.45	293.49	122.447	411.56	-305.8	-230.6	5.0403	901.61
IHVaR @98	-31121	53.07	-234.8	471.89	-282	-307.2	288.87	12.788	177.41	425.69	160.5	-547.3	-245.6	483.88	-260.5	-1372	264.28	742.28	-209.04	177.12	-193.33	-446.9	-23.31	-528.4	-744.9	492.19
IHVaR @99	-33911	453.9	-113.9	-195.8	522.53	26.977	478.86	-414.6	91.315	427.91	917.9	591.34	-765.5	143.08	-178	-437.9	345.21	598.22	573	192.02	96.9319	644.43	11.183	229.98	-1103	953.49
IES @95**	-29868	192.1	-179.7	169.64	146.42	-317.1	254.38	-125.19	81.68	363.92	348	53.096	-603.9	217.33	-171	-754.9	248.03	394.77	-189.43	346.4	125.322	428.96	31.859	-217.1	-333.8	652.23
IES @98	-36937	453.9	-478.7	2.4904	355.45	-444.6	409.84	46.721	-101.7	583.57	555.6	159.43	-777.3	57.768	-425.6	-818.9	318.15	1043.7	71.97	410.16	221.383	722.15	46.882	-471.3	-780.5	732.56
IES @99	-40721	699.9	-539.7	187.03	414.76	-597.6	230.86	510.02	-366.3	776.58	536.6	110.25	-794.7	224.7	-579.3	-1054	204.18	1128.3	-90.289	426.14	228.684	727.14	0.5072	-573.8	-630.2	853.18

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D1 - Incremental Historical VaR Estimates from Delta VaR for Domestic Portfolios

Table D1.25- Incremental Historical VaR Estimated from Delta VaR for United States

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-23140	-333.4	-333.97	407.65	334.66	111.09	-324.4	25.07	6.025	-0.106	-718.8	164.65	393.51	231.14	-725.4	-117.36	473.07	-31.42	445.29	-334.8	-72.29	129.63	49.13	284.4	678.94	-75.36
IHVaR @98	-29083	83.979	-131.52	519.54	258.78	-276.6	-404.7	185.5	119.3	304.5	68.7	192.3	419.8	499.66	-1084	-143.91	784.14	-29.48	500.16	89.645	-123.9	237.4	227.5	1236	613.03	130.17
IHVaR @99	-34513	-904.4	-353.48	561	-192.6	-250.9	-1011	445.7	129.3	143	-478.3	608.94	328.65	335.44	-1157	-867.41	990.25	-274.3	1049.8	7.6769	93.655	-420.7	640	387.5	-1300	221.12
IES @95**	-29718	-203.3	-123.24	639.35	198.33	-197.6	-799.8	84.07	-38.4	101.6	-389.2	316.48	346.09	465.92	-659.1	-224.29	531.16	120	632.5	164.43	-160.7	-72.79	297	740.1	391	293.38
IES @98	-37162	-656.6	-144.61	881.62	120.33	-199.5	-1549	103.3	367.8	308.6	-357.8	385.74	293.53	584.26	-507.9	-568.84	739.56	46.559	717.34	296.78	-254.4	-360.3	459.7	879.1	-252.2	229.2
IES @99	-41777	-751.5	40.705	1218.4	73.948	-193.5	-2320	-40.31	603.9	266.5	-287.6	437.06	327.21	774.88	-206.7	-595.47	710.2	430.2	726.99	414.05	-574.5	-547.3	432.3	1235	-97.42	372.11

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES@98, IES@99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D2 - Incremental Historical VaR Estimated from Delta VaR for Foreign Portfolios

Table D2.01- Incremental Historical VaR Estimated from Delta VaR for Companies with Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-16501	213.94	488.85	121	459.8	-60.63	81.93	116.9	467.77	301.9	20.91	-209.4	-51.32	70.649	192.16	29.73	314.35	-628.9	-171	-4.14	239.73	-179.2	-63.24	-702.6	359.31	187.42
IHVaR @98	-23496	264.84	233.28	632.3	217.9	-170.9	159.5	-321.6	552.53	-119.4	-319.1	-353	317.16	-385.2	228.21	1087	230.32	-184.4	-522.4	-1217	217.39	120.94	-125.8	-184.8	-250.2	141.11
IHVaR @99	-28020	269.91	-823.9	427.5	97.95	-828.3	869.8	-271.1	113.81	1222	148.1	12.368	756.54	43.831	706.02	-236	515.27	-843.5	-557.8	277.88	159.31	-208.8	326.91	-986.1	214.96	579.16
IES @95**	-23447	376.87	-98.61	422.9	191.3	-491.4	239.9	398.5	494.53	254.2	280.2	-19.43	231.27	67.886	426.81	44.59	69.51	-478.6	-321.6	-77.17	431.31	-40.66	-82.2	-494.1	194.24	533.58
IES @98	-30965	482	-729	378.4	190.1	-654.3	413.9	473.4	603.5	239.8	209	149.13	538.76	42.889	311.93	-123.7	-510.1	-530	-83.22	-25.11	531.41	89.211	74.578	-686.9	430.63	449.2
IES @99	-35057	698.27	-1104	182.7	10.46	-582.8	288.1	864.3	763.88	-379.6	420.3	88.498	439.46	-121.1	453.04	-290.5	-1201	-414.5	62.795	-356.5	560.24	348.4	-131.9	-690.2	338.1	216.29

Table D2.02- Incremental Historical VaR Estimated from Delta VaR for Companies with Second Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-18320	577.9	-88.94	332.5	949.2	172.13	280.1	755.1	296.52	559.6	713.9	271.57	191.47	510.27	323.42	-183.2	755.28	361.68	164.54	-1043	1126.2	696.53	907.45	-232.5	-80.87	725.42
IHVaR @98	-26891	651.88	-2332	68.24	790.9	-3.829	-45.65	133.9	200.83	-400.2	-150.4	-1010	292.4	59.555	-13.75	315.8	388.4	-796.3	-846	-2971	212.26	785.86	389.55	-1542	-1456	232.33
IHVaR @99	-30031	293.54	-2647	344.9	395.5	189.56	58.97	787.1	692.95	149.1	822.5	-92.84	43.301	228.49	259.33	132.8	974.5	112.21	-459.7	-1704	559.38	-113.3	583.35	132.73	686.96	335.09
IES @95**	-26606	617.12	-2029	336.3	643.1	59.974	221.9	868.7	247.94	190.3	581.1	42.507	423.16	187.63	430.62	229.8	599.93	-201.1	-305.3	-1706	572.17	410.71	279.35	-646.7	-153.6	390.14
IES @98	-35437	779.67	-4287	548.8	624.7	45.566	285.8	944.5	124.21	450.6	996.3	56.214	655.35	194.45	706.28	555.7	1289.2	-145.2	-344.7	-1522	615.71	499.37	480.35	-565.7	432.94	743.02
IES @99	-41873	983.11	-6303	878.4	874.7	-0.361	347.6	1007	-341	754.8	1120	385.24	630.48	53.49	671.15	648.4	1777.9	-220.6	-350.2	-1654	669.02	555.83	497.11	-1082	693.62	1096

Table D2.03- Incremental Historical VaR Estimated from Delta VaR for Companies with Third Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-15191	-144.3	310.77	-78.63	41	865.4	404	-352.5	46.133	6.989	364.9	-685.3	307.17	460.95	263.64	80.82	41.856	-68.97	-679	-337.3	-681.67	414.1	-485.4	-37.95	99.1	22.201
IHVaR @98	-20083	201.36	1236.4	377.8	187.4	887.41	503.5	340.8	482.2	-102.5	446.9	268.06	503.08	725.03	744.86	571.7	55.546	-233.8	-697.1	319.51	27.69	-378.6	-418.5	-514.9	828.6	340.09
IHVaR @99	-23228	-200.5	984.13	887.4	222.6	1086	134.6	-385.3	102.38	-227.3	936.7	522.47	714.18	967.13	428.72	-337.2	87.714	-809.4	160.35	306.79	382.09	689.34	-9.897	-344.4	1055.9	953.55
IES @95**	-21164	-284.7	526.36	266.7	224.7	957.26	492.9	-462.7	204.27	-22.23	682	-372.4	311.44	853.04	450.62	72.37	1.89	3.0635	-465.9	-30.72	-208.45	330.1	-373.2	-389.7	350.87	534.57
IES @98	-28099	-322.8	-109.4	347.3	275.3	1176.4	512.1	-698.1	100.99	-28.8	1033	-318.6	663.98	1164	442.68	-139.8	124.79	-195.8	-232.6	-51.68	127.13	437.53	178.91	-81.59	857.32	694.41
IES @99	-33581	-530.3	-1208	68.45	332.9	1265.7	699.5	-853.2	173.82	202.5	1252	-821.9	621.43	1387	595.4	-88.61	231.62	306.79	-517.8	-229.2	24.925	441.17	839.37	439.79	862.95	506.18

Table D2.04- Incremental Historical VaR Estimated from Delta VaR for Companies with Fourth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-16029	229.02	-9.857	415.4	-22.96	102.36	12.11	256.6	93.888	39.46	446.3	-228.8	225.67	-6.717	265.86	193.6	4.9572	-168.6	177.8	-133.8	347.06	425.78	-795.5	-136.8	-5.911	132.75
IHVaR @98	-21625	124.49	357.43	575.8	615.8	740.37	224.2	408.6	105.75	517.8	206.5	548.68	168.52	313.26	-1006	131.6	-448.9	-602.3	698.47	397.65	569.61	1136.2	533.94	-658.4	152.31	762.27
IHVaR @99	-34513	-904.4	-353.5	561	-192.6	-250.9	-1011	445.7	129.32	143	-478.3	608.94	328.65	335.44	-1157	-867.4	990.25	-274.3	1049.8	7.6769	93.655	-420.7	639.97	387.46	-1300	0.3193
IES @95**	-22050	343.42	-427	242.2	54.98	404.64	-75.23	322.7	120.29	249.6	496.3	31.764	178.47	-100.3	-278.3	-0.735	-71.72	-122.6	329.07	102.59	365.32	410.81	15.207	-477.3	132.38	527.85
IES @98	-29348	581.52	-882.2	573.6	55.07	669.86	-254.5	-0.051	-210.7	193.1	748.7	141.97	464.53	-116	-782	-435.5	-165.7	188.68	227.54	24.399	390.86	587.92	-138	-619.6	375.13	766.68
IES @99	-34330	620.04	-1601	257.2	-307.4	120.07	-219.6	58.79	-551	173.1	1045	218.68	1014.9	-94.37	-728.7	-417.6	-238	370.98	228.83	44.055	190.44	410.42	-37.79	-675.3	183.99	846.13

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES @98, IES @99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D2 - Incremental Historical VaR Estimated from Delta VaR for Foreign Portfolios (Continued)

Table D2.05- Incremental Historical VaR Estimated from Delta VaR for Companies with Fifth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-17695	244.46	-65.94	-13.31	-188.9	-725.6	-272.3	354.06	254.9	586.47	93.23	222.72	-83.9	137.81	425.9	-31.52	-245.6	26.1	407.52	356.33	-785.8	541.54	85.881	148.87	-164.1	321.19
IHVaR @98	-24330	784.31	573.8	764.31	442.09	738.14	-5.429	311.13	-953.6	1103.7	683.3	234.85	484.17	4.8571	466.26	647.8	562.22	166.1	379.67	-142.1	-559.7	797.12	233.56	-975.3	236.63	-585.3
IHVaR @99	-28638	697.12	-817.5	391.14	-775.4	-846.1	1051	570.11	788	1014.8	73.71	-304.1	944.21	-235.1	784.96	163.6	-431.5	550.9	159.27	-681.2	-359	866.57	24.779	-998.6	-1067	855.89
IES @95**	-25130	460.04	87.318	440.08	-367.8	-279.5	163.44	618.63	-335.7	818.44	603.3	-93.4	488.36	90.486	553.95	396.63	-74.69	-41.27	318.44	205.65	-622	731.03	3.1092	-738.9	-271	83.019
IES @98	-33409	643.32	-462.4	401.42	-614.7	-615.7	391.16	798.94	7.176	883.48	662.7	-326.4	912.07	-133.7	666.26	289.9	-327.7	150.2	497.86	252.79	-705.5	976.47	59.958	-909.1	-442.9	410.04
IES @99	-39586	582.96	-791.2	423.72	-648.7	-959.7	99.84	1016.2	-403.8	969.78	913.3	-358.8	964.05	-54.56	682.11	309.2	-587.7	-107.1	685.2	594.02	-946.8	872.3	52.185	-785.5	-229	186.91

Table D2.06- Incremental Historical VaR Estimated from Delta VaR for Companies with Sixth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-19495	512.37	311.81	489.93	-40.84	260.95	632.72	710.74	-2421	-1205	167.4	-38.01	182.33	583.81	630.01	123.59	-41.3	231.5	623.25	-196.2	96.408	542.33	470.16	136.5	261.76	145.46
IHVaR @98	-29280	492.83	113.91	804.67	-235.7	372.93	935.31	514.58	-2504	-3630	241	220.67	806.24	362.33	531.27	906.48	-139.2	-296.1	791.22	25.125	146.67	368.46	-298.6	943.5	708.56	1778.9
IHVaR @99	-36504	773.37	-302.6	1227	-702.6	186.81	636.69	914.42	-3252	-6260	170.7	-105.8	-39.12	575.71	675.81	1129	1099.8	404.7	497.37	186.14	-290.4	739.18	336.76	-59.6	894.49	31.101
IES @95**	-30527	674.6	261.13	1011.1	-31.48	605.47	866.09	843.09	-1846	-5566	232.3	308.45	936.53	639.7	798.2	618.34	339.04	278.1	861.03	320.68	212.7	763.25	335.91	406.19	669.63	511.86
IES @98	-43334	881.3	-348.4	1428.5	9.8921	662.96	1025.6	882.53	-1333	-11519	669.4	208.66	899.27	857.73	722.51	948.62	570.83	457.1	1092.3	216.12	-36.43	861.1	417.9	979.97	834.16	838.97
IES @99	-52328	1459.8	-180.4	1725.1	485.96	1175.7	1400.8	774.1	-135.6	-17334	1386	620.41	1372.7	1462.1	1256.9	884.92	513.06	551.5	1658.6	697	489.09	1239.9	866.47	1822.4	1076.8	1428.8

Table D2.07- Incremental Historical VaR Estimated from Delta VaR for Companies with Seventh Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-15969	-24.77	371.23	871.8	132.77	363.06	518.95	394.74	-453.8	203.15	444.4	181.86	158.67	261.09	583.68	347.73	198.89	-868.2	400.58	564.65	315.36	-30.37	-12.41	-149.4	-211.6	597.85
IHVaR @98	-21936	957.9	605.48	278.93	302.84	229.46	380.51	1003.8	-383.5	528.04	1448	-254.1	35.246	452.76	437.47	337.1	111.33	-470.2	199.17	-116.2	-1270	307.06	-202.5	-407.1	23.473	383.66
IHVaR @99	-25950	1059.2	764.05	408.46	-594.2	282.97	778.05	680.08	-860	905.77	58.16	-430	661.53	297.8	990.43	628.22	-601.5	-745.1	109.31	128.21	-1827	143.43	634.16	-1830	-396	718.46
IES @95**	-22335	667.16	341.26	500.46	-130	81.405	809.53	625.2	-570.3	406.06	532.1	-233.8	216.25	290.83	414.13	388.02	-17.1	-569.6	298.75	216.04	-1048	315.62	-1.799	-586.9	-163.5	413.02
IES @98	-29104	962.59	338.57	398.83	-653.7	272.32	1310.2	633.96	-704.8	552.02	757.2	-443.2	810.52	182.35	474.89	515.63	-362	-783.3	183.76	142.99	-2014	187.04	134.53	-727.8	318.11	689.28
IES @99	-33048	1160	173	-26.64	-517.7	225.73	1521.5	351.58	-494.5	396.65	1352	-303.5	1187.8	306.05	400.56	524.13	-475.4	-861.4	183.37	111.1	-2447	344.25	-88.76	124.66	886.94	829.94

Table D2.08- Incremental Historical VaR Estimated from Delta VaR for Companies with Eighth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-15240	510.86	-187.6	504.72	540.9	-39.49	419.21	283.49	-71.32	204.71	89.5	224	-68.15	-146.6	251.76	-444.2	12.613	-258.7	243.32	-47.24	-236.8	-286.4	437.66	-1266	-269.2	225.82
IHVaR @98	-22275	342.97	-413.4	358.17	1316.2	-1061	444.31	528.79	534.4	81.685	-8.54	-860.3	801.91	-563.2	402.8	98.189	-473.7	567.8	-40.05	-541.9	-490.5	423	708.29	-1856	-304	166.58
IHVaR @99	-25422	873.79	-163.6	530.81	828.11	147.64	358.97	49.935	-191.3	560.88	550.5	-243.2	-597.6	-483.7	-435.2	-698.1	49.761	-851.4	-924.3	597.83	128.88	384.85	102.97	-1354	-217.1	600.9
IES @95**	-21502	550.79	-97.3	592.86	920.31	-308.7	506.63	301.57	266.1	513.94	228.5	-174.4	510.75	50.399	256.86	-263.1	-292.7	-193.5	102.27	66.134	232.72	361.53	522.84	-1224	-100.2	366.77
IES @98	-27909	893.7	-388	683.82	1066.6	-231.3	720.19	-98.4	-433	594.24	556	-451	705.57	-305.8	67.532	-453.7	-532	-656.1	85.813	520.48	449.82	252.51	399.91	-1501	-305.1	563.43
IES @99	-31379	1245.7	-736.3	748.45	1282.8	-337.4	849.24	-212.8	-974.7	623.72	677.4	-450.2	1573.3	-249.2	329.03	-249.5	-868.4	-944.7	566.7	357.28	411.76	74.18	483.01	-1188	-480.7	932.3

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES @98, IES @99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D2 - Incremental Historical VaR Estimated from Delta VaR for Foreign Portfolios

Table D2.09- Incremental Historical VaR Estimated from Delta VaR for Companies with Ninth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-18323	461.21	-237.74	744.57	-88.35	174.3	71.69	692.66	-1717	518.09	-287.4	-16.95	174.43	794.2	430.24	414.6	309.13	-154.6	375.79	-103.6	-512.3	603.3	-393.8	63.13	600.35	477.12
IHVaR @98	-24846	626.98	-177.38	1086.5	-967.5	-441.3	963.1	761.03	-1764	1025.1	486.34	-809.4	379.35	917.76	433.67	-70.02	-229.6	865.44	813.24	-210.9	-257.3	337.63	516.45	-698.5	664.15	139.85
IHVaR @99	-28871	341.48	-253.98	1052.7	1001.9	-438.6	9.603	504.53	-981.5	707.29	1266.4	-967.2	116.01	1055.2	91.199	488.9	-420.6	-465.7	193.45	-512.2	68.923	567.3	-131.9	-1221	1069.3	531.38
IES @95**	-25535	711.5	404.7	808.08	18.038	209.9	255	593.48	-2581	781.91	435.8	-63.99	209.59	986.42	514.93	140.7	29.617	188.39	788.55	106.42	-216.8	268.37	186.56	-411.6	879.51	692.96
IES @98	-33493	886.21	806.99	1024.7	902.86	401.6	439	485.86	-3939	871.03	936.05	-312.5	463.52	1285.4	529.81	200.8	-225	401.44	859.93	452.55	-408.6	93.651	487.89	-586.4	1380.8	948.5
IES @99	-39578	1142.1	1079.1	1016.9	676.44	679.5	437.3	226.01	-7122	1017.9	833.52	-86.67	712.41	1506.8	718.43	-107.5	-280.4	541.86	975.72	844.2	-732	-479.7	610.46	-707.9	1581.1	1272.3

Table D2.10- Incremental Historical VaR Estimated from Delta VaR for Companies with Tenth Highest Market Capitalization

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-13901	169.07	349.55	396.85	138.81	317.1	-126.7	61.822	-71.78	272.35	19.314	200.48	674.57	-224.2	-6.942	-68.36	717.78	-408.4	136.91	-282.6	4.0698	-339.5	253.57	-810.8	157.81	-379.8
IHVaR @98	-19485	401.06	-11.172	596.69	82.212	49.09	-48.64	-584.4	-263.5	445.84	77.796	-69.33	270.77	291.26	135.2	789.3	826.98	-1140	461.05	-373.9	-261.9	-1199	548.74	443.6	116.21	-886.7
IHVaR @99	-24116	613.13	203.59	50.899	21.906	237.4	13.43	-808.5	-293.5	-928.5	283.81	239.41	515.94	1337	600.58	65.92	-300.8	-657.7	155.23	-1130	-1348	403.73	716.15	-537.4	115.46	1395
IES @95**	-19244	262.59	301.09	464.05	377.25	243.9	-87.37	-48.12	-154.9	210.93	287.03	245.25	805.74	360.56	392.86	292.4	731.37	-699.2	314.82	-217.4	272.46	-223	541.74	-297.3	170.3	214.34
IES @98	-25544	397.91	-356.82	391.15	409.63	354.4	-469.9	98.284	-328.4	-208.9	429.2	393.13	1050.3	804.39	570.44	324.7	35.342	-1140	314.75	-359.8	-87.21	-40.19	785.88	-439.2	207.2	818.54
IES @99	-28386	200.15	-1253.9	908	577.67	379.7	-911.2	481.02	-417.1	24.823	827.03	596.72	1276.8	627.86	550.05	328	-180.4	-1529	239.27	-24.96	750.78	-110.1	994.45	-793.4	174.35	758.13

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES @98, IES @99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents the twenty-five positions

Appendix D3 - Incremental Historical VaR Estimated from Delta VaR for Frechet Random Walk Model and Geometric Brownian Motion Model

Table D3.01- Incremental Historical VaR Estimated from Delta VaR for Frechet Random Walk Model

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-4031.9	156.06	158.28	261.6	105.5	194.3	13.54	159.3	64.471	73.34	31.53	-87.3	211.12	-91.72	157.57	-94.95	-18.45	-116.8	459.34	-33.33	-135.95	-306.6	-42.81	-184.7	294.73	13.647
IHVaR @98	-4939.1	161.4	266.21	194.1	533.3	181.12	361.2	185.6	519.17	306.7	370.5	482.9	511.44	-115.8	460.55	-121.2	120.3	304.21	462.66	392.53	388.24	364.81	179.03	-264.4	423.68	858.93
IHVaR @99	-5697	72.842	380.45	133.2	101.4	285.93	255.9	125.8	56.974	360.8	394.9	76.715	-120.4	-289	162.44	323.5	484.74	-58.95	229.74	476.61	737.7	-91.88	-155.1	-387.2	567.45	429.36
IES @95**	-5158	101.55	175.4	146.3	215.9	168.5	68.2	121.5	234.36	217.6	107.7	-104.7	226.36	-132.4	106.28	48.4	211.58	-145.5	256.55	201.28	202.18	-92.73	-12.29	-349.4	287	303.36
IES @98	-6227	-40.74	216.91	40.03	234	304.04	176.8	246.8	249.86	315.8	232.1	-278.9	67.048	-209.9	92.105	304.9	590.04	-275.1	267.3	185.8	540.13	-20.23	-58.76	-456.7	409.58	361.95
IES @99	-6877.2	-125.5	242.02	153.2	248.4	303.29	114.7	249.9	331.01	378.5	189.4	-587.5	182.1	-6.787	46.686	350.2	980.88	-450.9	365.64	159.22	756.75	-48.65	-7.082	-424.6	270.23	228.3

Table D3.02- Incremental Historical VaR Estimated from Delta VaR for Geometric Brownian Motion Model

# Removed Position	All 25	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24	Pos 25
IHVaR @95*	-2510.9	-43.25	17.632	67.78	-46.33	18.046	241.1	47.84	-175.9	-122	-125.5	-25.29	-19.35	84.444	93.154	17.96	49.264	-63.3	-42.2	143.25	-119.55	-45.51	15.029	-101.5	66.061	22.728
IHVaR @98	-3384.5	-586.5	162.47	7.694	69.34	65.483	-157.6	-77.55	341.68	-324.6	20.61	30.425	346.37	-56.84	-19.05	-46.2	-330.5	136.45	-48.98	-75.81	-239.42	171.81	224.02	-192.4	192.38	119.72
IHVaR @99	-3960	52.486	83.022	171.2	-65.53	31.865	-9.819	437.3	-120.1	10.69	-54.4	-35.53	-16.58	-165.1	-338.6	-64.58	-180.6	-49.65	174.53	-143	47.859	-249.4	215.41	-312.1	-268.1	-354.4
IES @95**	-3253	-140.7	63.991	75.87	116.2	21.186	18	158.6	74.687	8.81	74.71	8.3308	32.289	-15.57	-83.74	57.85	38.568	96.185	81.064	7.1635	-115	-59.79	242.47	-4.75	129.58	87.882
IES @98	-3971.4	24.939	11.002	63.35	34.72	-76.63	-49.38	288.5	40.223	136.1	-1.279	51.851	94.811	-170	-194.5	30.02	103.43	215.84	238.57	-127.3	-43.873	-56	326.42	-128.5	-111.4	-155.9
IES @99	-4186.1	73.672	-75.02	-8.886	-20.48	-151.8	57	427.7	0.6276	136.1	-38.93	-57.13	35.263	-145.8	-201.3	-26.06	454.17	293.85	270.48	-97.43	0.3751	-43.59	311.06	48.497	-142.6	-134.4

* IHVAR @95, IHVAR @98, IHVAR @99 represents incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

** IES @95, IES @98, IES @99 represents incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level and incremental expected shortfall at 99% confidence level respectively

*** Pos 1,…,Pos 25 represents position

Table E1.01- Risk Reduction as a Function of the Number of Positions in Portfolio for Australia

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.4669	0.8355	1.1076	1.0376	1.0646	1.043	1.0774	1.0468	1.0254	0.9857	1.0226	0.9683	1.0261	0.9534	1.0342	1.0136	0.9995	0.9937	0.9812	1.0182	0.9968	1.0168	1.003	0.99788
HVaR@99%*	1.2798	0.8791	1.104	1.0684	1.0094	1.0226	1.0688	1.0379	1.0108	1.005	0.9996	1.0145	1.0433	0.9444	1.0262	1.0406	1.0185	1.0091	1.0292	1.0286	1.0018	1.0191	1.0097	0.99023
HVaR@98%	1.1118	0.9081	1.077	1.0776	0.9992	1.035	1.0288	1.0498	1.0252	1.0364	1.0404	1.0046	1.0392	1.0035	1.0346	1.0025	0.969	1.0131	0.9816	1.0387	1.008	0.9997	1.0066	1.00311
HVaR@95%	1.0318	0.9184	1.1138	1.0439	1.0409	1.0346	1.0742	1.035	0.9916	1.0394	1.0285	1.0273	1.0194	1.011	1.0197	1.0161	0.9994	0.9873	1.0084	1.006	1.002	0.9901	1.0107	1.00166
ES(99%)**	1.4036	0.8387	1.1412	1.0569	1.041	1.0473	1.0655	1.0486	1.0179	1.0003	1.0188	0.9934	1.0266	0.9575	1.0286	1.013	0.999	0.9923	0.997	1.0018	1.0097	1.0177	0.9934	1.00037
ES(98%)	1.3357	0.8497	1.1261	1.0601	1.0287	1.0452	1.0573	1.0408	1.0188	1.0036	1.0162	1.0005	1.0323	0.9616	1.0265	1.0136	1.0038	0.9956	1.0101	1.0098	1.0097	1.0134	1.0014	0.99468
ES(95%)	1.1802	0.8843	1.1099	1.0586	1.0134	1.0483	1.066	1.0372	1.0146	1.0189	1.016	1.0082	1.0287	0.9894	1.0263	1.0114	0.9956	0.9966	1.0023	1.0104	1.0086	1.0099	0.9989	0.99862

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.4669	1.2437	1.3659	1.4052	1.4975	1.5578	1.6692	1.7407	1.8052	1.7753	1.8059	1.7624	1.8016	1.7008	1.7582	1.7778	1.7805	1.773	1.7291	1.7706	1.7559	1.7879	1.7886	1.7992
HVaR@99%*	1.2798	1.1323	1.2542	1.3323	1.3273	1.3627	1.4551	1.5114	1.5158	1.5236	1.5126	1.5393	1.6081	1.5081	1.5452	1.6068	1.6351	1.648	1.6929	1.7405	1.7399	1.7787	1.7988	1.78182
HVaR@98%	1.1118	1.0038	1.0806	1.1634	1.1529	1.1898	1.2245	1.2852	1.3152	1.3623	1.4197	1.4259	1.4842	1.4906	1.5464	1.5501	1.4958	1.5156	1.4832	1.5396	1.5535	1.5521	1.5613	1.56026
HVaR@95%	1.0318	0.9449	1.0541	1.1009	1.138	1.1774	1.2595	1.3018	1.2905	1.3394	1.3771	1.4204	1.4489	1.4603	1.4876	1.5138	1.5145	1.4913	1.5005	1.511	1.5171	1.4978	1.5132	1.51514
ES(99%)**	1.4036	1.1846	1.3405	1.4098	1.4757	1.5383	1.6335	1.7109	1.7502	1.7494	1.7786	1.7735	1.8199	1.7238	1.7732	1.7963	1.7987	1.7943	1.7803	1.7879	1.8021	1.8393	1.8228	1.83389
ES(98%)	1.3357	1.1403	1.2779	1.3492	1.3903	1.4486	1.5279	1.5914	1.6212	1.6279	1.6523	1.6553	1.7107	1.6339	1.6773	1.6984	1.706	1.7037	1.7166	1.7358	1.7526	1.7808	1.7826	1.77593
ES(95%)	1.1802	1.0428	1.1545	1.2226	1.2376	1.2954	1.3801	1.4307	1.4509	1.4772	1.5011	1.5137	1.5574	1.54	1.5806	1.5977	1.5905	1.5849	1.5873	1.6037	1.6169	1.6334	1.6315	1.62923

Table E1.02- Risk Reduction as a Function of the Number of Positions in Portfolio for Brazil

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.9635	1.1507	1.2471	1.0704	1.0481	1.1126	0.9885	0.9903	0.9996	0.9839	1.0329	0.9733	0.9961	0.8529	1.0169	1.0275	0.9949	1.0347	1.0187	1.0275	1.0196	1.0219	1.0118	0.98588
HVaR@99%*	0.949	1.321	1.0453	0.9687	1.0616	1.0667	1.0149	1.0434	0.9809	0.9955	1.0265	1.0185	0.9738	0.8263	1.0432	1.0375	0.9933	1.0408	1.0261	1.0304	1.0341	1.0303	1.003	1.01335
HVaR@98%	0.9824	1.2323	0.9717	1.0128	1.0373	1.0448	1.0037	0.996	1.0087	1.0187	1.0303	1.0333	0.9805	0.8788	1.0481	1.0218	0.9927	1.0495	1.0231	1.0026	1.0213	1.0341	1.0119	1.00837
HVaR@95%	0.9486	1.3539	0.9555	0.9923	1.0402	1.0836	0.9891	1.0289	0.993	1.002	1.08	1.0084	0.9675	0.9153	1.0262	1.0166	0.9806	1.0264	1.0261	1.0026	1.0094	0.9926	1.0209	1.00422
ES(99%)**	0.9584	1.1999	1.1835	1.0411	1.0236	1.1006	0.9957	1.0036	0.9958	0.9873	1.0325	0.9867	0.9823	0.854	1.0268	1.0227	0.9895	1.0381	1.0161	1.0156	1.0489	1.0144	1.0107	1.00287
ES(98%)	0.9694	1.2291	1.12	1.0166	1.0309	1.0843	0.9972	1.011	0.9977	0.9943	1.0311	0.9981	0.9797	0.8519	1.0234	1.0257	0.9962	1.0379	1.0193	1.0192	1.036	1.02	1.0063	1.00565
ES(95%)	0.9627	1.2493	1.0334	1.0101	1.0396	1.0767	0.9888	1.0093	0.9956	0.9963	1.0389	1.0109	0.9749	0.8804	1.0307	1.0192	0.9914	1.0355	1.0188	1.0131	1.0256	1.0192	1.0111	1.00869

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.9635	1.1193	1.3258	1.4059	1.4662	1.63	1.6087	1.5949	1.5922	1.5657	1.6114	1.5712	1.5619	1.3194	1.3411	1.3807	1.3693	1.4151	1.4345	1.4733	1.4998	1.5315	1.5468	1.52037
HVaR@99%*	0.949	1.2469	1.3055	1.2545	1.3233	1.4099	1.432	1.4834	1.4512	1.4454	1.4855	1.5118	1.4714	1.2104	1.2623	1.311	1.2986	1.3518	1.3833	1.4261	1.4797	1.5256	1.5248	1.54473
HVaR@98%	0.9824	1.209	1.1736	1.1836	1.2268	1.2857	1.2825	1.2727	1.2764	1.3	1.3401	1.3849	1.359	1.1868	1.2464	1.2739	1.2603	1.3266	1.3542	1.3519	1.3828	1.4306	1.443	1.45366
HVaR@95%	0.9486	1.2929	1.2201	1.2099	1.26	1.3597	1.3436	1.3786	1.3673	1.3727	1.4862	1.5025	1.4484	1.324	1.3546	1.3735	1.3477	1.3818	1.4206	1.4229	1.4374	1.417	1.445	1.45165
ES(99%)**	0.9584	1.1527	1.3254	1.3752	1.4078	1.5439	1.5337	1.5383	1.5317	1.511	1.5555	1.538	1.5085	1.2702	1.3057	1.3384	1.3211	1.371	1.3888	1.4045	1.4706	1.4902	1.5038	1.50636
ES(98%)	0.9694	1.1898	1.3185	1.3349	1.374	1.4859	1.479	1.4867	1.4832	1.4752	1.5197	1.518	1.4868	1.2573	1.2846	1.3183	1.3104	1.3592	1.3815	1.4054	1.4586	1.4853	1.4922	1.49932
ES(95%)	0.9627	1.2003	1.2426	1.2533	1.3028	1.3996	1.3838	1.3893	1.383	1.3794	1.4329	1.4485	1.4122	1.2416	1.2801	1.3048	1.2921	1.3383	1.3612	1.3783	1.4144	1.4407	1.4557	1.46829

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.03- Risk Reduction as a Function of the Number of Positions in Portfolio for Chile																								
Average Relative Risk Reduction - Sequential Adding of Positions																								
Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.2705	1.011	1.013	1.0523	1.119	1.0561	1.036	1.0666	1.0582	1.019	1.0216	1.0058	0.8881	1.0414	0.9559	1.0337	1	1.0355	1.0228	0.9944	1.028	1.0165	1.0092	1.0172
HVaR@99%*	0.9414	1.176	1.01	1.0492	1.111	1.0554	1.022	1.0858	1.0693	1.0202	1.0528	1.0451	0.9978	1.0445	1.0074	1.0067	1.0056	1.0276	1.0238	1.0261	1.0145	1.0003	0.9527	1.00538
HVaR@98%	0.9533	1.083	1.058	1.0215	1.137	1.0438	1.042	1.0687	1.0576	1.0348	1.0257	1.0269	1.0295	1.0539	1.0344	1.0297	0.9871	1.0286	1.0086	1.042	1.0236	0.9737	0.9645	1.00078
HVaR@95%	0.9213	1.071	1.029	1.0544	1.111	1.0597	1.052	1.0983	0.979	1.0281	1.0551	1.0198	1.0488	1.0427	1.0394	1.0193	1.0075	1.0196	1.0062	1.0244	1.0268	1.0125	0.9707	0.99368
ES(99%)**	1.1847	1.054	1.035	1.0434	1.117	1.023	1.039	1.0819	1.0616	1.0318	1.0269	1.0258	0.9055	1.0412	0.9801	1.0264	0.9968	1.0328	1.0132	1.0105	1.0286	1.0093	1.008	1.0098
ES(98%)	1.0827	1.075	1.031	1.0401	1.118	1.033	1.034	1.0842	1.0674	1.024	1.0379	1.0266	0.9341	1.0448	0.9954	1.023	0.9989	1.0305	1.0151	1.0186	1.0212	1.0046	0.9873	1.00555
ES(95%)	0.9887	1.065	1.058	1.0329	1.107	1.0424	1.041	1.0743	1.0413	1.0302	1.0387	1.0341	0.9786	1.046	1.0157	1.0167	1.0055	1.0265	1.0067	1.0276	1.0196	0.9991	0.9826	1.00116
Average Absolute Risk Reduction - Relative to First Position																								
Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.2705	1.291	1.331	1.3945	1.533	1.5945	1.649	1.7406	1.8303	1.8501	1.8799	1.8983	1.7751	1.837	1.7385	1.7821	1.7417	1.7924	1.8144	1.7768	1.8211	1.8417	1.8467	1.87061
HVaR@99%*	0.9414	1.098	1.103	1.1603	1.277	1.3474	1.369	1.4793	1.573	1.6101	1.6972	1.7723	1.7968	1.8806	1.8831	1.8818	1.8936	1.9455	1.9954	2.0474	2.0822	2.0715	1.9523	1.95626
HVaR@98%	0.9533	1.036	1.107	1.1142	1.252	1.3026	1.353	1.4389	1.5246	1.5835	1.613	1.6586	1.7223	1.8217	1.8836	1.9341	1.9061	1.9573	1.9494	2.034	2.0866	2.0353	1.974	1.97921
HVaR@95%	0.9213	0.973	1.001	1.0599	1.176	1.256	1.316	1.448	1.3915	1.4367	1.5172	1.5473	1.6222	1.7005	1.7708	1.7749	1.7883	1.8305	1.8448	1.889	1.942	1.9779	1.9078	1.88337
ES(99%)**	1.1847	1.251	1.308	1.359	1.495	1.534	1.592	1.7046	1.7909	1.8473	1.893	1.9477	1.8477	1.9068	1.854	1.8889	1.8631	1.9133	1.9216	1.926	1.9729	1.997	2.0068	2.01332
ES(98%)	1.0827	1.16	1.206	1.2578	1.385	1.4321	1.476	1.5907	1.685	1.7295	1.7943	1.8465	1.7929	1.8653	1.8391	1.8694	1.8585	1.9093	1.9284	1.9575	1.9952	2.0076	1.9765	1.97806
ES(95%)	0.9887	1.052	1.115	1.155	1.268	1.3212	1.37	1.4677	1.524	1.5728	1.6335	1.6925	1.6948	1.7728	1.785	1.8112	1.8199	1.8628	1.8692	1.9185	1.9543	1.953	1.9181	1.91507

Table E1.04- Risk Reduction as a Function of the Number of Positions in Portfolio for France																								
Average Relative Risk Reduction - Sequential Adding of Positions																								
Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0083	1.29	1.163	1.0549	0.921	0.9838	1.126	0.9874	1.0509	0.9935	1.022	0.9882	0.9596	0.9701	0.9993	1.0269	1.0127	0.9819	1.0126	0.9822	0.9935	1.0108	1.0144	0.99498
HVaR@99%*	1.0676	1.107	1.186	1.0143	0.945	1.0191	1.148	1.0064	1.0306	0.9844	1.0507	0.992	0.9968	0.9165	1.023	1.0385	0.9753	1.0029	1.0146	0.9985	1.0061	1.0323	0.9829	0.99806
HVaR@98%	1.1409	1.187	1.065	1.0096	0.914	1.0238	1.146	0.9904	1.0271	1.0062	1.0413	1.0136	1.014	0.9107	0.9895	0.9905	0.997	1.009	1.0157	0.992	0.9855	1.0356	0.9979	1.0013
HVaR@95%	1.0943	1.146	1.03	0.9959	1	1.0298	1.119	0.9339	1.0595	0.986	1.0102	1.019	1.0033	0.8959	1.0145	1.0201	1.0074	0.9857	1.0386	0.9747	1.0171	1.0112	0.9943	0.99947
ES(99%)**	0.9618	1.254	1.171	1.0651	0.931	0.9838	1.147	1.008	1.0403	0.9938	1.0216	0.996	0.9775	0.933	0.9945	1.027	0.9936	0.9903	1.0197	0.9884	1.0055	1.017	1.0075	0.98692
ES(98%)	1.0196	1.199	1.149	1.0423	0.928	0.9925	1.15	1.0075	1.0312	0.9934	1.0348	0.9958	0.9851	0.9242	1.0024	1.0257	0.9873	0.9997	1.0171	0.9904	1.0011	1.0277	0.9953	0.99393
ES(95%)	1.037	1.197	1.103	1.0175	0.945	1.0046	1.144	0.9696	1.0375	0.9999	1.0156	1.005	1.0066	0.9181	1.0044	1.014	0.9985	0.996	1.0172	0.9885	0.9969	1.0261	0.9993	0.98941
Average Absolute Risk Reduction - Relative to First Position																								
Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0083	1.321	1.54	1.5891	1.489	1.4746	1.712	1.7103	1.7641	1.7553	1.7524	1.7257	1.6038	1.5502	1.5449	1.5928	1.6008	1.572	1.6067	1.5821	1.5704	1.5907	1.6202	1.61016
HVaR@99%*	1.0676	1.196	1.342	1.3539	1.278	1.2994	1.496	1.5038	1.5476	1.5331	1.6131	1.5898	1.583	1.458	1.4873	1.5493	1.4998	1.5045	1.5361	1.5336	1.5342	1.5893	1.5556	1.55409
HVaR@98%	1.1409	1.339	1.424	1.4336	1.311	1.3194	1.512	1.5134	1.5485	1.575	1.6328	1.66	1.6772	1.5219	1.5068	1.4876	1.4757	1.4932	1.5231	1.498	1.4718	1.5241	1.5236	1.5227
HVaR@95%	1.0943	1.24	1.275	1.2663	1.275	1.3164	1.479	1.3901	1.4714	1.4548	1.4827	1.5176	1.5136	1.3597	1.364	1.3976	1.4095	1.3708	1.4419	1.3942	1.4221	1.4316	1.4142	1.40956
ES(99%)**	0.9618	1.205	1.394	1.456	1.366	1.3475	1.573	1.6002	1.6491	1.6415	1.6676	1.6627	1.6026	1.4647	1.4536	1.497	1.4844	1.4697	1.502	1.4844	1.4949	1.5208	1.5373	1.51095
ES(98%)	1.0196	1.229	1.385	1.4256	1.328	1.3203	1.535	1.5521	1.5966	1.5923	1.6473	1.6378	1.6006	1.4692	1.4673	1.5087	1.4852	1.4871	1.5182	1.5021	1.5012	1.5456	1.5401	1.52708
ES(95%)	1.037	1.245	1.364	1.3823	1.311	1.3174	1.515	1.4855	1.5353	1.5469	1.5683	1.5767	1.58	1.4479	1.4461	1.4685	1.4626	1.4546	1.4852	1.4648	1.4581	1.4986	1.4964	1.47572

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,...,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,...,P1/P25 represents the absolute risk reduction relative to first position

Table E1.05- Risk Reduction as a Function of the Number of Positions in Portfolio for Germany

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.204	1.5504	0.9659	0.8888	1.034	1.0518	0.9422	1.004	1.043	0.952	1.0654	1.0243	1.0078	1.0164	0.9928	0.9985	1.0477	1.0047	0.9538	0.9983	1.04617	0.9839	1.003	1.03636
HVaR@99%*	1.165	1.5194	1.1503	0.9543	1.054	1.0027	1.0321	0.967	0.991	0.973	1.0909	1.0341	1.0088	0.9814	0.9964	1.0272	1.0452	1.0437	0.9842	0.9995	1.02904	1.0036	0.9745	1.05217
HVaR@98%	1.252	1.435	1.0846	0.9587	1.035	1.016	1.0086	0.992	1.036	1.0047	1.0823	1.0119	1.0099	0.9758	0.9927	1.0123	1.0416	1.0353	0.9972	1.039	1.02923	0.9813	1.0198	1.02648
HVaR@95%	1.201	1.4888	1.1377	0.9331	1.032	1.0261	0.9871	0.955	1.058	1.0016	1.0936	0.9951	1.0241	1.0198	0.9935	0.9968	1.0602	1.0375	0.9981	1.0288	1.04308	0.9911	0.9849	1.02291
ES(99%)**	1.16	1.547	1.0018	0.8981	1.02	1.0369	0.9537	1.008	1.032	0.9574	1.0721	1.0373	1.0191	1.0063	0.9854	0.9859	1.0508	1.0223	0.9701	0.9991	1.04671	0.9902	0.9922	1.0431
ES(98%)	1.18	1.5125	1.0567	0.9187	1.025	1.0213	0.9872	0.998	1.018	0.9683	1.0791	1.0304	1.0154	1.0013	0.9883	0.9952	1.0465	1.0242	0.9791	1.0042	1.03604	0.9967	0.9849	1.04177
ES(95%)	1.197	1.4903	1.0813	0.9344	1.02	1.033	0.9856	0.993	1.034	0.9884	1.0767	1.0184	1.0091	1.001	0.9861	0.9984	1.0493	1.0346	0.9868	1.0159	1.03442	0.9996	0.9888	1.03729

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.204	1.8824	1.838	1.6668	1.747	1.8263	1.7012	1.724	1.795	1.6996	1.8233	1.8687	1.8766	1.9055	1.9008	1.8859	1.9825	1.9808	1.855	1.8564	1.95685	1.9233	1.954	2.0265
HVaR@99%*	1.165	1.7792	2.0013	1.9288	2.014	2.0114	2.0715	2.012	1.96	1.908	2.083	2.1503	2.1712	2.1282	2.1324	2.1776	2.2718	2.3698	2.3236	2.3168	2.38429	2.3929	2.3265	2.4499
HVaR@98%	1.252	1.7807	1.9315	1.8718	1.944	1.9623	1.9831	1.968	2.029	2.0441	2.2121	2.2354	2.2494	2.1786	2.1684	2.1837	2.2675	2.3484	2.3318	2.4209	2.4896	2.4345	2.4894	2.54607
HVaR@95%	1.201	1.7824	2.0335	1.9097	1.962	2.0093	1.9885	1.908	2.015	2.0327	2.1994	2.1765	2.2406	2.2739	2.2608	2.2536	2.3899	2.4734	2.4751	2.5369	2.63399	2.6113	2.5708	2.62661
ES(99%)**	1.16	1.801	1.8138	1.6566	1.708	1.76	1.6647	1.684	1.729	1.6461	1.7725	1.8379	1.869	1.8757	1.8613	1.8451	1.9394	1.9774	1.8956	1.889	1.98252	1.9589	1.9627	2.04508
ES(98%)	1.18	1.7931	1.882	1.7521	1.797	1.8271	1.798	1.798	1.814	1.7557	1.8998	1.9534	1.9813	1.9841	1.972	1.9652	2.0558	2.0996	2.0425	2.046	2.12038	2.1105	2.0855	2.17449
ES(95%)	1.197	1.783	1.93	1.8179	1.852	1.9087	1.8822	1.869	1.927	1.9045	2.0479	2.0818	2.0974	2.0971	2.07	2.0677	2.1685	2.2414	2.2103	2.2425	2.3172	2.3145	2.291	2.37496

Table E1.06- Risk Reduction as a Function of the Number of Positions in Portfolio for Hong Kong

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.986	1.2134	0.9551	1.0151	1.132	1.1468	1.0451	0.957	0.913	0.9569	0.9672	1.0053	0.9907	1.0212	1.0071	1.0083	0.9864	1.0232	0.9762	0.9813	1.0447	0.9949	1.0626	1.04984
HVaR@99%*	0.95	1.1602	0.9608	0.9514	1.138	1.089	1.0374	0.949	0.984	0.9462	1.0459	1.0075	0.975	1.0225	0.9887	1.0215	0.9947	1.0419	1.0031	0.9807	1.04317	1.0052	1.0365	1.03104
HVaR@98%	0.932	1.1199	0.9852	0.9319	1.122	1.0987	1.0554	0.969	1.025	0.949	1.0154	0.9927	1.0159	0.9926	0.9977	1.0277	0.9985	1.0409	0.963	0.9883	1.05615	1.0115	1.0519	1.02712
HVaR@95%	0.886	1.1425	0.9438	0.9545	1.131	1.1003	1.0914	0.932	0.957	0.9785	0.9787	1.0072	1.0028	1.0035	1.0233	1.0058	0.9887	1.0367	0.9877	0.9854	1.0515	1.0056	1.0334	1.02497
ES(99%)**	0.967	1.1697	0.9449	0.9971	1.128	1.1593	1.0467	0.942	0.938	0.9602	0.9605	1.0406	0.9956	1.0138	0.9745	1.0096	0.9925	1.0283	0.9741	0.981	1.04294	1.0033	1.0566	1.04234
ES(98%)	0.95	1.1517	0.9527	0.9813	1.121	1.1315	1.0509	0.941	0.957	0.958	0.9878	1.0248	0.991	1.0176	0.9834	1.0093	0.9954	1.0298	0.9801	0.982	1.04468	1.0046	1.0464	1.04392
ES(95%)	0.917	1.1355	0.9578	0.9663	1.121	1.129	1.0509	0.949	0.965	0.9667	0.9909	1.0097	1.0009	1.0047	0.9916	1.0141	0.9967	1.0345	0.9768	0.987	1.05165	1.0048	1.0435	1.03226

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.986	1.1366	1.1138	1.1364	1.287	1.467	1.5283	1.462	1.313	1.2429	1.2115	1.2222	1.2021	1.2271	1.2295	1.2417	1.233	1.2591	1.223	1.1975	1.24874	1.2426	1.3158	1.37658
HVaR@99%*	0.95	1.0943	1.0423	0.9881	1.12	1.2212	1.2845	1.212	1.181	1.1163	1.162	1.1701	1.14	1.1615	1.1593	1.1907	1.1857	1.2375	1.2528	1.2021	1.25222	1.2604	1.3131	1.36132
HVaR@98%	0.932	1.0488	1.0249	0.9597	1.086	1.1857	1.2484	1.202	1.222	1.1646	1.1773	1.1626	1.1795	1.169	1.1685	1.2071	1.2034	1.252	1.209	1.1961	1.26106	1.2746	1.3455	1.37996
HVaR@95%	0.886	1.0068	0.9535	0.9019	1.018	1.1214	1.2251	1.139	1.091	1.0651	1.0437	1.0476	1.0494	1.0527	1.0774	1.0822	1.0716	1.1103	1.0961	1.0785	1.13386	1.1398	1.1762	1.2072
ES(99%)**	0.967	1.1114	1.0677	1.065	1.199	1.3805	1.4485	1.366	1.264	1.2117	1.1624	1.204	1.1979	1.2146	1.1902	1.2053	1.1928	1.2254	1.1918	1.1685	1.21686	1.222	1.2908	1.34633
ES(98%)	0.95	1.0846	1.0412	1.0225	1.142	1.2903	1.3626	1.284	1.214	1.1649	1.1482	1.1714	1.1625	1.182	1.1691	1.1854	1.1769	1.2121	1.1872	1.1624	1.21278	1.2189	1.2768	1.33509
ES(95%)	0.917	1.0398	1.0009	0.9672	1.084	1.2237	1.2904	1.217	1.171	1.1312	1.1203	1.127	1.1288	1.1341	1.1273	1.1469	1.1414	1.1797	1.1526	1.1358	1.19335	1.1997	1.2535	1.29483

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.07- Risk Reduction as a Function of the Number of Positions in Portfolio for India

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.1549	0.8161	1.1019	1.0821	1.0974	1.116	0.9771	1.0648	0.9932	0.9582	1.0005	1.0074	1.0456	1.0199	1.026	1.0261	1.0145	0.9996	0.9923	0.9943	1.0176	1.0171	1.0147	0.98269
HVaR@99%*	1.4107	0.7697	1.0489	1.1225	1.0003	1.0945	1.0268	1.0296	1.0012	1.0009	0.9706	1.0511	1.0561	1.0242	1.0197	1.0005	1.0119	1.0008	1.0287	1.0161	1.0102	1.0366	1.0142	0.98619
HVaR@98%	1.3378	0.7868	1.0737	1.1364	1.0298	1.1205	1.0337	1.0379	1.0122	0.9795	1.0119	1.0137	1.0223	1.006	1.0214	0.9869	1.0267	1.006	1.002	0.9784	1.0475	1.032	1.0316	0.99876
HVaR@95%	1.2428	0.89	1.0407	1.1728	0.9905	1.101	1.0315	1.0237	0.9452	1.0032	1.0112	1.0286	1.0423	1.0378	1.0386	1.038	1.0389	0.9803	0.9855	1.0239	1.0223	1.0035	1.008	0.97855
ES(99%)**	1.2467	0.8031	1.0901	1.0831	1.082	1.1019	0.9956	1.0348	0.9917	0.9744	0.9855	1.0169	1.0524	1.0212	1.0217	1.0178	1.0162	1.0016	0.9968	1.0039	1.0242	1.0245	1.0246	0.9793
ES(98%)	1.3076	0.7895	1.0676	1.1053	1.0551	1.0967	1.0072	1.0387	0.9944	0.9862	0.9847	1.0282	1.0509	1.0196	1.0162	1.0058	1.0164	0.9997	1.002	1.0037	1.019	1.0237	1.0248	0.98881
ES(95%)	1.2942	0.8238	1.0517	1.1116	1.0448	1.0965	1.0231	1.0415	0.9863	0.9845	0.9933	1.0176	1.0482	1.0177	1.0198	1.0035	1.0178	1.0038	1.001	1.0083	1.0233	1.0222	1.0197	0.99511

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.1549	0.9332	0.9904	1.0466	1.1372	1.2702	1.2522	1.3166	1.3068	1.2545	1.2528	1.2633	1.3286	1.3547	1.378	1.411	1.4373	1.4389	1.4278	1.4195	1.4433	1.4676	1.4867	1.45927
HVaR@99%*	1.4107	1.0855	1.1149	1.2361	1.2265	1.3439	1.3769	1.4173	1.4159	1.4138	1.3662	1.4347	1.513	1.5525	1.5811	1.5823	1.594	1.5945	1.6392	1.6666	1.6798	1.74	1.764	1.74013
HVaR@98%	1.3378	1.0551	1.1215	1.2681	1.3003	1.4605	1.5129	1.5716	1.5873	1.5505	1.573	1.5911	1.624	1.6271	1.6623	1.6402	1.685	1.6989	1.7016	1.6627	1.744	1.7998	1.8628	1.854
HVaR@95%	1.2428	1.1233	1.1415	1.336	1.3272	1.4572	1.5038	1.534	1.4501	1.4532	1.473	1.51	1.5798	1.6465	1.7143	1.7662	1.8355	1.7999	1.7803	1.8226	1.8698	1.87	1.8885	1.84859
ES(99%)**	1.2467	1.0007	1.0622	1.1268	1.2143	1.3349	1.3408	1.3775	1.3686	1.3337	1.3104	1.3349	1.412	1.4406	1.465	1.4893	1.5126	1.5164	1.5124	1.5173	1.5542	1.5922	1.6304	1.59669
ES(98%)	1.3076	1.0346	1.0795	1.1762	1.236	1.3539	1.3679	1.417	1.4074	1.3876	1.3653	1.4048	1.4799	1.508	1.5303	1.5364	1.5608	1.5606	1.5622	1.5699	1.5996	1.6383	1.6795	1.65935
ES(95%)	1.2942	1.0723	1.1051	1.226	1.2822	1.4061	1.4394	1.4968	1.4783	1.4568	1.4465	1.4726	1.5475	1.572	1.6043	1.6087	1.6392	1.6466	1.6509	1.6649	1.7025	1.7406	1.7774	1.76726

Table E1.08- Risk Reduction as a Function of the Number of Positions in Portfolio for Indonesia

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.2254	0.9841	0.9347	1.0017	0.8307	0.9803	1.0442	1.1022	1.0068	1.0037	0.9971	1.0642	1.0162	0.9896	1.0199	1.0253	0.9993	0.9869	1.0272	1.0425	0.9904	1.0304	0.9956	1.02173
HVaR@99%*	1.0581	0.9804	0.9644	0.9073	0.8783	1.0483	1.0592	0.9568	1.0393	1.0134	1.0309	1.0696	1.042	1.0196	1.0026	1.0055	0.9963	1.0081	1.0176	1.0356	1.0059	0.9772	0.9856	0.97824
HVaR@98%	1.0093	0.9316	0.9814	0.9286	0.8403	1.0303	1.0851	0.9363	1.011	1.0346	1.04	1.0545	1.0364	1.0047	1.0242	1.0362	1.0083	0.987	1.0288	1.0294	0.9976	1.005	0.9924	1.00344
HVaR@95%	1.0309	0.9433	0.9274	0.9462	0.7901	1.0317	1.0439	1.0041	1.0502	1.028	1.0035	1.0603	1.0298	1.0018	1.0148	1.0303	1.011	0.9917	0.9951	1.036	1.0223	1.0256	0.994	1.00142
ES(99%)**	1.135	0.9762	0.9179	0.9826	0.8569	1.0047	1.0511	1.0414	1.0062	1.0211	0.9959	1.0579	1.0215	0.993	1.0218	1.018	0.9992	0.9918	1.0242	1.0391	0.9926	1.0243	1.0013	1.0085
ES(98%)	1.0709	0.9776	0.9373	0.9654	0.8575	1.0229	1.0519	0.9997	1.0109	1.0186	1.0091	1.0592	1.032	1.0027	1.0216	1.0153	1.0017	0.9994	1.024	1.0391	0.9895	1.0111	0.995	1.00176
ES(95%)	1.0546	0.9574	0.9332	0.9555	0.8269	1.0303	1.0611	0.9923	1.014	1.0213	1.0106	1.0579	1.0385	1.0066	1.021	1.0258	1.0057	0.9963	1.0222	1.0383	0.9912	1.0104	0.9952	0.99674

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.2254	1.1999	1.1204	1.1403	0.9629	0.9365	0.9813	1.0999	1.1134	1.0876	1.1072	1.1657	1.1874	1.1742	1.2009	1.2263	1.2106	1.1889	1.2086	1.2527	1.2435	1.2734	1.2752	1.28876
HVaR@99%*	1.0581	1.0372	0.9963	0.8879	0.7775	0.8141	0.8611	0.8065	0.8383	0.8423	0.8676	0.9297	0.9686	0.9852	0.9896	0.992	0.9865	0.9936	1.0109	1.0467	1.0539	1.0281	1.0131	0.98839
HVaR@98%	1.0093	0.9394	0.9284	0.8477	0.7095	0.7309	0.7893	0.7254	0.7317	0.7551	0.783	0.8243	0.8501	0.8572	0.8782	0.9088	0.9163	0.9062	0.9312	0.9568	0.9564	0.9607	0.9555	0.95127
HVaR@95%	1.0309	0.9745	0.9088	0.8542	0.658	0.6781	0.7057	0.7078	0.7458	0.7629	0.7661	0.8071	0.828	0.8299	0.8393	0.8621	0.8705	0.864	0.8623	0.8912	0.9103	0.9312	0.928	0.92949
ES(99%)**	1.135	1.1058	1.0241	1.0117	0.8832	0.8836	0.9294	0.9666	0.9743	0.9818	0.9862	1.0376	1.0593	1.0538	1.0742	1.0891	1.08	1.0708	1.0923	1.1319	1.1238	1.1468	1.1547	1.15746
ES(98%)	1.0709	1.0426	0.9834	0.9463	0.8228	0.8409	0.8852	0.8741	0.8811	0.8937	0.9013	0.9516	0.9821	0.985	1.0072	1.0204	1.0187	1.0177	1.0404	1.0801	1.0694	1.0803	1.0807	1.07918
ES(95%)	1.0546	1.0115	0.9495	0.9	0.7403	0.7614	0.8088	0.7931	0.803	0.8167	0.8281	0.8713	0.9041	0.9097	0.9285	0.9511	0.9544	0.951	0.972	1.0081	1.0007	1.0097	1.0087	1.00362

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.09- Risk Reduction as a Function of the Number of Positions in Portfolio for Ireland

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.1968	1.3112	1.051	1.1472	0.7141	1.015	1.0332	1.0388	1.0684	1.0263	1.0516	1.0725	1.0191	0.9989	1.0054	1.0069	1.0188	1.0258	0.9516	1.0859	1.0343	0.9807	1.0253	1.01832
HVaR@99%*	1.0412	1.1227	1.088	1.1695	0.9062	1.0422	1.0659	1.0611	1.0703	1.0599	1.0215	1.0578	0.9636	1.0406	1.0306	1.0296	1.0471	0.9976	1.0184	0.8411	1.0204	1.0178	1.0098	1.01648
HVaR@98%	1.0828	1.1498	1.0798	1.1977	0.8178	1.0528	1.0634	1.0831	1.0167	1.0495	1.0166	1.0504	0.9873	1.0355	1.0415	0.9774	1.054	1.0086	1.0108	0.8681	1.0316	0.9984	1.0188	0.99758
HVaR@95%	1.056	1.1733	1.0405	1.1751	0.878	1.0435	1.0623	1.0863	1.0213	1.0232	0.9992	1.0456	0.9991	1.0243	1.0132	0.9955	1.0371	1.0348	0.9984	0.9098	1.027	1.0032	1.0137	1.01344
ES(99%)**	1.1026	1.3051	1.0825	1.1372	0.7443	1.0182	1.0576	1.0321	1.0499	1.0155	1.044	1.0715	1.0313	1.0019	1.0084	1.0075	1.0322	1.0265	0.9649	0.9882	1.0352	0.9986	1.016	1.01524
ES(98%)	1.0926	1.2011	1.0746	1.1614	0.805	1.0213	1.0579	1.0492	1.0459	1.0264	1.0384	1.0625	1.0105	1.0088	1.0156	1.0137	1.0357	1.0121	0.988	0.9368	1.0286	0.9967	1.0105	1.01795
ES(95%)	1.0799	1.1881	1.0608	1.1526	0.8357	1.0261	1.075	1.0654	1.0331	1.018	1.028	1.0511	1.0052	1.0137	1.0187	1.0129	1.0372	1.0096	0.9986	0.9134	1.0287	0.9957	1.0069	1.00665

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.1968	1.6354	1.6741	1.9779	1.1939	1.2414	1.2498	1.301	1.4323	1.4744	1.5597	1.7074	1.7015	1.7311	1.6785	1.7061	1.7358	1.7623	1.6072	1.7248	1.7859	1.7761	1.8193	1.87338
HVaR@99%*	1.0412	1.1665	1.2667	1.4821	1.2916	1.3327	1.3934	1.4784	1.5634	1.6429	1.6829	1.7837	1.7194	1.7733	1.7921	1.8542	1.9514	1.9538	1.9848	1.6269	1.6661	1.7074	1.6982	1.72972
HVaR@98%	1.0828	1.2371	1.3303	1.5902	1.2895	1.3543	1.4418	1.5797	1.6038	1.6846	1.7154	1.8001	1.7817	1.8452	1.9152	1.864	1.9727	1.9647	1.9731	1.6931	1.7423	1.7464	1.7624	1.74295
HVaR@95%	1.056	1.2308	1.2801	1.5025	1.3491	1.3974	1.4766	1.6184	1.6449	1.6609	1.6519	1.7284	1.7309	1.7704	1.7676	1.7617	1.8407	1.9003	1.888	1.7309	1.801	1.8128	1.8306	1.85822
ES(99%)**	1.1026	1.4735	1.56	1.7962	1.1837	1.2271	1.2933	1.338	1.4205	1.4418	1.5318	1.66	1.7044	1.7168	1.6898	1.7017	1.762	1.8211	1.7075	1.6249	1.6927	1.7032	1.7214	1.75942
ES(98%)	1.0926	1.3263	1.4123	1.6496	1.2309	1.2649	1.3318	1.4016	1.4707	1.5092	1.5818	1.693	1.7109	1.724	1.7233	1.7519	1.8227	1.8492	1.7976	1.6387	1.6963	1.705	1.703	1.74019
ES(95%)	1.0799	1.2875	1.3626	1.5728	1.2765	1.3062	1.403	1.5044	1.5508	1.5722	1.6209	1.708	1.7193	1.7368	1.7609	1.7878	1.8608	1.8721	1.8596	1.6817	1.7376	1.7429	1.7398	1.75638

Table E1.10- Risk Reduction as a Function of the Number of Positions in Portfolio for Israel

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.1385	1.1732	1.094	1.068	0.9153	1.0476	1.0609	0.9927	0.9798	0.998	0.9439	0.9866	1.0559	0.9949	0.9729	0.9945	1.0452	1.0211	1.0252	1.0211	1.0379	1.0374	1.0339	0.99351
HVaR@99%*	1.1844	1.148	1.041	1.1208	0.9301	1.0572	1.0358	0.9856	1.0258	1.0198	0.9136	1.0356	1.0675	1.0137	0.9747	1.0142	1.045	1.0195	1.0423	0.9828	1.0169	1.0367	1.0081	1.00579
HVaR@98%	1.0848	1.2281	1.1179	1.0095	0.9664	1.0481	1.0271	0.9813	1.0052	0.992	0.9976	1.0054	1.0538	0.9821	0.9839	1.0114	1.0426	1.0491	1.0186	1.0242	1.0213	0.993	1.0297	0.98604
HVaR@95%	1.1409	1.3224	1.0626	1.0779	0.9146	1.0366	1.0062	1.0513	1.0089	0.966	1.0753	1.0093	1.0392	0.9865	0.9667	0.9798	1.0324	1.0172	1.0082	1.0156	1.0153	1.0311	1.0384	1.00683
ES(99%)**	1.1362	1.1589	1.0597	1.0592	0.9477	1.071	1.0476	0.9929	0.9562	0.9927	0.9539	1.0001	1.0594	1.0213	0.9684	1.0072	1.0499	1.0293	1.0188	1.0165	1.0381	1.0258	1.0204	0.9931
ES(98%)	1.1288	1.1559	1.0658	1.0607	0.9466	1.0632	1.0376	0.983	0.9827	1.0021	0.9441	1.0122	1.0581	1.0169	0.9698	1.0086	1.047	1.0303	1.0244	1.0076	1.0339	1.0183	1.0197	0.99097
ES(95%)	1.1203	1.2146	1.0739	1.0381	0.945	1.0545	1.0226	0.9876	0.9999	1.0002	0.9717	1.0077	1.0591	1.0075	0.9747	1.0003	1.037	1.0309	1.0227	1.0142	1.0323	1.0113	1.0262	1.00015

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.1385	1.2717	1.3259	1.4268	1.2836	1.3454	1.4313	1.4336	1.4069	1.4031	1.3257	1.3051	1.3747	1.3799	1.3384	1.3445	1.4039	1.4422	1.4887	1.5229	1.5814	1.6406	1.6952	1.68878
HVaR@99%*	1.1844	1.3481	1.4065	1.5596	1.449	1.5244	1.579	1.5547	1.6062	1.6457	1.4803	1.5344	1.6344	1.6494	1.5972	1.6188	1.6916	1.7214	1.7923	1.7483	1.7789	1.8455	1.8581	1.86916
HVaR@98%	1.0848	1.3172	1.4458	1.4584	1.4051	1.4748	1.5156	1.4897	1.5066	1.4861	1.483	1.4913	1.5757	1.5267	1.4979	1.5132	1.5827	1.665	1.6898	1.7353	1.775	1.755	1.8063	1.76567
HVaR@95%	1.1409	1.5041	1.5892	1.7126	1.5591	1.6156	1.6239	1.7069	1.7224	1.6595	1.7852	1.8063	1.8756	1.8544	1.7836	1.7494	1.8058	1.8363	1.8455	1.8671	1.9034	1.9617	2.0344	2.05716
ES(99%)**	1.1362	1.2649	1.3232	1.4173	1.318	1.4076	1.4855	1.471	1.4082	1.4002	1.3322	1.3312	1.4082	1.4452	1.3928	1.4156	1.4821	1.5317	1.564	1.5885	1.6507	1.6992	1.7235	1.71763
ES(98%)	1.1288	1.2743	1.3538	1.4416	1.3572	1.4403	1.5005	1.4722	1.4508	1.455	1.3738	1.3905	1.4703	1.4996	1.4474	1.4668	1.5337	1.584	1.623	1.6298	1.6875	1.719	1.7468	1.72974
ES(95%)	1.1203	1.3466	1.4449	1.5031	1.4162	1.4942	1.5311	1.5099	1.5134	1.5121	1.4701	1.4817	1.5682	1.5817	1.5408	1.5415	1.5984	1.6508	1.6875	1.7121	1.7688	1.7891	1.833	1.8316

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.11- Risk Reduction as a Function of the Number of Positions in Portfolio for Italy

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.4288	1.1075	0.9418	1.0432	0.9697	1.0006	1.0376	0.9277	1.0645	1.0158	0.9703	1.0171	1.0396	1.0597	1.0276	1.0081	0.9991	1.014	1.0058	0.9825	0.9984	1.0241	1.0214	1.00118
HVaR@99%*	1.1048	1.0354	0.9759	1.0964	1.0308	1.0396	1.0212	0.9913	1.0388	1.0223	1.0553	1.0182	1.0273	0.9692	1.0266	1.0041	0.9902	0.9874	0.9884	1.0271	1.0128	1.0002	1.0104	1.00092
HVaR@98%	1.1285	0.9648	1.0575	1.0353	1.019	0.984	1.0974	1.0236	1.0514	1.0222	1.0153	1.037	1.0591	0.9555	1.0228	1.0155	0.9896	1.0094	0.9781	1.0229	0.9982	1.0159	1.024	0.99122
HVaR@95%	1.1525	1.0166	0.9429	1.0908	1.0234	1.0369	1.0063	1.0092	1.0667	1.0052	1.014	1.0227	1.0619	0.9458	1.0211	1.0374	1.0017	1.0008	0.9723	1.03	0.9881	1.0115	1.0224	1.00546
ES(99%)**	1.3373	1.0704	0.9663	1.0433	0.9923	1.0124	1.0379	0.9601	1.0457	0.9838	0.9922	1.0222	1.0458	1.0259	1.0329	1.0132	0.9979	1.0099	0.9977	0.992	1.0005	1.0199	1.0179	1.00436
ES(98%)	1.236	1.0367	0.9738	1.0579	1.013	1.0185	1.0263	0.9816	1.0446	0.9935	1.0134	1.0213	1.0429	1.003	1.0292	1.015	0.9934	1.0053	0.9867	1.0029	1.0027	1.0132	1.0137	1.00663
ES(95%)	1.1805	1.0087	0.9967	1.0529	1.0129	1.0236	1.0373	0.9916	1.0567	0.9918	1.0283	1.0238	1.0463	0.9852	1.0234	1.0183	0.9973	0.9993	0.9783	1.0096	1.0006	1.0187	1.0151	1.00727

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.4288	1.6035	1.5245	1.5767	1.5306	1.5317	1.5983	1.4285	1.5309	1.5794	1.5413	1.5805	1.6527	1.7249	1.7765	1.7837	1.7908	1.827	1.8476	1.7781	1.7798	1.8293	1.8734	1.86499
HVaR@99%*	1.1048	1.1552	1.0926	1.2023	1.2419	1.2917	1.3128	1.3013	1.35	1.3762	1.4601	1.491	1.5299	1.4851	1.5294	1.54	1.5317	1.506	1.4789	1.5152	1.5481	1.5414	1.5559	1.55197
HVaR@98%	1.1285	1.0937	1.1311	1.1719	1.2012	1.1858	1.3134	1.3328	1.3841	1.4166	1.4401	1.4939	1.5738	1.5204	1.5487	1.5733	1.5716	1.5953	1.5449	1.576	1.5838	1.6027	1.6362	1.61107
HVaR@95%	1.1525	1.183	1.0915	1.1973	1.2221	1.2656	1.2807	1.2934	1.3731	1.3726	1.4023	1.4327	1.5278	1.4317	1.4628	1.5255	1.5264	1.5242	1.4708	1.5153	1.4951	1.5091	1.5481	1.55308
ES(99%)	1.3373	1.4406	1.3844	1.4383	1.4315	1.4512	1.5132	1.4229	1.4857	1.4666	1.4579	1.4932	1.5661	1.5991	1.6579	1.6802	1.6784	1.6998	1.699	1.6759	1.6796	1.7168	1.7507	1.75531
ES(98%)	1.236	1.292	1.2416	1.3121	1.3367	1.3637	1.4013	1.3606	1.4168	1.4053	1.4285	1.4603	1.5248	1.5326	1.5805	1.6062	1.5948	1.6034	1.583	1.5829	1.5914	1.6122	1.6366	1.64569
ES(95%)	1.1805	1.19	1.1738	1.2381	1.2583	1.2892	1.3414	1.3257	1.398	1.382	1.4233	1.4591	1.5257	1.5094	1.5451	1.5754	1.5736	1.5717	1.5329	1.5459	1.55	1.5765	1.5997	1.61189

Table E1.12- Risk Reduction as a Function of the Number of Positions in Portfolio for Japan

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.2655	1.0837	0.9882	0.9651	1.0633	1.0195	1.007	0.9502	1.0752	1.0135	1.0066	0.9977	0.9915	0.9997	1.0393	0.979	1.0406	0.9956	0.9994	0.9958	1.0066	1.0191	1.0114	0.98027
HVaR@99%*	1.1019	1.0321	1.0597	1.019	1.1488	0.9296	1.0224	0.9667	1.0969	0.9992	0.9931	1.0193	1.0042	0.9904	1.0231	0.9901	1.037	0.9816	0.9999	1.005	1.0049	1.0059	1.0193	0.97712
HVaR@98%	1.112	1.1586	0.9673	1.0589	1.0784	0.9652	1.0399	0.9436	1.1055	1.0211	0.9901	1.0012	0.9992	0.983	1.043	0.9822	1.0479	0.9841	0.9946	1.0029	0.9919	1.0056	0.9683	0.99399
HVaR@95%	1.0441	1.1455	1.0118	1.0056	1.0826	1.0039	1.0326	0.9866	1.0559	0.9863	0.9964	1.012	1.0076	1.0008	1.0262	1.0151	1.0349	0.9896	0.9864	1.0161	1.0023	0.993	0.9924	0.99597
ES(99%)**	1.1972	1.0695	1.0265	0.9655	1.1015	1.0216	0.9977	0.9525	1.0655	1.0098	1.0006	1.0109	0.999	0.9915	1.0341	0.9864	1.0372	0.998	1.0031	1.0013	1.0045	0.9976	1.013	0.9792
ES(98%)	1.1555	1.0642	1.0299	0.9804	1.1163	0.984	1.0073	0.9642	1.0752	1.0031	1.0022	1.0042	1.0015	0.9976	1.0347	0.9782	1.0424	0.9928	0.9993	0.9998	1.006	1.0005	1.0046	0.98183
ES(95%)	1.1268	1.0995	1.0148	1.0001	1.0954	0.9833	1.0161	0.9691	1.0906	0.991	0.9959	1.0181	1.001	0.9939	1.0347	0.9919	1.0381	0.9892	0.9948	1.0009	1.0055	1.0009	1.001	0.98746

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.2655	1.3741	1.3628	1.3257	1.3783	1.3914	1.3995	1.3198	1.4225	1.4489	1.4611	1.4625	1.4574	1.4601	1.5291	1.5089	1.5603	1.5595	1.5667	1.5576	1.5698	1.608	1.6298	1.58743
HVaR@99%*	1.1019	1.1318	1.2004	1.2177	1.3985	1.2904	1.3214	1.276	1.4015	1.3962	1.388	1.4134	1.4159	1.406	1.4368	1.4257	1.4783	1.4546	1.4547	1.4606	1.4648	1.4714	1.4956	1.467
HVaR@98%	1.112	1.2892	1.2304	1.2834	1.3898	1.3417	1.399	1.3164	1.4529	1.4779	1.4648	1.4711	1.4587	1.4305	1.4916	1.4701	1.5367	1.5163	1.5074	1.511	1.4949	1.5019	1.4553	1.44909
HVaR@95%	1.0441	1.1917	1.1996	1.2017	1.3025	1.3077	1.3516	1.3284	1.4038	1.381	1.379	1.3966	1.406	1.4067	1.4414	1.4727	1.5177	1.5009	1.4869	1.5053	1.5074	1.493	1.4813	1.4752
ES(99%)	1.1972	1.2842	1.3237	1.2902	1.4033	1.419	1.4159	1.341	1.4316	1.4512	1.45	1.4739	1.4828	1.4639	1.5198	1.5034	1.5566	1.5538	1.5669	1.5716	1.5815	1.5812	1.6043	1.56188
ES(98%)	1.1555	1.2297	1.2662	1.25	1.3949	1.3605	1.3692	1.3201	1.421	1.4243	1.4256	1.4357	1.4417	1.435	1.4872	1.4544	1.5173	1.5072	1.5086	1.5099	1.5207	1.5247	1.5327	1.50333
ES(95%)	1.1268	1.236	1.2502	1.252	1.3773	1.3505	1.3718	1.3263	1.4486	1.4318	1.4267	1.4564	1.457	1.448	1.4993	1.4887	1.5467	1.5313	1.5237	1.5244	1.5332	1.5343	1.5368	1.51909

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.13- Risk Reduction as a Function of the Number of Positions in Portfolio for Mexico

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.28	1.244	0.97756	1.061	1.0633	1.008	0.992	1.1109	1.056	1.0734	1.0126	1.0508	1.025	0.8882	0.9876	1.0201	1.0066	1.039	1.0114	1.0297	1.0403	1.022	1.0004	0.98889
HVaR@99%*	1.121	1.405	0.8615	0.956	1.073	0.973	1.0216	1.1226	0.999	1.0221	1.0582	1.0652	1.0178	0.9956	1.0066	1.0372	0.9796	1.0429	1.0334	1.0322	0.8563	1.0199	0.9979	1.03098
HVaR@98%	1.167	1.418	0.85399	0.949	1.0719	1.032	0.9966	1.0845	1.039	1.069	1.003	1.0749	1.0032	0.9818	0.9971	1.0328	1.0013	1.0256	1.0228	1.0236	0.9789	1.026	1.007	0.94456
HVaR@95%	1.134	1.4	0.88492	0.978	1.0276	1.028	0.9974	1.1036	1.035	1.0603	1.0208	1.0643	1.002	0.9421	1.0411	1.0438	0.9868	1.0311	1.0222	1.0313	1.0128	1.013	0.9885	0.96418
ES(99%)**	1.31	1.273	0.93742	1.001	1.0476	1.014	0.9863	1.0989	1.029	1.0578	1.0073	1.0459	1.0223	0.913	1.0041	1.0212	0.9919	1.0346	1.0179	1.0304	1.026	1.0249	0.9959	0.988
ES(98%)	1.238	1.317	0.90846	0.978	1.0515	1.012	0.992	1.0998	1.031	1.0497	1.0154	1.0546	1.0146	0.9353	1.0072	1.0275	0.9898	1.0357	1.0228	1.0302	0.9687	1.0251	1.0034	0.99494
ES(95%)	1.176	1.363	0.89159	0.973	1.0429	1.022	1.0027	1.0966	1.034	1.0531	1.0106	1.0568	1.0094	0.9493	1.0163	1.0231	0.988	1.0372	1.0295	1.0311	0.9771	1.0209	1.0034	0.96319

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.28	1.664	1.52428	1.56	1.6193	1.595	1.5934	1.7776	1.827	1.9624	2.0168	2.105	2.1557	1.8308	1.8341	1.8681	1.8725	1.9449	1.9576	2.0189	2.0897	2.141	2.1523	2.11669
HVaR@99%*	1.121	1.576	1.36627	1.324	1.3862	1.348	1.3893	1.5585	1.549	1.5882	1.6681	1.7713	1.81	1.7789	1.7999	1.8688	1.832	1.9075	1.9691	2.0261	1.7219	1.7554	1.7457	1.80337
HVaR@98%	1.167	1.641	1.39254	1.323	1.4248	1.469	1.4546	1.5814	1.64	1.7549	1.7519	1.876	1.8998	1.8566	1.8677	1.9347	1.9289	1.9827	2.0318	2.0842	2.0476	2.1077	2.1053	1.96585
HVaR@95%	1.134	1.587	1.40466	1.363	1.404	1.447	1.4465	1.6006	1.654	1.7522	1.7999	1.9134	1.9114	1.8154	1.8952	1.9809	1.9497	2.0138	2.0647	2.1354	2.1773	2.2107	2.1754	2.08662
ES(99%)	1.31	1.715	1.55636	1.541	1.6022	1.605	1.5905	1.7534	1.782	1.8907	1.9281	2.0005	2.0411	1.7804	1.8045	1.8513	1.8235	1.8899	1.926	1.9878	2.0364	2.0914	2.0749	2.04203
ES(98%)	1.238	1.651	1.47853	1.445	1.5091	1.523	1.5224	1.6725	1.714	1.8029	1.839	1.9275	1.9655	1.7927	1.813	1.8679	1.8335	1.8992	1.9443	2.0032	1.9552	2.0056	2.0083	1.99655
ES(95%)	1.176	1.607	1.42723	1.393	1.4507	1.485	1.4947	1.6407	1.693	1.787	1.8104	1.9069	1.9318	1.8206	1.8576	1.9032	1.8745	1.9448	2.0031	2.066	2.0322	2.0782	2.0791	1.99851

Table E1.14- Risk Reduction as a Function of the Number of Positions in Portfolio for New Zealand

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.124	1.125	0.97918	1.084	1.0836	1.067	0.9816	1.0346	1.035	1.005	1.0272	0.9847	1.0495	0.9961	1.0329	0.9903	0.9717	1.0007	1.0068	1.0151	1.0094	0.9883	1.0094	1.02492
HVaR@99%*	1.034	1.065	0.99866	1.16	1.0801	1.073	1.0212	1.0753	1.051	1.0512	1.0076	1.0184	1.0447	1.0195	0.9782	1.001	1.0081	0.994	1.0103	0.9784	1.0259	1.009	1.0183	1.00016
HVaR@98%	1.032	1.142	0.98872	1.11	1.103	1.056	1.0299	1.0476	1	1.0279	1.0084	1.0525	1.02	1.0186	0.9666	1.0056	1.0154	1.021	1.0313	1.0153	1.0143	1.0137	0.9886	1.02147
HVaR@95%	1.115	1.08	0.94968	1.114	1.1028	1.045	1.0439	1.0324	1.055	1.0273	1.0347	1.0195	1.0337	1.0167	0.9925	1.0353	1.0105	1.033	1.0194	0.9743	1.0058	1.021	1.0402	0.99203
ES(99%)**	1.033	1.131	0.97827	1.1	1.0769	1.06	0.9951	1.0403	1.029	1.0035	1.0265	1.0068	1.0369	1.0069	1.0172	0.9969	0.9974	0.9938	1.0145	1.0047	1.0157	0.9975	0.9996	1.02034
ES(98%)	1.032	1.11	0.99215	1.12	1.0704	1.07	1.0083	1.0468	1.032	1.0213	1.015	1.0046	1.0416	1.0114	1.003	0.9995	1.0029	0.9921	1.0105	1.0008	1.0165	1.0049	1.0088	1.01313
ES(95%)	1.053	1.116	0.96654	1.119	1.0943	1.063	1.0171	1.0327	1.029	1.0253	1.03	1.0049	1.0386	1.015	0.9959	1.014	1.0109	1.0024	1.0099	0.9987	1.0112	1.0087	1.0155	1.01045

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.124	1.285	1.30161	1.389	1.5001	1.586	1.5723	1.6161	1.67	1.6831	1.748	1.7292	1.8107	1.7886	1.8393	1.7634	1.7413	1.7396	1.767	1.7671	1.7816	1.7786	1.7971	1.84136
HVaR@99%*	1.034	1.1	1.10344	1.249	1.3277	1.458	1.471	1.5815	1.641	1.7082	1.7174	1.7125	1.7887	1.8234	1.765	1.769	1.782	1.7743	1.7938	1.761	1.8092	1.826	1.858	1.86343
HVaR@98%	1.032	1.182	1.16503	1.282	1.4082	1.481	1.5271	1.603	1.609	1.6462	1.6599	1.7274	1.7574	1.7882	1.7301	1.7357	1.7621	1.7881	1.8476	1.8615	1.8902	1.9174	1.8964	1.9359
HVaR@95%	1.115	1.188	1.113	1.237	1.3475	1.412	1.468	1.5095	1.593	1.6417	1.6868	1.7227	1.7801	1.8106	1.7975	1.8529	1.8722	1.9318	1.97	1.9119	1.9224	1.9597	2.0406	2.02543
ES(99%)	1.033	1.168	1.17428	1.279	1.3598	1.434	1.4438	1.5027	1.54	1.5406	1.594	1.6205	1.6688	1.6653	1.6884	1.6667	1.6756	1.6727	1.6969	1.7016	1.7171	1.7181	1.7116	1.74291
ES(98%)	1.032	1.139	1.14768	1.272	1.3436	1.438	1.4574	1.527	1.565	1.5991	1.6269	1.6294	1.6913	1.7034	1.7009	1.6986	1.7126	1.6996	1.7163	1.7176	1.7389	1.7528	1.7614	1.78069
ES(95%)	1.053	1.166	1.13257	1.257	1.3632	1.448	1.4724	1.5213	1.565	1.6017	1.6505	1.6535	1.7138	1.7363	1.7282	1.7529	1.7739	1.7737	1.7894	1.7877	1.8063	1.8233	1.8476	1.86507

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.15- Risk Reduction as a Function of the Number of Positions in Portfolio for Singapore

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.061	1.0131	1.057	1.005	1.082	1.036	0.963	0.953	1.015	1.0364	1.1053	1.0152	1.0427	1.0499	1.0292	1.0053	1.0126	1.0291	1.0131	1.0179	0.9787	0.991	0.9376	1.0211
HVaR@99%*	1.052	1.1208	1.06	1.036	0.977	0.991	1.014	1.037	1.029	0.9801	1.0992	1.0349	1.0291	1.0581	0.9905	0.9903	1.0132	1.0157	0.9409	1.0154	1.0167	1.022	0.9791	0.99318
HVaR@98%	1.049	1.1131	1.059	1.08	0.999	1.058	0.977	0.998	1.062	0.9892	1.0956	1.0314	1.0047	1.059	1.0488	1.0231	0.9931	1.0153	0.9985	1.0036	0.9725	1.0098	0.9732	1.02962
HVaR@95%	1.088	1.1019	1.028	1.072	1.094	1.055	0.997	0.947	1.069	0.9751	1.0881	1.0261	1.0635	1.0491	1.0209	1.0068	1.0088	0.9903	0.9662	1.0288	0.9738	1.0221	0.9776	1.02638
ES(99%)**	1.03	1.0405	1.05	0.999	1.048	1.04	0.984	0.962	1.013	1.0116	1.1011	1.0111	1.0364	1.0509	1.0257	0.9996	1.0066	1.0148	1.0166	1.0152	0.9771	0.9955	0.9658	1.02216
ES(98%)	1.039	1.0786	1.049	1.012	1.026	1.033	0.984	0.992	1.015	1.0035	1.0979	1.013	1.0362	1.0511	1.0202	0.9982	1.0109	1.0087	0.9946	1.0142	0.9875	1.0085	0.9652	1.01289
ES(95%)	1.06	1.0841	1.058	1.044	1.029	1.044	0.986	0.988	1.023	1.0042	1.0984	1.0155	1.0379	1.0489	1.0282	1.0083	1.0024	1.0026	0.987	1.0082	0.9846	1.0096	0.9827	1.01346

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.061	1.0762	1.135	1.14	1.238	1.274	1.229	1.179	1.201	1.2377	1.368	1.3831	1.4436	1.5145	1.571	1.5707	1.5915	1.6366	1.6566	1.6903	1.6458	1.6342	1.5042	1.54082
HVaR@99%*	1.052	1.1693	1.247	1.278	1.259	1.237	1.259	1.308	1.348	1.3108	1.4374	1.4973	1.5463	1.6381	1.6096	1.5972	1.6166	1.654	1.522	1.55	1.5766	1.6138	1.5867	1.57492
HVaR@98%	1.049	1.1652	1.235	1.329	1.328	1.398	1.365	1.365	1.445	1.4243	1.5563	1.5982	1.6031	1.697	1.7811	1.8215	1.804	1.8339	1.8281	1.8327	1.7914	1.8092	1.7549	1.79958
HVaR@95%	1.088	1.1992	1.234	1.322	1.45	1.523	1.519	1.433	1.531	1.4891	1.621	1.6579	1.7639	1.8495	1.8879	1.9021	1.9208	1.9056	1.8371	1.8956	1.8544	1.8923	1.8419	1.88999
ES(99%)	1.03	1.0745	1.125	1.123	1.18	1.224	1.207	1.165	1.186	1.1974	1.3162	1.3303	1.3812	1.4515	1.4997	1.4935	1.5085	1.5341	1.5613	1.5895	1.5423	1.5392	1.4728	1.50709
ES(98%)	1.039	1.1202	1.177	1.189	1.225	1.26	1.243	1.236	1.257	1.2581	1.3787	1.3981	1.4512	1.5269	1.5653	1.5597	1.5786	1.5957	1.5837	1.6104	1.5862	1.6017	1.5403	1.56107
ES(95%)	1.06	1.1493	1.217	1.269	1.307	1.362	1.345	1.332	1.363	1.3667	1.4992	1.5239	1.5818	1.6608	1.7101	1.7238	1.7291	1.7354	1.7108	1.7255	1.6989	1.7167	1.685	1.70832

Table E1.16- Risk Reduction as a Function of the Number of Positions in Portfolio for South Africa

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.698	1.0787	0.98	0.895	1.042	0.975	0.967	1.001	1.09	0.9603	0.9618	0.974	0.9849	0.9934	0.9833	1.0001	1	1.0294	0.9982	0.9844	1.0116	1.0324	1.0131	0.98705
HVaR@99%*	1.614	1.0516	1.021	1.032	0.995	0.987	1.012	0.995	1.038	1.0573	1.0011	0.9995	0.9858	1.0091	1.014	1.0202	1.0244	0.9778	1.024	0.9675	0.9884	1.0387	0.998	0.97775
HVaR@98%	1.423	1.0648	1.126	1.051	0.938	0.977	0.957	1.008	1.104	0.9798	1.0216	1.0089	0.9897	1.0251	0.9888	1.0125	1.0172	1.0121	0.9578	1.0131	1.0195	1.0113	0.9911	1.01671
HVaR@95%	1.264	1.1114	1.102	1.05	1.008	1.019	0.977	1.025	1.025	1.0056	1.0106	0.9837	1.0056	1.0111	1.011	1.0231	0.9969	0.9885	1.0155	0.9947	1.0217	0.9934	1.0258	1.01387
ES(99%)**	1.609	1.0879	0.986	0.948	1.012	1.006	0.982	0.993	1.033	0.9915	0.9825	0.9995	0.9862	1.0044	0.9863	0.9964	1.001	1.022	0.9939	0.9726	1.0149	1.0299	1.0132	0.99556
ES(98%)	1.582	1.0647	1.015	0.986	0.998	0.994	0.981	1	1.043	1.004	0.9971	1.0007	0.9848	1.0081	0.9938	1.0084	1.0082	1.0031	1.0044	0.9755	1.0131	1.0283	1.0086	0.99339
ES(95%)	1.419	1.0931	1.071	1.009	0.991	1.003	0.982	1.006	1.044	0.9895	0.9999	1.0023	0.9854	1.0046	1.0013	1.0136	1.0069	1.0071	1.0004	0.9854	1.0131	1.0269	1.0083	0.99988

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.698	1.8051	1.732	1.546	1.598	1.56	1.504	1.503	1.635	1.5696	1.5153	1.4764	1.4596	1.452	1.4299	1.4355	1.4371	1.4725	1.469	1.4456	1.4633	1.5113	1.5322	1.51211
HVaR@99%*	1.614	1.667	1.684	1.729	1.717	1.687	1.697	1.693	1.764	1.8698	1.8665	1.8549	1.8338	1.8406	1.8572	1.8952	1.9447	1.9022	1.9448	1.8906	1.866	1.9539	1.953	1.91207
HVaR@98%	1.423	1.5076	1.699	1.748	1.653	1.596	1.518	1.529	1.71	1.6658	1.6896	1.707	1.6794	1.7183	1.7017	1.7205	1.7578	1.7762	1.6975	1.7215	1.7522	1.7719	1.7548	1.78308
HVaR@95%	1.264	1.4151	1.522	1.601	1.611	1.635	1.596	1.637	1.679	1.6833	1.6975	1.6677	1.6772	1.6951	1.7113	1.7504	1.7462	1.7293	1.7533	1.744	1.7865	1.7693	1.8143	1.83977
ES(99%)	1.609	1.7257	1.674	1.582	1.598	1.608	1.571	1.561	1.616	1.596	1.5698	1.5723	1.5518	1.5619	1.5433	1.5405	1.5382	1.5705	1.5581	1.5208	1.5447	1.5987	1.6209	1.6131
ES(98%)	1.582	1.6657	1.673	1.644	1.641	1.626	1.59	1.59	1.665	1.6712	1.6662	1.6654	1.6415	1.6538	1.6431	1.6593	1.6717	1.6779	1.6821	1.646	1.667	1.7226	1.7381	1.72683
ES(95%)	1.419	1.5455	1.643	1.653	1.64	1.643	1.609	1.619	1.693	1.673	1.6731	1.6766	1.6523	1.6589	1.6609	1.6858	1.6985	1.7113	1.7109	1.6863	1.7081	1.7561	1.7726	1.77211

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,...,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,...,P1/P25 represents the absolute risk reduction relative to first position

Table E1.17- Risk Reduction as a Function of the Number of Positions in Portfolio for South Korea

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0825	1.1878	1.0635	1.0284	1.0441	0.9593	0.9914	1.0008	0.9834	1.0186	1.0324	1.007	0.9727	1.065	0.9829	0.953	1.0142	0.9865	1.021	1.0042	1.0044	0.9835	0.9779	1.0068
HVaR@99%*	1.1383	1.194	1.1569	1.0054	1.0052	0.9448	0.9848	1.0748	0.9879	1.0158	0.9987	0.9865	1.0026	1.0361	0.9695	0.9705	0.9877	1.0004	1.0374	1.0232	0.957	0.991	0.9995	1.0258
HVaR@98%	1.1382	1.128	1.1239	0.9713	1.0622	0.9755	1.0357	1.0257	0.9966	1.0129	1.0055	1.0227	0.98	1.0272	0.9908	0.987	1.0049	0.9911	1.0143	0.9703	0.9682	1.003	1.0113	1.0079
HVaR@95%	1.0817	1.1105	1.1078	0.9909	1.0134	0.9722	1.04	0.9581	1.0216	1.0069	1.0225	0.9722	0.9921	1.0338	0.9892	0.9804	0.988	0.9935	1.0167	1.0257	0.9958	1.0145	1.0017	1.0119
ES(99%)**	1.1011	1.1687	1.1133	1.0317	1.0343	0.9462	1.0021	1.006	0.9925	1.0201	1.018	0.9833	0.9864	1.0524	0.9844	0.9553	1.0097	0.9938	1.0287	1.0071	0.9761	0.9917	1.0003	1.0197
ES(98%)	1.123	1.1756	1.1194	1.0167	1.0301	0.9433	1.0114	1.0177	0.9971	1.0187	1.0075	0.9918	0.9882	1.0402	0.9852	0.9641	0.9975	0.9947	1.0344	1.0062	0.968	0.9895	0.9989	1.024
ES(95%)	1.1124	1.1605	1.1124	0.9917	1.0278	0.9521	1.0206	1.0192	0.9995	1.0145	1.0057	0.9904	0.9989	1.0316	0.9851	0.9705	0.9993	0.9964	1.0226	1.0021	0.9666	0.9927	1.0051	1.0159

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0825	1.2767	1.3723	1.394	1.461	1.3908	1.3802	1.3764	1.3523	1.3849	1.4289	1.4326	1.3948	1.4829	1.4585	1.3845	1.4074	1.3855	1.417	1.421	1.4215	1.3969	1.3631	1.3707
HVaR@99%*	1.1383	1.327	1.5391	1.5395	1.5487	1.4585	1.4227	1.5337	1.5071	1.5325	1.5296	1.5049	1.5113	1.5685	1.5257	1.4758	1.4621	1.4668	1.522	1.5537	1.4713	1.4572	1.4571	1.4941
HVaR@98%	1.1382	1.2778	1.4378	1.3871	1.4704	1.4343	1.4899	1.5143	1.5064	1.5242	1.5416	1.5832	1.5483	1.5925	1.5836	1.5551	1.5605	1.5442	1.5587	1.5117	1.4464	1.4514	1.4696	1.4833
HVaR@95%	1.0817	1.2029	1.3317	1.3217	1.3361	1.295	1.3454	1.2886	1.3229	1.3216	1.3542	1.3137	1.2995	1.3485	1.3304	1.3014	1.2853	1.2783	1.3039	1.3343	1.3268	1.3472	1.3534	1.3719
ES(99%)	1.1011	1.2712	1.4266	1.4667	1.5165	1.4261	1.4249	1.4328	1.4234	1.4549	1.4824	1.4535	1.4375	1.5095	1.4855	1.4184	1.4355	1.4255	1.4699	1.4808	1.4317	1.4203	1.4182	1.4448
ES(98%)	1.123	1.3016	1.4654	1.4853	1.5313	1.4342	1.4481	1.4772	1.4702	1.4998	1.5119	1.4956	1.4807	1.5379	1.517	1.4613	1.4584	1.4516	1.5055	1.5151	1.4504	1.4354	1.4338	1.4678
ES(95%)	1.1124	1.2859	1.4374	1.4243	1.4622	1.3833	1.4112	1.4406	1.4394	1.4605	1.4715	1.454	1.4526	1.5	1.4776	1.4311	1.4292	1.4258	1.4606	1.463	1.4018	1.3918	1.3988	1.421

Table E1.18- Risk Reduction as a Function of the Number of Positions in Portfolio for Spain

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P1	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.9724	1.1262	1.1824	1.0972	1.0814	1.0684	1.0505	1.0392	1.0041	1.0229	0.9946	1.0276	0.9847	1.0351	1.0184	1.0008	0.9784	1.0079	1.0059	1.0236	1.003	0.9982	1.022	1.025
HVaR@99%*	1.1122	1.0343	1.1233	1.1031	1.1314	1.0662	1.0427	1.0025	1.0493	1.0637	0.9991	1.0006	1.0208	1.0026	1.05	0.9718	0.9858	0.9762	1.0141	1.0087	0.9975	0.9852	1.0308	1.0253
HVaR@98%	1.1013	1.0288	1.1758	1.0337	1.1326	1.0395	1.0262	1.0132	1.0637	1.0717	1.0298	0.9998	0.9809	1.0308	1.0007	1.0002	1.0026	0.9953	1.0079	1.0173	0.9964	1.0011	1.0192	1.0375
HVaR@95%	1.1666	1.0277	1.1404	1.1079	1.1214	1.0425	1.0058	1.0231	1.075	1.0195	1.0333	1.0187	0.9836	1.0004	1.0518	1.0247	1.0062	0.9789	1.0166	1.0389	0.994	0.9793	1.0363	1.0335
ES(99%)**	1.0479	1.0977	1.1512	1.088	1.0942	1.0625	1.0472	1.0324	1.0256	1.0338	1.0148	1.0131	0.9863	1.0279	1.0172	1.0049	0.9778	0.9906	1.0101	1.014	0.9963	0.9996	1.0262	1.0282
ES(98%)	1.0775	1.0752	1.1323	1.0922	1.1095	1.0571	1.0363	1.0263	1.0323	1.0528	1.0116	1.0026	0.9971	1.0175	1.0276	0.9985	0.9866	0.9778	1.0118	1.012	0.9939	0.9955	1.0332	1.0254
ES(95%)	1.1093	1.05	1.1301	1.0904	1.1074	1.0476	1.0255	1.0267	1.0523	1.0576	1.0142	1.0048	0.994	1.0159	1.0257	1.0046	0.9831	0.9974	1.0168	1.0201	0.9898	0.9948	1.0297	1.0259

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.9724	1.1125	1.2875	1.4108	1.5226	1.6295	1.706	1.7756	1.7959	1.8288	1.8225	1.8631	1.8286	1.8816	1.9151	1.9176	1.8807	1.9008	1.9152	1.9599	1.968	1.9589	2.0019	2.0539
HVaR@99%*	1.1122	1.1745	1.327	1.4581	1.6255	1.7162	1.7987	1.7637	1.8489	1.9586	1.9419	1.9508	1.9931	1.9893	2.0822	2.0227	1.9946	1.9589	1.975	1.9882	1.9845	1.9461	2.008	2.0565
HVaR@98%	1.1013	1.1471	1.3526	1.3902	1.554	1.6292	1.6686	1.6615	1.7593	1.889	1.9476	1.9371	1.9031	1.9529	1.9567	1.9498	1.9552	1.9535	1.9646	2.0007	1.9903	1.989	2.0272	2.1002
HVaR@95%	1.1666	1.2128	1.3789	1.5335	1.6916	1.7583	1.7655	1.7979	1.9356	1.9722	2.0157	2.063	2.0114	2.01	2.1138	2.1639	2.177	2.128	2.1672	2.2456	2.2269	2.1857	2.2677	2.3385
ES(99%)	1.0479	1.172	1.3361	1.4482	1.5804	1.6789	1.7379	1.7874	1.8408	1.8991	1.926	1.9446	1.9208	1.9655	1.9984	2.0096	1.9687	1.9528	1.9729	1.9986	1.9894	1.9837	2.0356	2.0938
ES(98%)	1.0775	1.1795	1.3354	1.4508	1.5994	1.6876	1.7382	1.7685	1.8258	1.9228	1.9377	1.9389	1.9344	1.9621	2.0136	2.0116	1.9862	1.9469	1.9654	1.988	1.9752	1.9621	2.0277	2.0786
ES(95%)	1.1093	1.1818	1.3356	1.4504	1.5895	1.6688	1.7047	1.7367	1.8276	1.9335	1.9569	1.9639	1.9499	1.9794	2.027	2.0358	1.9992	1.9993	2.0311	2.0712	2.0476	2.0343	2.0938	2.1472

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.19- Risk Reduction as a Function of the Number of Positions in Portfolio for Sweden

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0306	1.3305	1.183	1.1832	1.1436	1.1093	1.0505	1.0739	1.0367	0.9657	0.9957	1.0167	1.0123	1.0107	1.0236	0.987	1.0061	1.0259	1.0145	0.9785	0.9977	0.9842	1.0074	0.99566
HVaR@99%*	0.9211	1.2323	1.12	1.1053	1.1173	1.056	1.0978	1.0444	0.9837	0.9293	0.9907	1.0024	1.0058	1.0104	1.0159	0.9944	1.0099	1.0227	1.0251	0.9751	1.0071	1.0164	1.0239	1.01492
HVaR@98%	0.9424	1.1917	1.131	1.096	1.036	1.0623	1.0467	0.9991	1.0271	0.9084	1.0253	1.001	1.0204	0.9863	0.9985	1.0308	1.0334	1.0104	1.0225	0.9946	1.0196	1.0133	1.0033	1.03284
HVaR@95%	0.8292	1.2128	1.129	1.1048	1.0132	1.0666	1.0119	1.0211	1.0115	0.9448	0.9999	1.0177	1.0167	1.0032	1.0255	1.0216	1.0045	1.0087	1.036	0.9876	1.0235	0.9839	1.0189	1.01788
ES(99%)**	0.9929	1.3574	1.181	1.1296	1.093	1.0816	1.0339	1.0475	1.0356	0.9672	1.0056	1.0277	1.0057	1.0184	1.0189	1.0099	1.0093	1.0381	1.015	0.9772	1.0046	0.99	1.0159	0.99235
ES(98%)	0.9557	1.3206	1.16	1.1197	1.0876	1.0734	1.0492	1.0353	1.012	0.9543	1.0041	1.0195	1.0022	1.0134	1.0135	1.0109	1.0104	1.03	1.0172	0.9772	1.0105	0.9917	1.0174	1.00717
ES(95%)	0.9064	1.2612	1.148	1.1042	1.0549	1.0643	1.029	1.0174	1.0145	0.9491	1.0182	1.015	1.0046	1.0047	1.0089	1.013	1.0147	1.0235	1.0212	0.9849	1.0147	0.9933	1.0175	1.01369

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0306	1.3664	1.628	1.9244	2.3239	2.5718	2.8276	3.1272	3.3538	3.3804	3.2293	3.2469	3.3483	3.337	3.4324	3.3983	3.4429	3.5128	3.6203	3.5414	3.539	3.5511	3.5803	3.57785
HVaR@99%*	0.9211	1.1417	1.287	1.4141	1.6033	1.6857	1.8229	1.8677	1.8298	1.7063	1.696	1.7125	1.7088	1.7262	1.747	1.7521	1.7712	1.8146	1.8594	1.8055	1.8175	1.8411	1.8828	1.93006
HVaR@98%	0.9424	1.1173	1.274	1.3999	1.4331	1.5382	1.5739	1.5682	1.6183	1.4571	1.5064	1.5124	1.5378	1.5106	1.5058	1.5507	1.5999	1.622	1.658	1.6394	1.6794	1.6948	1.7024	1.75959
HVaR@95%	0.8292	1.01	1.142	1.2676	1.2896	1.3655	1.3907	1.4099	1.4328	1.3544	1.3553	1.3835	1.3937	1.3966	1.4344	1.4572	1.4667	1.4756	1.5324	1.5094	1.5427	1.5175	1.5461	1.57196
ES(99%)	0.9929	1.3369	1.59	1.7928	2.0289	2.2081	2.3391	2.4643	2.6191	2.6085	2.5442	2.6098	2.645	2.6804	2.7384	2.7697	2.8023	2.8863	2.9371	2.8673	2.8865	2.8772	2.918	2.88305
ES(98%)	0.9557	1.2561	1.469	1.644	1.8313	1.9758	2.0857	2.1514	2.2017	2.126	2.1183	2.1707	2.173	2.1978	2.2231	2.2551	2.2825	2.3433	2.3874	2.3239	2.3567	2.3466	2.384	2.40727
ES(95%)	0.9064	1.1459	1.328	1.4721	1.5691	1.6713	1.7156	1.7451	1.7761	1.686	1.7123	1.7428	1.7512	1.7568	1.7707	1.7884	1.8166	1.8556	1.8959	1.8623	1.8973	1.885	1.9202	1.94868

Table E1.20- Risk Reduction as a Function of the Number of Positions in Portfolio for Switzerland

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number:	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.3003	0.933	1.033	0.8903	0.9658	0.8711	1.0587	0.9943	1.0245	1.0511	0.9733	1.022	0.9948	1.0183	0.9637	1.0687	0.9999	1.0283	1.0174	1.0066	1.0265	0.9974	1.001	1.03606
HVaR@99%*	1.2754	0.9579	1.027	0.9056	1.0093	0.9584	1.024	1.0109	0.9939	1.03	0.9507	1.0264	0.9882	1.0296	1.0233	1.0481	0.9813	1.0249	0.9928	1.0372	1.0167	0.9727	1.0155	1.0427
HVaR@98%	1.1252	1.0384	1.055	0.8533	0.9899	0.9364	1.0357	1.0026	1.0461	0.9849	0.97	1.0005	1.0019	1.0099	1.0098	1.069	0.9638	1.0308	1.006	0.9954	1.024	1.029	1.0121	1.03323
HVaR@95%	1.0174	1.0535	1.033	0.9369	0.9732	0.9549	1.0126	1.0034	1.0042	1.0222	0.9508	1.022	1.0136	1.0137	0.9943	1.0428	0.9874	1.0386	0.9724	1.0302	1.0436	0.9762	1.0165	1.02484
ES(99%)**	1.2894	0.9503	1.036	0.894	0.9847	0.8744	1.0632	1.0058	1.0055	1.0486	0.96	1.0258	0.9875	1.012	0.9751	1.0671	1.0072	1.0344	1.0047	0.9976	1.0273	0.9986	1.0044	1.03628
ES(98%)	1.2533	0.9707	1.029	0.8948	0.9882	0.9012	1.053	1.0001	0.9987	1.0418	0.9583	1.0313	0.9873	1.0199	0.9943	1.0616	0.9901	1.0308	1.0025	1.0045	1.022	0.9893	1.0083	1.03434
ES(95%)	1.1442	1.0052	1.048	0.9037	0.9777	0.9208	1.0395	0.9892	1.0254	1.0109	0.9605	1.0216	0.9883	1.0162	1.0031	1.0572	0.9877	1.0317	0.9959	1.0142	1.0255	0.9952	1.0087	1.03623

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number:	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.3003	1.1939	1.237	1.1062	1.0672	0.9201	0.9723	0.9592	0.9849	1.0334	1.0081	1.0275	1.021	1.0374	1.0021	1.0743	1.0732	1.1009	1.1173	1.1198	1.1461	1.1436	1.1415	1.18239
HVaR@99%*	1.2754	1.2414	1.273	1.1493	1.1842	1.145	1.182	1.1845	1.1626	1.1911	1.1208	1.1446	1.116	1.1477	1.1751	1.2319	1.2113	1.2471	1.23	1.2768	1.2967	1.2619	1.2763	1.33129
HVaR@98%	1.1252	1.1738	1.237	1.0627	1.0543	0.9995	1.0364	1.0278	1.063	1.046	1.0188	1.0123	1.0141	1.0247	1.0332	1.1033	1.0705	1.0993	1.109	1.0984	1.1193	1.1607	1.1807	1.21791
HVaR@95%	1.0174	1.0692	1.095	1.0281	1.0101	0.9648	0.9751	0.984	0.9791	1.0022	0.9617	0.9819	0.9892	1.007	0.9989	1.0335	1.0236	1.0599	1.021	1.0513	1.0947	1.0707	1.0871	1.11175
ES(99%)	1.2894	1.2267	1.275	1.1398	1.1232	0.9772	1.0418	1.0411	1.0458	1.0937	1.0535	1.0765	1.062	1.0756	1.0521	1.1241	1.1338	1.1694	1.1736	1.1649	1.1959	1.1929	1.1971	1.23924
ES(98%)	1.2533	1.2234	1.262	1.1295	1.1222	1.0088	1.0674	1.063	1.0593	1.0968	1.0525	1.0812	1.0634	1.0859	1.0823	1.1496	1.1422	1.1759	1.1772	1.179	1.2029	1.1888	1.1972	1.23779
ES(95%)	1.1442	1.1544	1.214	1.1003	1.0813	0.9995	1.0396	1.0243	1.0468	1.054	1.0145	1.0353	1.0189	1.0361	1.0426	1.1023	1.0936	1.1264	1.12	1.1333	1.1602	1.1546	1.1647	1.20706

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.21- Risk Reduction as a Function of the Number of Positions in Portfolio for Taiwan

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.174	1.0128	1.0072	1.0486	1.0175	0.9743	0.9937	1.0026	0.981	0.9891	0.9969	0.9894	0.9895	0.9975	1.0005	1.0019	1.0027	0.9892	0.9955	1.0014	0.9925	1.0111	0.997	0.9972
HVaR@99%*	1.3121	1.0438	0.9825	1.1445	1.014	1.0123	1.0308	0.9316	0.9695	1.0448	1.0145	0.9904	1.024	0.9955	0.9906	1.009	1.0052	0.9881	0.99	1.0264	0.9851	1.0034	0.9896	0.99133
HVaR@98%	1.3258	1.0436	1.0157	1.1073	1.0355	1.0292	1.0152	0.9973	0.9699	0.9948	0.9878	0.9889	0.9754	1.0149	1.0273	1.0385	1.0152	0.9867	0.9583	0.9852	0.9996	1.0183	1.0061	0.98486
HVaR@95%	1.3699	1.0499	1.0759	1.0993	1.0171	0.9923	1.016	0.9532	0.9752	1.0397	1.0079	1.0224	0.9849	0.9696	0.9969	1.0009	0.994	0.9843	1.0126	0.9829	0.9735	1.0159	1.0093	0.98573
ES(99%)**	1.2147	1.0087	1.0238	1.0649	1.0095	0.9949	1.0011	0.9772	0.9861	1.0099	1.0049	0.9889	0.9989	0.9958	0.9946	1.0036	1.0092	0.988	0.9943	0.9928	0.9903	1.0081	0.9918	0.99458
ES(98%)	1.2565	1.0269	1.002	1.0959	1.0181	1.0037	1.0063	0.9738	0.9763	1.015	1.0063	0.9929	1.0026	0.9984	0.9906	1.0061	1.0073	0.9882	0.992	1.0008	0.9876	1.0106	0.9928	0.99538
ES(95%)	1.3197	1.0236	1.0244	1.1049	1.0151	1.0047	1.0072	0.9877	0.9721	1.0219	1.0041	0.986	0.9924	0.9962	1.0028	1.0136	1.0101	0.982	0.9856	0.9965	0.99	1.0124	0.9972	0.99617

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.174	1.1895	1.1973	1.2579	1.2761	1.2359	1.2281	1.2317	1.2051	1.1944	1.1895	1.1752	1.161	1.1578	1.1566	1.159	1.1619	1.1481	1.1426	1.1444	1.135	1.1472	1.1435	1.13986
HVaR@99%*	1.3121	1.3726	1.3414	1.534	1.5574	1.5667	1.6185	1.5076	1.4553	1.5201	1.5448	1.5248	1.5625	1.5546	1.5431	1.5567	1.5615	1.5434	1.5273	1.5723	1.5502	1.5587	1.542	1.52948
HVaR@98%	1.3258	1.3882	1.4088	1.5552	1.6076	1.6555	1.6813	1.6764	1.6232	1.6146	1.596	1.5743	1.5329	1.5611	1.5981	1.6566	1.6829	1.6645	1.5944	1.5704	1.5711	1.5999	1.6091	1.58429
HVaR@95%	1.3699	1.4402	1.5419	1.6886	1.7091	1.6873	1.7144	1.6327	1.5912	1.657	1.6686	1.7034	1.679	1.6243	1.6177	1.6186	1.6073	1.5836	1.6026	1.576	1.5331	1.5574	1.5701	1.54854
ES(99%)	1.2147	1.2237	1.249	1.3315	1.3406	1.3303	1.3336	1.3041	1.2843	1.2964	1.3014	1.2858	1.2835	1.278	1.2695	1.2749	1.2877	1.2714	1.264	1.2556	1.2441	1.2552	1.2446	1.23744
ES(98%)	1.2565	1.2905	1.2894	1.4143	1.4374	1.4394	1.4508	1.4144	1.3772	1.3972	1.4059	1.3943	1.3984	1.3963	1.3828	1.3922	1.403	1.3852	1.3738	1.3764	1.3602	1.3765	1.3663	1.35951
ES(95%)	1.3197	1.3529	1.3827	1.5274	1.5505	1.5569	1.57	1.5522	1.5056	1.5388	1.5458	1.5218	1.5104	1.506	1.5105	1.5314	1.5469	1.5185	1.4969	1.4921	1.4779	1.4974	1.4933	1.48746

Table E1.22- Risk Reduction as a Function of the Number of Positions in Portfolio for Thailand

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.2396	1.4564	1.0049	1.002	0.9853	0.997	1.0285	1.0191	1.0527	0.9569	0.9753	0.9431	0.9978	1.0152	0.9839	1.0327	1.0047	0.9841	0.9906	1.0101	1.022	1.0255	1.0293	1.03429
HVaR@99%*	1.1811	1.0432	0.9584	1.0234	1.0259	0.9631	1.07	1.0361	1.0292	0.9901	0.973	1.0328	1.0041	1.0064	0.9619	1.0205	0.9833	1.0047	0.9901	1.0231	1.017	1.0381	1.0163	1.02796
HVaR@98%	1.1617	1.0022	1.0266	0.9525	1.0634	0.9811	1.0977	0.9411	1.0612	0.9664	1.0173	1.0384	0.964	0.9911	0.9881	1.012	0.9988	1.0108	0.9997	1.0174	1.0143	1.0112	1.0321	1.03116
HVaR@95%	1.1219	0.9927	1.0688	0.9688	1.0824	0.9688	1.0926	0.9674	1.0453	0.9607	1.0117	1.007	0.9813	1.0053	0.965	1.0367	0.9836	1.0002	0.9538	1.0333	1.0186	1.0491	1.0286	1.03715
ES(99%)**	1.2538	1.2468	1.0234	0.9969	0.9901	1.0016	1.0612	0.9857	1.0391	0.9667	0.9854	0.9543	1.0008	1.017	0.9898	1.02	0.997	0.9765	0.9856	1.0115	1.0163	1.0253	1.0272	1.03582
ES(98%)	1.2388	1.1434	0.9936	1.0028	1.0143	0.9851	1.0672	0.986	1.0368	0.9778	0.9789	0.9903	0.9987	1.0187	0.977	1.0191	0.989	0.9866	0.9889	1.0196	1.0154	1.0266	1.0247	1.03144
ES(95%)	1.1801	1.0665	1.0075	0.9899	1.0432	0.9712	1.0877	0.9881	1.0445	0.965	0.9839	1.0133	0.9841	1.0123	0.9741	1.026	0.9856	0.9888	0.9811	1.0225	1.0182	1.0248	1.027	1.03583

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.2396	1.7921	1.7974	1.7839	1.7761	1.7596	1.7957	1.8113	1.9155	1.8306	1.783	1.7003	1.6866	1.7188	1.6916	1.7389	1.7443	1.7236	1.7053	1.7319	1.7645	1.8209	1.8772	1.94284
HVaR@99%*	1.1811	1.2403	1.1867	1.2025	1.2487	1.21	1.2772	1.3066	1.3459	1.3297	1.2976	1.3294	1.3413	1.3491	1.2906	1.3177	1.3017	1.3072	1.2937	1.3201	1.3432	1.3904	1.418	1.45607
HVaR@98%	1.1617	1.1716	1.2006	1.1502	1.2277	1.2059	1.3157	1.2469	1.3156	1.2703	1.2938	1.3426	1.2956	1.2828	1.2671	1.2726	1.2726	1.2779	1.2795	1.3028	1.3209	1.3411	1.3825	1.42741
HVaR@95%	1.1219	1.1087	1.1862	1.1469	1.2388	1.1977	1.3088	1.2723	1.3243	1.2743	1.2933	1.3025	1.2822	1.2868	1.2378	1.2833	1.258	1.2543	1.194	1.238	1.2576	1.3208	1.3568	1.40843
ES(99%)	1.2538	1.5459	1.5841	1.5704	1.5526	1.5612	1.6489	1.6268	1.6946	1.635	1.6105	1.5364	1.5337	1.5625	1.5473	1.5776	1.5729	1.5412	1.5178	1.5394	1.5609	1.609	1.6545	1.71565
ES(98%)	1.2388	1.4121	1.4009	1.4054	1.4242	1.4076	1.4963	1.4806	1.5374	1.5037	1.4741	1.4552	1.4553	1.4808	1.4469	1.4726	1.4598	1.4416	1.4244	1.4532	1.4739	1.5177	1.5549	1.6039
ES(95%)	1.1801	1.2543	1.2644	1.2537	1.3073	1.2705	1.3801	1.3677	1.4295	1.3826	1.3635	1.3808	1.36	1.3755	1.3402	1.374	1.3558	1.3399	1.3138	1.3435	1.367	1.4021	1.4394	1.49154

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.23- Risk Reduction as a Function of the Number of Positions in Portfolio for Turkey

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.93605	1.1428	1.0196	0.9875	1.0258	0.9867	0.9851	1.0014	1.0074	1.0241	0.9977	1.0031	0.9974	0.994	1.0131	0.9967	1.0103	0.9782	1.0102	1.0165	0.9818	1.0074	1.0044	1.05307
HVaR@99%*	1.01177	1.119	1.03	1.0177	1.0007	1.0026	0.9651	0.9856	1.0071	1.0124	1.0107	1.0375	1.0017	1.0091	0.99	1.0022	1.0216	0.9826	0.9997	1.0017	1.0053	1.0064	1.0003	1.02989
HVaR@98%	0.99872	1.0524	1.082	1.0021	1.006	1.005	0.9296	1.0109	0.9976	1.0396	0.9961	1.0152	1.0014	1.0144	0.9983	1.0035	1.0107	0.9998	1.0083	1.011	0.9944	1.016	1.0073	1.01593
HVaR@95%	1.07886	1.0548	1.0201	0.9747	0.994	1.0274	0.9682	0.9909	1.0293	1.0185	0.9901	1.0203	1.022	0.9868	1.0021	1.0019	1.0002	0.9804	0.9916	1.0001	1.0169	1.0148	1.0051	1.02838
ES(99%)**	0.96986	1.1499	1.0314	0.962	1.0192	0.9962	0.9812	1.0055	1.0076	1.0136	0.9949	1.0142	1.002	0.9924	1.0239	0.9959	1.0077	0.9822	1.0081	1.0103	0.9884	1.0116	1.0054	1.03717
ES(98%)	0.97933	1.1307	1.0376	0.9753	1.0148	0.9963	0.9683	0.9986	1.007	1.0189	0.9976	1.0238	1.0038	0.9997	1.0103	0.9977	1.013	0.9857	1.0073	1.0055	0.9942	1.0099	1.0031	1.03066
ES(95%)	1.01184	1.0839	1.037	0.9761	1.0192	1.0011	0.9689	1.0005	1.0036	1.0233	0.9976	1.0207	1.0039	1.003	1.0052	1.0017	1.0078	0.9899	1.0032	1.0047	0.9991	1.0107	0.9993	1.02272

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.93605	1.0701	1.0964	1.0748	1.1035	1.081	1.0671	1.0699	1.0805	1.1128	1.1065	1.1082	1.103	1.0937	1.1136	1.1099	1.1237	1.0993	1.1132	1.1384	1.1152	1.1258	1.1335	1.21296
HVaR@99%*	1.01177	1.1232	1.1584	1.1845	1.1748	1.1835	1.1469	1.1344	1.1441	1.158	1.1713	1.2099	1.2124	1.2208	1.2056	1.2065	1.2316	1.2098	1.2091	1.21	1.218	1.2239	1.2243	1.26598
HVaR@98%	0.99872	1.0518	1.1278	1.1359	1.1434	1.1458	1.0709	1.0857	1.0784	1.1246	1.1128	1.1334	1.1332	1.153	1.1453	1.1484	1.1575	1.1617	1.1704	1.1825	1.1759	1.1943	1.2045	1.22488
HVaR@95%	1.07886	1.1345	1.1564	1.1322	1.1198	1.1561	1.1184	1.1095	1.1372	1.1551	1.1377	1.1633	1.189	1.1696	1.171	1.1744	1.176	1.153	1.1447	1.1453	1.1643	1.1822	1.1881	1.22489
ES(99%)	0.96986	1.1142	1.151	1.1014	1.1242	1.1189	1.1012	1.1088	1.1198	1.1386	1.1325	1.1496	1.1499	1.1379	1.1701	1.1644	1.1752	1.1512	1.1623	1.1785	1.1642	1.1787	1.187	1.24369
ES(98%)	0.97933	1.105	1.1469	1.1175	1.1316	1.1298	1.0975	1.0988	1.1089	1.1319	1.1284	1.1539	1.1583	1.156	1.1692	1.1653	1.1819	1.1639	1.1744	1.182	1.1757	1.1876	1.1915	1.2344
ES(95%)	1.01184	1.0984	1.1371	1.1123	1.1333	1.1344	1.1023	1.1046	1.1092	1.1358	1.132	1.1561	1.1608	1.1637	1.1698	1.1713	1.1814	1.1692	1.1734	1.1789	1.1775	1.1898	1.1891	1.21844

Table E1.24- Risk Reduction as a Function of the Number of Positions in Portfolio for United Kingdom

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.06554	1.1427	1.049	1.0703	1.0116	0.9911	1.0069	1.031	1.0568	1.0313	0.9498	0.9913	0.9868	0.9678	1.0015	1.0562	1.0078	1.0262	0.998	1.0197	1.0068	0.9786	0.9952	1.02025
HVaR@99%*	0.98448	1.1348	1.0722	1.0375	1.103	1.0255	1.0388	1.0306	1.0132	1.0273	0.9834	1.0099	0.9796	0.9956	1.0263	1.0108	1.0014	1.0117	0.9958	1.0161	1.0066	1.0064	0.9564	1.02857
HVaR@98%	1.06083	1.1457	1.0434	1.0227	1.0866	1.019	1.0527	1.0868	1.0136	0.9828	0.9683	1.0221	0.9808	0.948	1.0311	1.0013	1.0095	1.0037	1.0177	1.0216	0.9937	0.989	0.9906	1.01466
HVaR@95%	1.07697	1.1176	1.0566	1.0216	1.0741	0.978	1.0299	1.0478	1.0224	1.0082	0.9684	1.0559	0.9863	0.9491	1.041	1.0028	1.007	1.0238	1.008	1.0321	0.9934	0.9889	0.9877	1.04088
ES(99%)**	1.04977	1.163	1.0602	1.0134	1.0481	1.0184	1.0181	1.0188	1.0575	1.0305	0.9531	0.9998	0.992	0.9677	1.012	1.0532	0.9884	1.0317	1.0002	1.0175	1.0023	0.986	0.9872	1.021
ES(98%)	1.01881	1.1483	1.0651	1.0276	1.0724	1.0183	1.0222	1.0385	1.036	1.0227	0.9637	1.0028	0.9834	0.9742	1.0213	1.035	0.9909	1.023	1.0068	1.0136	1.0051	0.9902	0.9779	1.02012
ES(95%)	1.04179	1.135	1.0524	1.0259	1.0669	1.0209	1.0271	1.0533	1.0345	1.0023	0.9662	1.0128	0.9933	0.9633	1.0228	1.0265	0.991	1.0166	1.0042	1.0207	0.9994	0.992	0.99	1.02163

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.06554	1.2081	1.2652	1.3311	1.3449	1.3354	1.342	1.385	1.4634	1.5109	1.4151	1.3982	1.3811	1.3263	1.3285	1.3996	1.4082	1.4443	1.4422	1.4742	1.4856	1.4514	1.4434	1.47153
HVaR@99%*	0.98448	1.1132	1.1911	1.2304	1.3505	1.3925	1.4424	1.4939	1.4977	1.5399	1.4947	1.5025	1.4654	1.4588	1.4968	1.5114	1.5137	1.5316	1.5225	1.5465	1.5569	1.5662	1.4969	1.54011
HVaR@98%	1.06083	1.2063	1.2472	1.2724	1.3827	1.4129	1.4848	1.6131	1.6285	1.5995	1.5494	1.5819	1.5442	1.4634	1.5096	1.5093	1.5255	1.5257	1.5517	1.5853	1.5749	1.5568	1.5436	1.56497
HVaR@95%	1.07697	1.1886	1.2507	1.2777	1.374	1.3339	1.3735	1.4382	1.4679	1.4789	1.435	1.5157	1.4939	1.4193	1.4754	1.4815	1.4887	1.5233	1.5362	1.5842	1.5731	1.5518	1.5316	1.59335
ES(99%)	1.04977	1.2071	1.2831	1.2847	1.3435	1.3673	1.3923	1.4154	1.4989	1.5452	1.462	1.4562	1.445	1.3957	1.4131	1.4872	1.469	1.5147	1.5148	1.5409	1.5457	1.5248	1.5065	1.53662
ES(98%)	1.01881	1.1623	1.2379	1.2621	1.3507	1.3802	1.41	1.4621	1.5137	1.546	1.4809	1.4819	1.4547	1.4152	1.4448	1.4962	1.4809	1.515	1.5254	1.546	1.5539	1.5391	1.5054	1.5348
ES(95%)	1.04179	1.1763	1.2336	1.263	1.3461	1.3777	1.414	1.4894	1.5385	1.5414	1.4883	1.5063	1.4947	1.439	1.4707	1.5108	1.4965	1.521	1.5278	1.5599	1.5576	1.5449	1.5294	1.56194

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E1.25- Risk Reduction as a Function of the Number of Positions in Portfolio for United States																								
Average Relative Risk Reduction - Sequential Adding of Positions																								
Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0436	1.4121	1.0981	0.9757	0.846	1.014	1.0467	1.0467	0.9876	1.0469	1.0465	1.0529	0.9844	0.9721	1.0486	1.0354	1.0256	1.0123	0.9807	0.9982	1.0076	1.042	1.0105	1.0222
HVaR@99%*	1.0654	1.223	1.1191	1.0281	0.9127	1.0522	1.0305	1.0231	0.9967	1.0139	1.0214	1.0483	0.9572	1.0033	1.026	1.0184	1.0139	1.0089	0.9976	0.9893	1.0256	1.0266	0.9644	1.0064
HVaR@98%	1.0735	1.2189	1.105	1.0126	0.8838	1.0292	1.046	1.0232	0.9624	1.0454	1.0345	1.0207	0.9618	1.014	1.0512	0.9975	1.0378	0.996	1.001	0.9971	1.0155	1.034	1.0216	1.0049
HVaR@95%	1.0482	1.2612	1.12	0.9422	0.881	1.0323	1.0206	1.0385	0.9297	1.0511	1.0921	1.0184	0.9366	1.0033	1.0033	1.0355	1.0233	0.9899	1.0052	1.0013	1.024	1.0154	1.0388	0.9975
ES(99%)**	1.0897	1.393	1.0933	0.9674	0.895	1.0402	1.0364	1.0453	0.9845	1.0432	1.03	1.0428	0.9791	0.9719	1.0389	1.0247	1.0338	1.0124	0.9752	0.9866	1.0138	1.0364	1.0055	1.0097
ES(98%)	1.0744	1.3095	1.0859	0.9982	0.8976	1.0427	1.0356	1.0362	0.9846	1.0378	1.027	1.0365	0.9684	0.9876	1.0378	1.0177	1.0282	1.011	0.9866	0.9903	1.0143	1.0329	0.9978	1.0067
ES(95%)	1.0516	1.2854	1.0805	0.9892	0.8947	1.0363	1.0195	1.0285	0.9656	1.0476	1.038	1.0372	0.9586	0.9956	1.0337	1.0114	1.0303	1.0061	0.9909	1.0022	1.0127	1.0283	1.0123	1.01
Average Absolute Risk Reduction - Relative to First Position																								
Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0436	1.4106	1.5392	1.5031	1.2456	1.267	1.3277	1.3806	1.3647	1.4361	1.5086	1.5879	1.5611	1.5175	1.5901	1.6616	1.7125	1.7314	1.7057	1.683	1.7083	1.7763	1.8076	1.8627
HVaR@99%*	1.0654	1.3014	1.446	1.4823	1.3514	1.4251	1.4603	1.4977	1.4838	1.509	1.5442	1.6192	1.5383	1.5389	1.5758	1.6073	1.63	1.6441	1.6459	1.6228	1.6662	1.7086	1.6582	1.669
HVaR@98%	1.0735	1.2997	1.43	1.4373	1.264	1.3012	1.3593	1.3884	1.333	1.3957	1.4449	1.4684	1.4077	1.4286	1.4987	1.4947	1.553	1.5457	1.5468	1.54	1.5632	1.6174	1.6531	1.6615
HVaR@95%	1.0482	1.3192	1.4858	1.3971	1.2274	1.2673	1.2934	1.3391	1.2362	1.2996	1.4257	1.4505	1.3524	1.3561	1.3536	1.4086	1.4391	1.4251	1.4278	1.4296	1.4643	1.4901	1.5419	1.5399
ES(99%)	1.0897	1.4623	1.5959	1.5496	1.3574	1.4203	1.4723	1.5378	1.5076	1.5843	1.6381	1.7088	1.6669	1.6185	1.6815	1.7402	1.7955	1.8183	1.7739	1.7341	1.7659	1.8311	1.8563	1.8823
ES(98%)	1.0744	1.3859	1.4996	1.4998	1.3334	1.3966	1.4438	1.4965	1.4674	1.5321	1.5778	1.6351	1.5734	1.5516	1.6101	1.6496	1.6954	1.7134	1.6926	1.6669	1.6967	1.7536	1.7629	1.7784
ES(95%)	1.0516	1.3443	1.4542	1.4374	1.2809	1.3297	1.3504	1.3897	1.3353	1.4032	1.4583	1.5119	1.4409	1.4347	1.4832	1.5021	1.5489	1.5577	1.5424	1.5431	1.5659	1.6104	1.6335	1.6507

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix E2 - Risk Reduction as a Function of the Number of Positions for Foreign Portfolios

Table E2.01- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.1974	1.1418	1.0964	0.9733	1.1062	1.0714	1.0703	1.027	1.0562	1.015	1.0242	0.984	1.009	0.9973	0.9459	0.9958	1.0037	0.9953	1.0275	1.0183	1.0097	0.9925	0.9978	1.03237
HVaR@99%*	0.8759	1.308	1.1984	0.9463	1.1098	1.0491	1.0912	1.06	0.934	0.9436	1.0703	1.0032	1.0489	1.0041	0.9602	0.9667	0.9897	0.9938	1.0105	0.9888	1.016	0.9549	1.0335	1.0191
HVaR@98%	0.8474	1.2789	1.1195	1.0013	1.0898	1.0687	0.9989	1.039	1.0168	0.9574	1.0899	1.0285	0.9889	1.0248	0.9933	0.9714	0.9737	0.9873	1.0068	0.9907	0.9877	1.0126	0.9998	1.00772
HVaR@95%	0.9736	1.2429	1.1381	0.9736	1.1019	1.0631	1.0535	1.042	1.0023	0.972	1.0615	1.0053	1.0156	1.0087	0.9665	0.978	0.989	0.9921	1.0149	0.9993	1.0045	0.9866	1.0104	1.01973
ES(99%)**	1.1107	1.2003	1.1429	0.9808	1.1049	1.0546	1.0676	1.002	1.0268	1.0185	1.0223	0.9955	1.0078	0.9955	0.9675	0.9703	1.0084	0.9973	1.0221	1.0141	1.0023	0.9815	1.0104	1.00446
ES(98%)	1.001	1.2344	1.1391	0.9751	1.1025	1.0614	1.0563	1.034	1.0072	0.9813	1.0536	1.0033	1.0141	1.0061	0.9667	0.9765	0.9929	0.9932	1.0163	1.0023	1.004	0.9856	1.0104	1.01667
ES(95%)	0.9319	1.251	1.1204	0.9787	1.1042	1.0484	1.0513	1.022	1.012	0.9959	1.031	0.9956	1.031	1.0064	0.9929	0.9634	0.9813	0.9841	1.0214	0.9988	0.9957	0.9764	1.0055	1.02284

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.1974	1.2879	1.3945	1.3352	1.4673	1.5716	1.6966	1.723	1.8166	1.8495	1.8803	1.8547	1.879	1.8745	1.7768	1.7706	1.7961	1.7734	1.8131	1.8476	1.8709	1.8634	1.8582	1.93628
HVaR@99%*	0.8759	1.1237	1.3524	1.2785	1.4218	1.4803	1.6147	1.722	1.5853	1.4928	1.5943	1.61	1.6907	1.7045	1.6171	1.5615	1.5556	1.5407	1.5461	1.5185	1.5323	1.4668	1.5108	1.54644
HVaR@98%	0.8474	1.0971	1.197	1.1874	1.2979	1.3808	1.3769	1.429	1.4514	1.3824	1.5037	1.5383	1.5104	1.5477	1.5468	1.4947	1.4509	1.4232	1.4353	1.4203	1.4031	1.4264	1.418	1.43126
HVaR@95%	0.8829	1.1447	1.2113	1.1631	1.2859	1.3507	1.4168	1.476	1.4748	1.4692	1.5236	1.4723	1.5516	1.5614	1.61	1.5303	1.4633	1.4762	1.493	1.4982	1.4794	1.4238	1.4588	1.47979
ES(99%)	1.1107	1.2959	1.468	1.4246	1.5654	1.6174	1.7369	1.721	1.7657	1.7968	1.8311	1.8261	1.8428	1.8357	1.784	1.7327	1.7644	1.7576	1.7936	1.8176	1.8267	1.7975	1.812	1.82296
ES(98%)	1.0027	1.2082	1.4004	1.3539	1.4886	1.5528	1.671	1.694	1.6849	1.665	1.7343	1.738	1.7686	1.7651	1.7069	1.6499	1.6589	1.6425	1.6667	1.671	1.6832	1.6397	1.6615	1.68669
ES(95%)	0.9319	1.1604	1.2904	1.2561	1.3865	1.444	1.5195	1.549	1.5664	1.5569	1.604	1.5973	1.6445	1.6566	1.6492	1.5882	1.5612	1.5336	1.5671	1.5606	1.5561	1.5185	1.5252	1.56313

Table E2.02- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Second Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.5992	1.2786	1.1964	1.0293	1.0863	1.076	1.0183	1.059	1.0576	1.0108	1.0015	1.0151	0.9926	1.0353	1.0605	0.9819	0.9947	0.9591	1.0191	1.0123	1.0153	0.9655	0.9988	1.01405
HVaR@99%*	0.6991	1.3463	1.1134	1.1465	1.0987	1.0642	1.0352	1.007	1.0737	1.0415	1.0589	1.0271	1.02	1.0111	1.0378	0.992	0.9833	0.924	1.0191	1.0071	1.0145	1.0085	1.008	1.00729
HVaR@98%	0.7338	1.3151	1.1727	1.0877	1.1228	1.105	0.9863	1.036	1.0465	1.0412	1.0378	0.9584	1.034	1.0167	1.0186	1.0088	1.0256	0.8725	1.0676	1.0563	1.019	0.9298	0.9601	1.00728
HVaR@95%	0.8559	1.2621	1.1076	1.0723	1.0655	1.1416	1.0161	1.097	1.0232	1.0266	1.0496	1.0124	0.9878	1.0345	1.0384	0.9479	0.9879	0.9335	1.0345	1.0278	1.0208	0.9791	0.9733	1.03867
ES(99%)**	0.6132	1.3483	1.1671	1.0445	1.0751	1.1085	1.0193	1.029	1.0549	1.0277	1.0015	1.0367	1.0076	1.0181	1.04	1.0027	0.9841	0.9537	1.0152	1.0087	1.0091	0.9628	1.0189	1.02473
ES(98%)	0.6478	1.3335	1.154	1.0823	1.0904	1.0976	1.0154	1.025	1.0556	1.0258	1.0242	1.0203	1.0172	1.014	1.0395	1.0023	0.9765	0.936	1.0205	1.012	1.015	0.9782	1.0118	1.01977
ES(95%)	0.7153	1.2815	1.142	1.0904	1.0977	1.1076	1.0162	1.028	1.0563	1.0262	1.0249	1.0171	1.023	1.0123	1.033	0.991	0.9877	0.9226	1.0288	1.0249	1.0124	0.977	0.9939	1.01378

Average Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.5992	0.7818	0.9425	0.954	1.0354	1.1007	1.1061	1.161	1.2223	1.2355	1.2156	1.2412	1.2236	1.2773	1.3485	1.3349	1.3238	1.2304	1.2481	1.2613	1.2804	1.2291	1.2191	1.23608
HVaR@99%*	0.6991	0.9352	1.0372	1.2137	1.3128	1.3683	1.4066	1.377	1.4695	1.5144	1.5926	1.6253	1.6588	1.6776	1.7477	1.7354	1.703	1.5714	1.5956	1.6008	1.6249	1.6383	1.6553	1.65673
HVaR@98%	0.7338	0.9456	1.1053	1.2121	1.3613	1.513	1.4643	1.516	1.5838	1.653	1.7248	1.6349	1.6765	1.703	1.7311	1.7499	1.8091	1.5462	1.6487	1.7507	1.7757	1.6526	1.5834	1.59103
HVaR@95%	0.8559	1.0694	1.1963	1.2625	1.3354	1.5221	1.5495	1.686	1.7112	1.7459	1.833	1.8522	1.8391	1.9094	1.9788	1.8612	1.8316	1.7007	1.7604	1.8119	1.8482	1.8088	1.7601	1.82508
ES(99%)	0.6132	0.8312	0.9758	1.01	1.0797	1.192	1.2126	1.229	1.2907	1.3177	1.2994	1.3571	1.3616	1.3884	1.4365	1.4453	1.4179	1.335	1.3501	1.3565	1.3675	1.3044	1.3273	1.3597
ES(98%)	0.6478	0.8652	0.9999	1.0808	1.1754	1.2817	1.2941	1.307	1.3725	1.4003	1.4204	1.4518	1.4765	1.4971	1.5519	1.559	1.5208	1.4087	1.4353	1.4468	1.4681	1.4289	1.4449	1.47109
ES(95%)	0.7153	0.913	1.0403	1.1373	1.2462	1.381	1.3925	1.42	1.4947	1.5333	1.5683	1.5977	1.6324	1.6509	1.7046	1.688	1.6685	1.5237	1.5672	1.6026	1.6212	1.5842	1.5734	1.59349

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Table E2.03- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Third Highest Market Capitalization																								
Average Relative Risk Reduction - Sequential Adding of Positions																								
Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.1702	1.5498	1.1791	1.1319	1.1638	0.8791	1.0193	1.0697	1.0987	1.078	1.0224	1.103	0.9958	0.9968	0.9992	1.0262	1.0154	0.9977	0.9926	1.0179	1.0456	1.013	1.0193	1.01603
HVaR@99%*	1.1901	1.2627	1.4009	1.2267	1.1176	0.8075	1.0104	1.0759	1.0854	0.9192	1.1029	1.0837	1.0165	0.9674	1.0164	1.0706	0.9727	0.9851	1.0338	1.0491	0.9424	0.9868	1.0323	1.04486
HVaR@98%	1.4011	1.2572	1.1695	1.1662	1.1049	0.88	1.0248	0.9951	1.1141	1.0122	0.9994	1.07	1.0591	1.0326	1.0476	0.951	1.0002	1.0206	0.9874	0.9838	1.0116	0.9523	1.0677	1.01661
HVaR@95%	1.682	1.1848	1.0583	1.1724	1.1074	0.8447	1.0265	1.0484	1.079	0.9988	1.027	1.0445	1.0774	1.0045	0.9941	0.9998	0.988	0.9819	0.9881	1.037	0.9692	0.9939	1.0158	1.00348
ES(99%)**	1.2067	1.4339	1.1879	1.1644	1.1477	0.8764	1.028	1.0548	1.0666	1.0443	1.038	1.0908	1.0088	1.0008	0.9839	1.0051	1.0091	0.9979	1.0055	1.0157	1.0226	1.0118	1.0333	1.01268
ES(98%)	1.1776	1.3804	1.204	1.1873	1.1408	0.8525	1.032	1.0453	1.0793	1.0111	1.0408	1.0873	1.0246	0.9916	1.0066	1.0131	0.9978	1.0044	1.0086	1.0237	0.9971	1.0022	1.0271	1.02419
ES(95%)	1.3266	1.2749	1.1568	1.193	1.1137	0.8606	1.0315	1.0464	1.0819	0.9957	1.0377	1.0776	1.0349	1.0075	1.0141	1.0023	0.988	1.0067	0.9854	1.0143	0.9884	0.9909	1.0207	1.02511
Average Absolute Risk Reduction - Relative to First Position																								
Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.1702	1.8397	2.1408	2.3999	2.7437	2.257	2.2189	2.3375	2.5542	2.7508	2.7681	3.0576	2.9695	2.9108	2.8541	2.8977	2.9092	2.8804	2.8395	2.8928	2.9587	2.9738	3.0324	3.07414
HVaR@99%*	1.1901	1.5018	2.0186	2.451	2.7344	2.1839	2.1959	2.3653	2.5628	2.3149	2.5353	2.7498	2.7809	2.6786	2.7172	2.9002	2.8199	2.7867	2.8994	3.0385	2.8351	2.7872	2.8783	3.00958
HVaR@98%	1.4011	1.7216	2.0012	2.3348	2.5619	2.2394	2.2879	2.228	2.4825	2.5073	2.4835	2.656	2.8109	2.9009	3.0316	2.8819	2.8764	2.9372	2.904	2.8582	2.8858	2.7436	2.9306	2.97629
HVaR@95%	1.682	1.9803	2.0967	2.4589	2.7172	2.2652	2.313	2.4097	2.5929	2.5918	2.6572	2.7725	2.9952	3.003	2.972	2.9731	2.9441	2.8887	2.8616	2.974	2.903	2.8687	2.9134	2.91786
ES(99%)	1.2067	1.7619	2.0838	2.4216	2.7455	2.2628	2.3004	2.4023	2.5345	2.6525	2.7206	2.9782	2.9631	2.9225	2.846	2.8346	2.867	2.8519	2.8623	2.895	2.9357	2.9608	3.0616	3.0906
ES(98%)	1.1776	1.6337	1.9496	2.307	2.6102	2.0958	2.1712	2.254	2.4196	2.4341	2.5108	2.7369	2.7865	2.7556	2.7563	2.7736	2.777	2.7888	2.8195	2.8821	2.8542	2.8546	2.9329	3.00083
ES(95%)	1.3266	1.6847	1.9391	2.3108	2.5555	2.119	2.1896	2.2795	2.4643	2.4456	2.5355	2.7324	2.8214	2.8448	2.8779	2.88	2.8534	2.8737	2.8422	2.8791	2.8502	2.8193	2.8778	2.94749

Table E2.04- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Fourth Highest Market Capitalization																								
Average Relative Risk Reduction - Sequential Adding of Positions																								
Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.8392	1.1954	1.0054	1.0076	1.0708	1.058	0.9812	0.9839	1.1027	1.0278	1.0809	0.996	1.0211	0.9944	0.9868	0.9984	0.9916	1.0028	1.0022	1.033	0.9931	0.9625	0.9994	1.03724
HVaR@99%*	0.7553	1.3041	1.116	1.1018	1.0792	1.0336	0.9422	1.0752	1.0867	0.9739	1.046	1.0568	0.9101	1.0102	1.0123	1.01	1.0319	1.0089	1.039	1.0616	0.9841	0.9662	1.0275	1.02459
HVaR@98%	0.7244	1.2643	1.0789	1.1194	1.0852	1.073	0.9695	1.0686	1.0517	1.0067	1.0076	1.0101	0.9498	1.0321	1.0063	0.9936	1.0494	0.9718	1.008	1.0281	1.0173	0.9845	1.018	1.03293
HVaR@95%	0.7861	1.153	1.1389	1.0957	1.0271	1.1375	0.9506	1.0405	1.0362	1.0041	1.0077	0.9653	1.0531	1.0118	1.013	1.0056	1.0416	0.9961	1.0249	1.0273	0.9846	0.9629	1.0212	1.00851
ES(99%)**	0.8302	1.2504	1.0011	1.0765	1.0404	1.0307	0.9596	1.0206	1.1	1.0009	1.0627	0.9892	1.0188	0.9911	0.9919	1.0056	1.0121	1.0045	1.0093	1.0151	0.9988	0.9776	1.0098	1.02377
ES(98%)	0.787	1.2335	1.0681	1.0802	1.0605	1.0666	0.9606	1.0377	1.0754	1.0027	1.041	1.0035	0.9906	1.0079	1.0021	1.0026	1.0253	0.9968	1.0167	1.033	0.9956	0.9707	1.0152	1.02541
ES(95%)	0.7613	1.2348	1.0917	1.0947	1.0577	1.0641	0.9639	1.0449	1.0734	0.998	1.0238	0.9889	0.9965	1.0118	1.0027	0.9965	1.027	1.0046	1.0201	1.0218	1.0013	0.9782	1.0087	1.02346
Average Absolute Risk Reduction - Relative to First Position																								
Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.8392	1.0063	1.0064	0.9978	1.0509	1.1009	1.0791	1.0588	1.1686	1.1957	1.2853	1.2782	1.3024	1.2955	1.2736	1.2577	1.2472	1.2502	1.2552	1.2955	1.2848	1.2378	1.2403	1.28909
HVaR@99%*	0.7553	0.99	1.0742	1.1847	1.2651	1.3094	1.2039	1.2804	1.3831	1.3332	1.3894	1.4693	1.3418	1.3613	1.3727	1.3813	1.4248	1.4279	1.4754	1.5644	1.5365	1.4817	1.5237	1.55281
HVaR@98%	0.7244	0.9188	0.9845	1.097	1.1808	1.2649	1.2196	1.3015	1.3707	1.3753	1.3814	1.3904	1.3234	1.3716	1.3851	1.3859	1.4337	1.3953	1.4069	1.4488	1.4756	1.4461	1.4733	1.5202
HVaR@95%	0.7861	0.9036	1.023	1.1207	1.1487	1.3057	1.242	1.2901	1.3331	1.3379	1.3492	1.3027	1.3709	1.3865	1.4007	1.4059	1.465	1.4589	1.4955	1.5386	1.5123	1.4527	1.4835	1.49336
ES(99%)	0.8302	1.0457	1.0365	1.1076	1.1367	1.1562	1.1071	1.1261	1.241	1.2313	1.302	1.2916	1.316	1.3039	1.2923	1.2869	1.302	1.3069	1.3208	1.3417	1.3399	1.3095	1.3244	1.35621
ES(98%)	0.7882	1.0131	1.034	1.1284	1.1787	1.2103	1.1453	1.1917	1.2957	1.275	1.3364	1.3495	1.3174	1.3242	1.3268	1.3176	1.3432	1.3471	1.378	1.4202	1.4189	1.3691	1.3877	1.42242
ES(95%)	0.7613	0.9442	1.0215	1.117	1.1762	1.2489	1.2023	1.256	1.3462	1.3412	1.3722	1.3557	1.3547	1.3714	1.3727	1.3655	1.4011	1.4068	1.435	1.4677	1.4695	1.4355	1.4486	1.48137

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix E2 - Risk Reduction as a Function of the Number of Positions for Foreign Portfolios (Continued)

Table E2.05- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Fifth Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.7383	1.2834	1.0404	0.9632	1.1207	1.0718	0.9423	1.1079	1.0508	0.9956	1.0513	0.9848	1.045	1.0093	0.9821	0.9962	1.02	1.018	0.9666	1.0231	0.9881	0.9738	0.9957	1.0059
HVaR@99%*	0.7874	1.1529	1.1452	0.9902	1.0367	1.0463	0.9305	1.0636	1.0723	1.0261	1.0633	1.0387	1.0277	1.016	1.0399	0.9964	1.0198	1.0002	0.9439	1.0271	1.0254	0.9644	0.9592	1.0322
HVaR@98%	0.8131	1.182	1.1034	1.0286	1.0311	1.033	0.8861	1.1113	1.0774	1.0173	1.0649	1.0307	1.045	1.0462	0.9764	0.9977	0.9958	0.9963	0.9831	1.0437	1.015	1.0002	0.9916	0.9761
HVaR@95%	0.853	1.2279	1.0693	0.9987	1.0228	1.0937	0.8454	1.099	1.0773	1.0005	1.0452	1.0699	1.0248	1.0419	1.0194	0.9998	1.0368	0.9882	0.9949	1.0296	0.9854	0.9906	0.9873	1.0199
ES(99%)**	0.7403	1.2488	1.0658	0.9637	1.1061	1.0613	0.9228	1.0846	1.0505	0.9948	1.0422	0.9927	1.0377	1.0245	0.9836	1.019	1.0268	1.0142	0.9807	1.022	0.9926	0.9798	0.9944	1.0041
ES(98%)	0.759	1.2146	1.0839	0.9814	1.0715	1.0541	0.9204	1.0851	1.0618	1.0074	1.0535	1.0031	1.039	1.0261	0.9992	0.9965	1.0242	1.0111	0.9706	1.028	0.9993	0.973	0.9872	1.0121
ES(95%)	0.7907	1.211	1.08	1.0107	1.0399	1.0559	0.8853	1.0906	1.0665	1.0198	1.0565	1.0222	1.0419	1.0297	1.0008	1.0013	1.0254	1.0093	0.9743	1.0331	0.9992	0.97	0.9904	1.0037

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.7383	0.9578	0.9549	0.9043	1.0151	1.0751	0.0297	1.1318	1.1718	1.1643	1.2094	1.1893	1.2323	1.2384	1.2178	1.2139	1.2285	1.2477	1.2029	1.2295	1.2238	1.1844	1.1789	1.1842
HVaR@99%*	0.7874	0.9093	1.0434	1.029	1.0597	1.0792	0.9957	1.055	1.1295	1.1524	1.2268	1.2609	1.2839	1.3011	1.3429	1.3408	1.3633	1.3644	1.2808	1.3155	1.3458	1.291	1.2378	1.2763
HVaR@98%	0.8131	0.9651	1.0689	1.0852	1.1058	1.1384	0.992	1.0969	1.1795	1.1952	1.2651	1.2996	1.3641	1.4284	1.3875	1.3789	1.3772	1.3691	1.3475	1.3958	1.4166	1.4062	1.3964	1.3628
HVaR@95%	0.853	1.0459	1.1237	1.126	1.1434	1.2463	1.0202	1.1179	1.2033	1.1955	1.25	1.3333	1.3585	1.4047	1.4321	1.4278	1.4788	1.4592	1.4517	1.4941	1.469	1.4522	1.4284	1.4586
ES(99%)	0.7403	0.9281	0.9751	0.9273	1.0221	1.0734	1.0003	1.0845	1.1289	1.1189	1.1625	1.1471	1.1866	1.2109	1.1858	1.202	1.2318	1.2466	1.216	1.2407	1.2338	1.2039	1.1951	1.1958
ES(98%)	0.759	0.9262	0.9966	0.9716	1.0319	1.0772	0.9958	1.0809	1.1397	1.1425	1.2014	1.1969	1.2388	1.2685	1.263	1.2535	1.2821	1.296	1.2539	1.2878	1.2867	1.2488	1.2303	1.2434
ES(95%)	0.7907	0.9578	1.0374	1.0463	1.0795	1.1297	0.9949	1.0839	1.1489	1.165	1.229	1.2502	1.3004	1.3355	1.3327	1.3311	1.3643	1.3749	1.3363	1.3794	1.3774	1.3296	1.3166	1.3211

Table E2.06- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Sixth Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0052	1.1921	1.0355	1.1307	1.1674	1.0051	0.6583	0.8517	1.1118	1.061	1.0579	1.054	1.0311	1.0223	0.9799	1.0269	1.06	1.0415	1.0004	1.0077	1.016	1.0275	0.9988	1.0219
HVaR@99%*	1.0019	1.3505	0.9752	1.014	1.1807	1.0815	0.612	0.9313	1.0356	1.0199	1.0588	1.0492	1.0632	1.045	1.0334	1.0083	1.0255	0.9891	1.0016	1.0364	0.9918	1.0255	1.035	0.9931
HVaR@98%	1.0473	1.297	1.0205	1.0878	1.1881	0.9507	0.625	0.9365	1.057	1.0301	1.0839	1.0326	1.0542	1.0519	0.9899	1.0249	1.0213	1.0139	1.012	1.0406	1.0077	0.9969	1.0095	1.0594
HVaR@95%	1.0734	1.3211	1.0085	1.0253	1.1442	1.0582	0.5983	1.0097	1.0396	1.036	1.0783	1.0415	1.0757	1.0426	1.0212	1.0174	1.032	1.0112	1.0146	1.0253	1.0329	1.006	1.0238	1.0044
ES(99%)**	0.9778	1.2812	0.9803	1.1142	1.1478	1.0592	0.6344	0.8826	1.0784	1.0511	1.0496	1.0412	1.03	1.0412	1.0023	1.0226	1.0502	1.0243	0.9843	1.0262	1.0097	1.02	1.0128	1.0221
ES(98%)	1.0006	1.3047	0.9751	1.0817	1.1574	1.0526	0.6212	0.8996	1.0615	1.0305	1.0602	1.0448	1.0491	1.0442	1.0153	1.0157	1.0397	1.0098	0.9895	1.0276	1.008	1.0193	1.0197	1.0112
ES(95%)	1.0181	1.333	0.9823	1.0792	1.1543	1.0309	0.6064	0.9299	1.0492	1.0254	1.0741	1.049	1.0502	1.0372	1.0236	1.0226	1.0444	1.0043	1.0029	1.0317	1.0147	1.0097	1.0213	1.0135

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0052	1.1644	1.1255	1.269	1.4929	1.4903	0.9591	0.8126	0.9082	0.9644	1.0222	1.0796	1.113	1.1329	1.0995	1.134	1.2062	1.2602	1.2474	1.2481	1.2681	1.2965	1.2831	1.3103
HVaR@99%*	1.0019	1.3541	1.28	1.2974	1.5305	1.6457	1.008	0.9606	0.9918	1.0042	1.0718	1.1259	1.1981	1.2555	1.2852	1.2884	1.321	1.2962	1.2896	1.3417	1.3237	1.3576	1.4039	1.3868
HVaR@98%	1.0473	1.3552	1.3428	1.4596	1.7374	1.6318	1.0432	0.9598	1.0148	1.0367	1.1302	1.1708	1.2366	1.3038	1.2864	1.3132	1.3391	1.3547	1.3615	1.409	1.4168	1.4098	1.4165	1.4986
HVaR@95%	1.0734	1.4231	1.397	1.425	1.6298	1.7056	1.0271	1.0106	1.0404	1.0658	1.1583	1.2114	1.3014	1.3665	1.3864	1.4042	1.4478	1.4573	1.4722	1.509	1.5579	1.547	1.5866	1.5902
ES(99%)	0.9778	1.2276	1.1455	1.2794	1.4734	1.5523	0.9794	0.8697	0.94	0.9881	1.0403	1.0841	1.1174	1.1647	1.1613	1.1929	1.2548	1.2823	1.2477	1.2767	1.2878	1.3072	1.3154	1.3438
ES(98%)	1.0006	1.2912	1.2161	1.3173	1.5297	1.6024	0.9989	0.9114	0.9669	0.9919	1.0562	1.1039	1.1597	1.2132	1.2254	1.2443	1.2936	1.3015	1.2758	1.3094	1.3181	1.3387	1.3596	1.3706
ES(95%)	1.0181	1.3527	1.2916	1.3926	1.6104	1.6497	1.0167	0.9433	0.9868	1.0041	1.0835	1.1382	1.1963	1.2403	1.2696	1.2981	1.3575	1.3581	1.353	1.3944	1.4139	1.4224	1.4499	1.4682

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix E2 - Risk Reduction as a Function of the Number of Positions for Foreign Portfolios (Continued)

Table E2.07- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Seventh Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.4502	1.332	1.2007	1.2642	1.1601	1.071	0.8553	1.087	1.099	0.9539	1.0499	1.0068	1.0264	0.995	0.9923	0.9465	1.0288	0.9888	0.8647	1.0321	0.9955	0.9869	1.022	1.02109
HVaR@99%*	1.2888	1.1962	1.0664	1.0424	1.2163	1.095	0.8967	1.002	1.0824	0.9782	0.9868	1.0485	1.0033	1.0305	0.9991	0.9564	1.0301	1.0008	0.9591	0.9964	0.9883	0.9615	0.9861	1.02722
HVaR@98%	1.1719	1.1723	1.0943	1.0572	1.2243	1.031	0.879	1.036	1.0464	0.971	1.0338	1.0026	1.0347	1.043	0.995	0.9398	1.0607	1.0263	0.9106	1.0237	1.0095	0.9682	0.9904	1.01717
HVaR@95%	1.2278	1.2585	0.985	1.0723	1.1202	1.085	0.8314	0.98	1.0307	1.0217	0.9898	1.0526	1.0618	1.0223	0.9826	0.9585	1.0135	1.007	0.9767	1.0282	0.9838	0.9773	0.9613	1.03944
ES(99%)**	1.417	1.2812	1.1735	1.1472	1.1633	1.084	0.8218	1.088	1.0972	0.9743	1.0483	1.0159	1.0285	1.0058	0.9785	0.9391	1.0044	0.9983	0.8985	1.0012	0.9859	0.9972	1.0316	1.02452
ES(98%)	1.3673	1.2413	1.1263	1.0923	1.1844	1.086	0.8464	1.055	1.0824	0.9752	1.0244	1.031	1.0233	1.0185	0.981	0.9435	1.0142	1.0015	0.9159	1.0035	0.9936	0.9799	1.0094	1.02353
ES(95%)	1.3135	1.201	1.0692	1.071	1.178	1.066	0.8524	1.032	1.0524	0.9917	1.0131	1.0198	1.0296	1.0223	0.9971	0.9492	1.0237	1.0058	0.934	1.0197	0.9965	0.9694	0.9948	1.01862

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.4502	2.0515	2.6028	3.3953	3.9338	4.254	3.1469	3.427	3.7566	3.42	3.6084	3.672	3.7604	3.6703	3.7133	3.5307	3.6154	3.552	2.8706	2.9783	2.9801	2.9453	2.9932	3.05429
HVaR@99%*	1.2888	1.492	1.5502	1.634	1.9738	2.174	1.9365	1.811	1.9939	1.9848	1.9673	2.0542	2.0575	2.1174	2.1107	1.9678	2.0111	2.0032	1.961	1.9607	1.9377	1.8111	1.7844	1.82343
HVaR@98%	1.1719	1.3706	1.4176	1.4952	1.8339	1.9	1.6495	1.677	1.7343	1.6928	1.7571	1.7641	1.8148	1.8805	1.8705	1.7384	1.8447	1.9018	1.7347	1.767	1.8032	1.6866	1.6684	1.7038
HVaR@95%	1.2278	1.5246	1.4737	1.5833	1.7763	1.906	1.5818	1.542	1.5848	1.6185	1.5948	1.6764	1.7786	1.8229	1.7826	1.7062	1.7306	1.7461	1.7139	1.7554	1.7283	1.6692	1.6025	1.66869
ES(99%)	1.417	1.8847	2.2349	2.626	3.0367	3.316	2.4631	2.681	2.9468	2.7773	2.9414	2.9991	3.0825	3.0431	3.0147	2.8399	2.8563	2.8386	2.465	2.4416	2.4058	2.396	2.4722	2.53022
ES(98%)	1.3673	1.7352	1.9227	2.1351	2.5156	2.762	2.1911	2.274	2.4756	2.3873	2.4778	2.5632	2.6122	2.6321	2.593	2.4351	2.4604	2.4576	2.2224	2.2141	2.21	2.1386	2.1602	2.20443
ES(95%)	1.3135	1.5874	1.6511	1.7825	2.1036	2.232	1.8619	1.904	2.0071	1.9895	2.0239	2.0712	2.1188	2.1582	2.1542	2.0291	2.0809	2.0971	1.9582	1.9886	1.9901	1.8954	1.8878	1.91922

Table E2.08- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Eighth Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.0724	1.2302	1.316	0.9416	1.0745	0.938	0.9467	1.023	1.0521	1.0265	1.08	0.9284	1.0021	0.9753	0.9734	0.9375	1.0586	1.0222	1.0347	0.9874	1.0326	0.9395	0.9973	1.04038
HVaR@99%*	0.9123	1.2082	1.2644	0.986	1.1389	0.994	1.0358	1.01	1.005	0.9493	1.0323	1.0041	1.0435	0.9625	0.9948	0.9763	0.9655	1.0533	1.0237	1.0196	1.0203	0.9346	0.9786	1.03019
HVaR@98%	0.8748	1.2002	1.2533	1.0326	1.0652	1.075	0.9689	1.022	1.0461	0.9437	1.0521	1.0468	1.0201	0.9847	0.9471	0.9525	1.0094	0.9966	0.9851	1.005	1.0368	0.9562	0.9956	1.00307
HVaR@95%	0.8218	1.3242	1.2204	1.0452	1.1271	0.999	0.9475	1.1	1.0429	0.9671	1.0361	1.0193	1.0128	0.9579	0.9906	0.9918	1.0088	0.9755	1.0114	1.014	1.0457	0.9028	0.9854	1.01431
ES(99%)**	1.0418	1.2182	1.3152	0.9323	1.0861	0.975	0.949	1.036	1.0582	0.9987	1.0522	0.9573	0.9949	0.9762	0.9709	0.9401	1.0564	1.0337	1.0203	1.003	1.0169	0.9423	0.9895	1.02903
ES(98%)	0.9778	1.2103	1.2898	0.9631	1.1009	0.977	0.9848	1.022	1.0407	0.9708	1.037	0.9818	1.0108	0.9714	0.9763	0.9615	1.0157	1.0346	1.0179	1.0058	1.0228	0.9423	0.9885	1.0207
ES(95%)	0.8979	1.2377	1.2597	0.9915	1.1179	0.998	0.9724	1.036	1.025	0.9731	1.035	1.0051	1.0238	0.9759	0.9717	0.9645	1.0032	1.0047	1.0116	1.0181	1.0241	0.9355	0.9959	1.01685

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.0724	1.3534	1.7698	1.5889	1.653	1.56	1.4991	1.463	1.5064	1.5733	1.661	1.5457	1.5331	1.4975	1.4711	1.3387	1.4057	1.4532	1.5213	1.486	1.5343	1.4189	1.4167	1.47493
HVaR@99%*	0.9123	1.1061	1.3832	1.3732	1.5377	1.488	1.5354	1.552	1.5438	1.4433	1.4824	1.4816	1.5554	1.4856	1.4764	1.4444	1.3989	1.4755	1.5133	1.5463	1.5837	1.4413	1.412	1.45926
HVaR@98%	0.8748	1.0433	1.2841	1.3236	1.4048	1.501	1.4331	1.46	1.5195	1.4268	1.4958	1.5683	1.5977	1.5766	1.4945	1.4202	1.4334	1.4251	1.4081	1.4221	1.4758	1.4046	1.4016	1.40385
HVaR@95%	0.8218	1.0759	1.3078	1.3629	1.5307	1.517	1.4415	1.593	1.6496	1.6029	1.6538	1.6616	1.6862	1.6114	1.6026	1.5769	1.5935	1.5616	1.585	1.6014	1.6741	1.4973	1.4767	1.4934
ES(99%)	1.0418	1.2981	1.6779	1.5166	1.6072	1.574	1.5037	1.511	1.5858	1.5756	1.6415	1.5748	1.5632	1.5287	1.4928	1.3741	1.4478	1.5074	1.5464	1.54	1.5633	1.4614	1.4443	1.48866
ES(98%)	0.9778	1.203	1.5241	1.4535	1.5757	1.528	1.5133	1.523	1.5721	1.5112	1.5623	1.5343	1.5529	1.5043	1.4704	1.4019	1.4251	1.4796	1.5075	1.5095	1.5436	1.442	1.4258	1.45679
ES(95%)	0.8979	1.1194	1.3874	1.3717	1.5238	1.514	1.4736	1.514	1.5438	1.4954	1.5475	1.5564	1.5941	1.5549	1.5148	1.4548	1.4608	1.471	1.4895	1.5126	1.5508	1.4317	1.428	1.45374

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix E2 - Risk Reduction as a Function of the Number of Positions for Foreign Portfolios

Table E2.09- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Ninth Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.8335	1.497	1.0224	1.1191	1.1477	1.1394	0.6951	1.0783	1.1228	1.0463	1.0674	1.0726	1.0473	1.02	0.9909	1.0101	1.0332	1.0254	0.9835	1.0048	1.0129	0.9993	1.0365	1.02831
HVaR@99%*	0.8073	1.406	0.9621	1.0693	1.0651	1.1007	0.7202	1.0622	1.0764	1.0592	1.0857	1.071	1.0431	1.0256	0.9672	1.079	1.0286	1.0242	0.9925	1.0098	1.0701	0.9486	1.0421	1.01944
HVaR@98%	0.8932	1.46	0.9531	1.0704	1.0382	1.1124	0.7018	1.1277	1.0459	1.0612	1.0008	1.0607	1.0301	1.0096	1.0304	1.0265	1.0591	1.0101	0.9825	1.0051	1.0289	0.9999	1.0383	1.00353
HVaR@95%	1.0671	1.334	0.9613	1.0505	1.0081	1.1228	0.7503	1.0581	1.0177	1.0309	1.0464	1.0667	1.0337	1.0348	1.0269	1.0233	1.0388	0.9867	1.0149	1.0209	0.9647	0.9985	1.041	1.02615
ES(99%)**	0.8101	1.397	1.0274	1.1331	1.1402	1.1165	0.6896	1.0906	1.095	1.0475	1.0705	1.0719	1.0503	1.0285	0.9938	1.0066	1.0338	1.023	0.9754	0.9997	1.0105	0.9834	1.0378	1.03118
ES(98%)	0.8162	1.416	0.9923	1.1138	1.1135	1.1091	0.6926	1.0861	1.0741	1.0551	1.0645	1.072	1.0464	1.0269	0.9936	1.0186	1.0378	1.0253	0.9882	1.0039	1.0281	0.9795	1.0377	1.02764
ES(95%)	0.8955	1.404	0.9753	1.0785	1.0823	1.0949	0.6975	1.0935	1.04	1.0547	1.0587	1.0668	1.0499	1.0155	1.0111	1.0168	1.04	1.0091	0.9815	1.0239	1.0105	0.9832	1.0353	1.02619

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.8335	1.27	1.0756	1.1327	1.2305	1.3754	1.0223	1.072	1.183	1.2181	1.3316	1.425	1.4914	1.4935	1.4678	1.4908	1.5294	1.569	1.518	1.5573	1.5692	1.5666	1.6002	1.64603
HVaR@99%*	0.8073	1.08	0.9476	1.012	1.0745	1.1657	0.8166	0.8506	0.9208	0.978	1.0595	1.1332	1.1801	1.2061	1.1526	1.2498	1.2811	1.3083	1.2968	1.3004	1.3889	1.3235	1.3699	1.39552
HVaR@98%	0.8932	1.265	1.1237	1.1907	1.2095	1.3659	0.9078	1.0253	1.0652	1.1384	1.1404	1.2017	1.2367	1.2646	1.2998	1.3186	1.3937	1.4099	1.3745	1.3823	1.425	1.4075	1.461	1.46024
HVaR@95%	1.0671	1.383	1.2814	1.3345	1.3201	1.4727	1.1178	1.1592	1.1538	1.1905	1.2429	1.3191	1.3568	1.4067	1.4447	1.4725	1.5295	1.5042	1.518	1.5517	1.5001	1.493	1.5548	1.59197
ES(99%)	0.8101	1.08	0.9596	1.0475	1.1593	1.3041	0.9076	0.9753	1.0562	1.0946	1.1917	1.2765	1.3266	1.3488	1.3327	1.3423	1.3837	1.4072	1.3715	1.3733	1.3668	1.3326	1.3774	1.41669
ES(98%)	0.8162	1.102	0.966	1.0526	1.1474	1.265	0.876	0.9361	1.0059	1.0615	1.1367	1.2187	1.2666	1.293	1.2743	1.2972	1.3425	1.3703	1.3499	1.3482	1.3729	1.3391	1.3842	1.41943
ES(95%)	0.8955	1.2	1.0823	1.152	1.2277	1.3439	0.9309	1.0093	1.0356	1.0969	1.1654	1.2405	1.3	1.3194	1.3295	1.3506	1.4017	1.4083	1.3786	1.4113	1.4239	1.3913	1.4394	1.47455

Table E2.10- Risk Reduction as a Function of the Number of Positions in Portfolio for Companies with Tenth Highest Market Capitalization

Average Relative Risk Reduction - Sequential Adding of Positions

Portfolio Numbers	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.9961	1.299	1.2822	1.0943	0.8716	1.1193	0.9938	0.9762	1.0518	1.0915	1.0345	1.0943	1.0492	1.028	0.9639	0.8994	1.013	1.0164	0.9976	1.0185	1.0589	0.9708	0.9994	1.05034
HVaR@99%*	0.969	1.299	1.2209	1.1176	0.9798	1.0129	0.9279	1.0264	1.0926	1.0179	1.0908	1.0563	1.046	0.9958	1.0464	0.9554	1.0088	1.0062	1.0001	0.9733	1.021	0.9626	1.0143	1.05033
HVaR@98%	0.9489	1.199	1.2822	1.1565	0.9558	0.9469	1.0385	1.1218	0.9972	1.0448	1.0948	0.9719	1.0405	1.034	1.0595	0.9314	1.0472	0.971	1.0374	0.9864	1.0095	1.0391	1.0295	0.95606
HVaR@95%	0.9465	1.21	1.2321	1.1291	1.0849	0.9453	1.0075	1.1152	1.0413	1.0513	1.0412	1.0304	1.045	0.9985	1.0682	0.9865	1.0374	1.0017	1.0057	0.9872	0.9875	0.9485	1.0251	0.97422
ES(99%)**	0.9573	1.308	1.2423	1.0715	0.9015	1.0995	0.9471	1.0051	1.0525	1.0758	1.0602	1.0839	1.0489	1.0208	0.9807	0.9198	1.0026	1.0018	1.0065	1.0148	1.0523	0.9748	1.006	1.03497
ES(98%)	0.9576	1.276	1.2446	1.0958	0.9337	1.0422	0.9496	1.0239	1.0582	1.0547	1.0771	1.0626	1.0305	1.0225	1.0072	0.9375	1.0111	0.9975	0.9985	0.9942	1.0379	0.98	1.0083	1.03415
ES(95%)	0.9318	1.24	1.2373	1.131	0.9904	0.9889	0.9703	1.0779	1.0404	1.0579	1.0742	1.023	1.0257	1.028	1.0223	0.9569	1.0223	0.9946	1.016	0.9868	1.0323	0.9701	1.0094	1.01263

Average Absolute Risk Reduction - Relative to First Position

Portfolio Numbers	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.9961	1.303	1.6597	1.7633	1.4786	1.6544	1.6514	1.6091	1.6606	1.7883	1.8538	2.0316	2.1138	2.1475	2.0917	1.8254	1.8388	1.872	1.8699	1.9055	2.0238	1.9454	1.944	2.03724
HVaR@99%*	0.969	1.256	1.5393	1.7114	1.6476	1.594	1.4862	1.4991	1.6394	1.6642	1.8115	1.9029	1.9874	1.9847	2.066	1.9724	1.9912	2.0154	2.0032	1.9551	2.0001	1.9256	1.9628	2.04645
HVaR@98%	0.9489	1.128	1.4454	1.6654	1.5848	1.4522	1.5079	1.6838	1.6687	1.7465	1.9191	1.8344	1.9108	1.9717	2.0906	1.9363	2.0252	1.9554	2.0315	2.0085	2.0245	2.1036	2.1606	2.05525
HVaR@95%	0.9465	1.133	1.3968	1.5753	1.695	1.5897	1.5872	1.7658	1.8417	1.9351	2.0218	2.0788	2.1721	2.1555	2.3033	2.2624	2.3436	2.3462	2.3605	2.3208	2.2907	2.1649	2.2205	2.16372
ES(99%)	0.9573	1.261	1.5426	1.6391	1.4362	1.5621	1.4922	1.4866	1.5584	1.6638	1.7625	1.9148	2.0047	2.0335	2.0005	1.8175	1.8175	1.8256	1.8351	1.8661	1.9698	1.9107	1.9213	1.98694
ES(98%)	0.9576	1.225	1.5155	1.6479	1.5044	1.5388	1.4754	1.4993	1.5816	1.6597	1.7828	1.8949	1.9493	1.9908	2.002	1.8732	1.8918	1.8922	1.8857	1.8804	1.9569	1.9136	1.9321	1.99785
ES(95%)	0.9318	1.153	1.4262	1.6056	1.5688	1.5253	1.4822	1.5887	1.6552	1.7519	1.8799	1.9152	1.9616	2.0161	2.058	1.9661	2.0069	1.9964	2.0306	2.0066	2.071	2.0069	2.0248	2.04985

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix E3 - Risk Reduction as a Function of the Number of Positions for Frechet Random Walk Model and Geometric Brownian Motion Model

Table E3.01- Risk Reduction as a Function of the Number of Positions in Portfolio for Frechet Random Walk Model

Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	0.5373	1.6132	1.2767	1.4723	1.2355	1.2425	1.1775	1.064	1.1367	1.1663	1.1476	0.4664	1.0153	1.0285	1.1008	1.0777	1.1447	0.9882	1.2292	0.9855	1.0147	0.9986	1.0774	0.9944
HVaR@99%*	0.9747	1.3096	1.288	1.1928	0.7835	1.1914	0.9487	1.053	1.0411	1.1418	1.0278	0.9827	1.1176	0.8257	1.1403	0.9622	1.0088	1.116	0.9683	0.8673	0.9905	0.9454	1.1146	1.07537
HVaR@98%	0.9361	1.2432	1.2	1.1291	1.0492	0.8679	1.173	1.04	1.052	0.8779	1.0882	0.9894	1.0244	0.9706	0.9669	1.1194	0.9674	1.127	0.9863	0.9462	0.9419	0.8834	1.0416	1.1739
HVaR@95%	1.106	0.8419	1.1466	1.2466	0.8745	1.1504	0.965	1.016	1.0879	0.8561	1.0054	1.0498	1.0247	0.9217	1.0013	0.9932	1.0571	0.962	1.074	0.894	1.0875	0.9128	1.0634	1.00338
ES(99%)**	0.6272	1.6012	1.268	1.2033	1.1946	1.1701	1.1433	1.097	1.0818	1.1188	1.1288	0.6251	0.9971	1.0174	1.1096	0.8302	1.1282	1.0384	1.1895	0.9925	1.0558	0.9888	1.0421	1.0332
ES(98%)	0.7304	1.4802	1.2649	1.2038	1.0528	1.1581	1.0748	1.082	1.0421	1.1191	1.0792	0.7589	1.0327	0.951	1.1097	0.8982	1.0703	1.0557	1.1276	0.9258	1.0235	0.9626	1.0673	1.05813
ES(95%)	0.8513	1.2614	1.2385	1.1952	1.0206	1.1022	1.0627	1.033	1.0742	0.9684	1.0363	0.8753	1.0468	0.9181	1.0951	0.9558	1.0774	1.0251	1.0533	0.945	1.0314	0.9082	1.0505	1.05881

Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	0.5373	0.8668	1.1067	1.6294	2.0132	2.5013	2.9454	3.134	3.5624	4.155	4.7681	2.2238	2.2579	2.3223	2.5565	2.755	3.1535	3.1162	3.8305	3.7749	3.8304	3.8249	4.121	4.09796
HVaR@99%*	0.9747	1.2765	1.6441	1.9611	1.5365	1.8305	1.7366	1.829	1.9044	2.1743	2.2348	2.1961	2.4545	2.0267	2.3111	2.2238	2.2433	2.5036	2.4242	2.1024	2.0824	1.9688	2.1945	2.35984
HVaR@98%	0.9361	1.1637	1.3964	1.5767	1.6542	1.4357	1.6841	1.751	1.8419	1.617	1.7596	1.7409	1.7834	1.731	1.6738	1.8736	1.8125	2.0427	2.0147	1.9063	1.7955	1.5861	1.6522	1.93947
HVaR@95%	1.106	0.9311	1.0676	1.3308	1.1638	1.3388	1.292	1.312	1.4273	1.2218	1.2285	1.2896	1.3215	1.218	1.2196	1.2113	1.2805	1.2318	1.323	1.1828	1.2863	1.1741	1.2485	1.25273
ES(99%)	0.6272	1.0043	1.2734	1.5323	1.8305	2.1419	2.4488	2.686	2.9062	3.2516	3.6705	2.2945	2.2877	2.3274	2.5826	2.1441	2.4189	2.5119	2.9879	2.9654	3.1309	3.0957	3.226	3.33304
ES(98%)	0.7304	1.0811	1.3674	1.6462	1.7331	2.0071	2.1572	2.334	2.4328	2.7226	2.9383	2.23	2.3028	2.1899	2.4301	2.1828	2.3363	2.4665	2.7813	2.5748	2.6354	2.537	2.7077	2.86514
ES(95%)	0.8513	1.0738	1.3299	1.5895	1.6223	1.788	1.9001	1.963	2.1082	2.0415	2.1156	1.8517	1.9383	1.7796	1.9489	1.8628	2.007	2.0574	2.167	2.0479	2.1122	1.9183	2.0152	2.13371

Table E3.02- Risk Reduction as a Function of the Number of Positions in Portfolio for Geometric Brownian Motion Model

Relative Risk Reduction - Sequential Adding of Positions

Portfolio Number	P1/P2	P2/P3	P3/P4	P4/P5	P5/P6	P6/P7	P7/P8	P8/P9	P9/P10	P10/P11	P11/P12	P12/P13	P13/P14	P14/P15	P15/P16	P16/P17	P17/P18	P18/P19	P19/P20	P20/P21	P21/P22	P22/P23	P23/P24	P24/P25
Maximum Loss	1.508	1.0924	1.1273	1.1605	1.1329	0.9284	1.3623	0.951	1.1924	1.0336	0.9501	0.9715	0.8665	0.976	1.2716	1.0869	0.9105	1.0308	1.0315	1.0084	1.1919	1.0146	0.9819	0.96845
HVaR@99%*	1.4893	1.2679	1.2318	1.0296	1.1205	1.1732	1.0443	1.156	1.0229	0.9677	1.0759	1.0813	0.9545	1.028	0.938	1.0028	1.0162	1.0311	0.8877	1.0298	1.1819	1.0155	1.0526	0.9105
HVaR@98%	1.5347	1.2886	1.2288	1.0577	0.9834	1.2027	1.1413	1.095	1.0186	1.0051	1.0582	1.0114	1.024	0.9638	1.0146	1.0374	0.9547	1.0131	1.045	0.9285	1.067	1.056	1.0263	1.03537
HVaR@95%	1.2508	1.3003	1.1901	1.0563	1.0391	1.1317	1.099	1.057	1.0816	0.9467	1.0437	1.0571	1.0212	1.0424	0.974	1.0806	1.0708	1.0727	0.9896	0.9526	1.0106	1.0548	1.0221	1.00905
ES(99%)**	1.4929	1.114	1.1939	1.1243	1.1122	1.0575	1.1905	0.978	1.1662	1.0005	0.982	1.0029	0.964	0.988	1.1218	1.0272	0.988	0.9934	0.9928	1.0238	1.1621	1.0234	0.9744	0.96789
ES(98%)	1.4893	1.1961	1.2034	1.08	1.1089	1.1119	1.1441	1.038	1.1039	0.9908	1.0223	1.0229	0.9662	1.0009	1.052	1.0035	1.0028	1.0039	0.9391	1.0292	1.1696	1.0199	1.0119	0.96073
ES(95%)	1.4372	1.2513	1.1924	1.0936	1.0162	1.1603	1.1339	1.048	1.0511	1.0091	1.0376	1.0106	1.0187	1.0016	1.0098	1.0425	1.0085	1.0137	0.9815	0.9891	1.0863	1.003	1.0356	1.02702

Absolute Risk Reduction - Relative to First Position

Portfolio Number	P1/P2	P1/P3	P1/P4	P1/P5	P1/P6	P1/P7	P1/P8	P1/P9	P1/P10	P1/P11	P1/P12	P1/P13	P1/P14	P1/P15	P1/P16	P1/P17	P1/P18	P1/P19	P1/P20	P1/P21	P1/P22	P1/P23	P1/P24	P1/P25
Maximum Loss	1.508	1.6474	1.8571	2.1551	2.4415	2.2668	3.0881	2.937	3.5024	3.6201	3.4393	3.3412	2.895	2.8256	3.593	3.9054	3.5558	3.6651	3.7806	3.8124	4.544	4.6102	4.5268	4.384
HVaR@99%*	1.4893	1.8883	2.326	2.3948	2.6835	3.1483	3.2877	3.802	3.8888	3.7632	4.0488	4.3781	4.1789	4.2961	4.0298	4.0412	4.1065	4.2344	3.7587	3.8707	4.5747	4.6456	4.8902	4.45247
HVaR@98%	1.5347	1.9775	2.4301	2.5703	2.5277	3.04	3.4695	3.798	3.8688	3.8887	4.1152	4.1623	4.2624	4.1081	4.168	4.324	4.1283	4.1825	4.3706	4.058	4.33	4.5724	4.6927	4.8587
HVaR@95%	1.2508	1.6265	1.9356	2.0446	2.1245	2.4044	2.6425	2.792	3.0198	2.859	2.9838	3.1541	3.2209	3.3573	3.2701	3.5335	3.7837	4.0588	4.0166	3.8261	3.8665	4.0784	4.1684	4.20617
ES(99%)	1.4929	1.6632	1.9857	2.2325	2.483	2.6257	3.126	3.059	3.5667	3.5686	3.5043	3.5143	3.3879	3.3472	3.7547	3.8569	3.8106	3.7856	3.7584	3.848	4.4719	4.5766	4.4595	4.31625
ES(98%)	1.4893	1.7814	2.1436	2.3151	2.5672	2.8544	3.2656	3.39	3.7419	3.7074	3.7899	3.8768	3.7456	3.7492	3.9443	3.9583	3.9694	3.9848	3.742	3.8513	4.5044	4.5942	4.6491	4.46654
ES(95%)	1.4372	1.7984	2.1444	2.3452	2.3831	2.7651	3.1354	3.286	3.4536	3.4851	3.6161	3.6545	3.7226	3.7287	3.7651	3.9252	3.9587	4.0128	3.9385	3.8958	4.2321	4.2448	4.3959	4.51461

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** P1/P2,…,P24/P25 represents the relative risk reduction in terms of sequential adding of positions

**** P1/P2,…,P1/P25 represents the absolute risk reduction relative to first position

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for DomesticPortfolios

Table F1.01- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Australia

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.8E-11	-628.9	648.5	446.26	481.5	302.9	540.59	130.5	-59.7	100.51	-97.21	-281.2	19.95	-55.28	1248	923.26	1004	879.9	708.92	738.3	666.9	715.8	729.18	691.51	527.55
HVaR@99%*	4.8E-11	-474	59	741.37	345.2	734.5	606.99	1.882	-231	-64.72	-85.25	82.058	90.13	-96.21	493.1	584.37	-310.3	-879	-1034	-1599	-1559	-1558	-1424	-1499	-1290
HVaR@98%	6.9E-11	377.39	201.9	536.65	-19.75	562	717.39	1359	106.7	66.231	165.2	189.41	378.7	-25	361.5	162.9	211	484.9	494.94	808.8	224.2	329.8	202.5	-21.79	-126.1
HVaR@95%	6.8E-11	338.76	190.7	704.66	741.4	22.97	141.41	-7.592	-107	343.26	242.1	267.31	-84.76	14.55	-43.32	148.32	117.1	561.9	312.03	320.9	139.7	251.6	550.5	315.89	126.78
ES(99%)**	0	291.91	1214	936.3	1043	599.1	835.92	487.6	289.9	314.9	296	205.75	290.9	251.2	-161.3	-188.4	243.1	419.1	509.2	644.6	618.9	622.9	679.97	597.6	515.51
ES(98%)	0	-30.8	766.1	894.16	612.9	669.5	606.29	285	134.8	148.47	142.5	70.227	174.8	175.5	95.02	88.085	125	18.24	33.275	-54.33	-45.04	-121.3	-5.287	-16.23	-65.58
ES(95%)	0	98.601	498.8	587.33	406.8	515.2	349.17	317.5	262.3	101.66	33.73	19.532	109	48.83	61.83	43.456	32.53	88.6	107.62	140.2	96.9	112.8	91.166	107.25	58.45

Table F1.02- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Brazil

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.9E-11	6135.8	17263	8995.3	3815	-334.9	-4010	-4284	-2889	-3292	-2544	-2280	-948.4	-1311	12259	11932	10989	11021	10169	9015	8585	8986	8680.1	8215.2	8917.7
HVaR@99%*	4.9E-11	5202.3	-5696	-3586	365.7	2837	5963.3	2844	-1229	-1134	-1010	-1063	-862	-1053	12177	10350	9695	9983	8135.9	7399	6838	7087	6127.4	5611.1	4401.9
HVaR@98%	-7E-11	548.47	-2152	-1558	-1052	1157	1442.1	2514	4504	3173.4	2443	2271.3	900.1	2506	10021	9188.7	8808	7502	6694.3	7773	7613	7117	6541.6	5934.6	5029.2
HVaR@95%	4.7E-11	3148.3	962.5	1189.8	1084	1297	1068.9	744.7	911.5	216.61	218.2	-719.1	-408	109.9	1939	1783.9	2192	1694	2189.4	2038	1303	1332	1662.6	1888.1	2020.5
ES(99%)**	2.3E-11	4714	6026	3441	324.8	-691.5	-2702	-2768	-1832	-2331	-2018	-1689	-1319	-960.9	11563	11431	10573	10376	9604.3	8802	8355	8101	7745.5	7038.1	7176.7
ES(98%)	0	4213.3	769.6	-536.3	-609.7	641.3	267.47	47.07	-1136	-1280	-1532	-1150	-513.1	-636.7	11328	11243	10245	10065	9058.2	8146	7735	7658	7080.1	6669.6	6212.6
ES(95%)	0	1765	300.8	-451.7	-457.8	45.6	190.64	215.7	-58	182.1	197.9	138.89	359.8	270.5	7170	7094	6508	6187	5851.4	5526	5254	5239	5068.9	4890.2	4599.6

Table F1.03- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Chile

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-8E-11	149.4	195.4	-77.84	708.4	710.4	-134.7	-47.09	-129	-15.07	-268.4	-174.3	-260.7	12169	11555	15324	14131	12813	12104	11028	10728	10357	9701.5	8941.2	8797.1
HVaR@99%*	-7E-11	925.63	1036	1021.6	422.7	227.2	-13.71	-143.1	298.4	44.146	717	667.68	143.5	774	1214	1253.8	1488	1215	1389.5	1336	1477	1398	1610.1	377.3	-397.1
HVaR@98%	2.2E-11	826.33	583.1	779.97	1235	1037	579.88	312.5	531.4	238.43	521.4	372.49	631.1	253.1	86.63	81.92	-137.2	367.6	127.23	126	-66.08	-304.7	93.221	328.89	429.78
HVaR@95%	-7E-11	870.44	224	446.34	389.1	652.5	291.18	296.9	46.15	380.5	257.5	213.01	411.6	228.7	519.6	398.81	-96.06	299.5	280.52	178.2	259.5	171.7	150.15	208.99	139.63
ES(99%)**	-1E-12	935.29	-382	38.146	0.489	47.27	-149.6	-116.4	-544	-565.5	-702.4	-560.7	-458.7	6425	5807	7865.6	7404	7400	6961.8	6502	6116	5733	4812.6	4081.9	4097.2
ES(98%)	0	1035.6	482.2	539.09	371.4	529.6	145.79	179.9	-106	-188.5	-40.94	6.6291	15.31	3427	3286	4296.9	4083	4034	3890	3691	3554	3387	2877.7	2324.7	2153.3
ES(95%)	0	968.98	529.7	541.4	718.7	759.6	690.37	557.5	425.9	428.56	415.6	425.26	421.1	1423	1311	1613.9	1500	1349	1232.2	1197	1250	1196	1143.6	994.57	923.43

Table F1.04- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for France

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-3E-11	723.42	-1039	196.05	18.95	-373.1	-595.5	-858.9	440.2	308.12	355.9	448.78	717.6	798.1	830.6	541.64	310.5	-401.4	166.32	33.19	-137.2	46.72	-17.08	57.011	-122.6
HVaR@99%*	0	343.17	855.4	-1300	-412.1	-420.1	-292.6	-772.3	-550	-651.8	143	-135.2	232.3	407.3	541.7	-331.6	-1121	-1998	-1687	-809.6	-815.4	-827.4	-731.1	-850.9	-546.7
HVaR@98%	0	-359.8	24.31	663.85	-705.1	621.3	104.47	-120.9	-2007	-1250	-997.5	-1940	-1492	-1311	-339.6	511.31	1469	1257	1162	1134	865.4	1033	1068.3	715.26	802.82
HVaR@95%	2.3E-11	-343.8	-23.8	0.6067	91.58	164.8	-702.1	131	763	390.55	580.3	522.27	509.4	280.8	1387	1062.9	1068	726.9	809.45	324.2	351.7	55.75	211.25	616.15	250.95
ES(99%)**	1.5E-12	662.39	-202	-105.3	-331.5	113.4	-435.4	-813.9	-473	141.23	-264	394.61	336.4	-145.8	112.8	-171	-910.8	-404.9	-40.56	-679.9	-747.7	-754.3	-828.8	-577.6	-428.6
ES(98%)	1.3E-11	182.16	137.9	-437.9	-632.9	-271.1	-54	-333.4	-705	-204.9	-60.11	10.466	-85.5	-158.8	494.2	-72.43	-480.2	-533.5	-340.6	-451.6	-481.8	-358.8	-589.8	-386.9	-296.9
ES(95%)	0	-61.44	51.27	-189.9	-341.3	17.62	85.388	20.54	-225	-138.8	19.7	39.775	-36.03	-19.4	822.8	710.62	704.1	624.2	539.4	545.3	400.2	373	339.72	269.97	369.98

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (Continued)

Table F1.05- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Germany

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	5.2E-11	-453.1	-2373.4	-923.5	2513.4	1268.8	1356	765.5	693.3	411.03	794.26	808.77	558.76	229.6	593.3	679.61	417.21	502.2	343.9	458.12	366.1	636.31	630.48	540.25	94.81
HVaR@99%*	-4.7E-11	1340	-246.5	-53.88	1022.4	208.09	407.9	27.77	219.5	41.08	187.95	8.0721	367.94	270.9	147.7	-196	-187.8	-85.33	122.2	195.89	667.4	563.03	574.47	546.01	493.5
HVaR@98%	2.5E-11	-677	631.7	37.572	121.05	797.85	-25.03	485.5	917.5	337.62	598.62	428.02	120.6	170.6	277	311.3	179.82	-19.61	-47.71	-19.89	-172.7	-115.3	125.36	-293.5	-378.7
HVaR@95%	1.5E-12	422.8	-370.78	-288.9	484.11	109.64	730.7	244.9	88.01	688.35	310.51	-299.3	260.87	-237.5	-112.1	236.05	347.73	277.6	457.2	795.79	135.9	-66.85	43.629	-176.3	-236.8
ES(99%)**	2.3E-11	421	-1820.1	-954.2	1192.6	1004.2	1225	598.8	439	426.31	746.46	733.43	388.77	299.9	458	655.42	895.13	1053	1132	1163.1	1033	1244.9	1145.3	1321.5	851
ES(98%)	0	457.7	-936.81	-616.1	1016.1	637.15	1017	606.2	292.9	301.48	186.74	139.13	282.56	201.5	236.4	269.33	440.93	666.6	798.3	840.67	872.3	983.36	942	941.65	681.4
ES(95%)	0	157.1	-405.67	-368.8	815.53	841.61	704.6	488.4	433.5	175.55	232.42	238.99	192.88	174.4	130.9	85.379	193.51	333.7	418	405.98	310.1	341.08	310.42	358.91	206.7

Table F1.06- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Hong Kong

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2.3E-11	923.8	-136.76	800.42	112.05	259.3	15.8	210.7	-70.38	-580.3	-430	-447.3	-688.4	-736.6	-445	-650.7	-394.9	-427.1	-151.2	-106.3	7.557	-47.65	-121.3	-634.5	98
HVaR@99%*	2.3E-11	266.9	-104.41	99.795	-48.99	-331.5	180	78.25	-43.03	134.13	1.7935	-55.15	59.753	552.5	300.3	260.73	92.938	401	334.8	305.5	16.05	69.167	-167.8	65.084	-500.2
HVaR@98%	-4.6E-11	256.6	802.32	-17.87	46.848	318.98	38.61	71.31	151.8	-42.34	-159.4	-9.127	307.4	302	9.377	133.19	155.69	-142.8	27.05	164.52	-9.818	-354.9	-309.5	-787.9	-772
HVaR@95%	4.7E-11	481.3	481.83	477.68	87.452	247.35	405.2	293	176.4	-387.3	-65.68	192.63	-30.26	-109.7	-251.6	-70.81	-99.69	468	419.3	163.48	-67.28	-130.7	28.273	-566.6	-626.9
ES(99%)**	2.3E-11	433.9	97.486	351.9	251.04	172.89	-140	38.09	-175.7	-45.61	-223.9	-134.5	-497.8	-440.7	-234.3	535.49	438.46	141.5	388.2	385.96	521.6	344.03	393.69	-19.16	384
ES(98%)	2.8E-11	312	221.91	346.17	237.74	-27.28	-69.55	29.57	36.37	107.2	-150.4	-38.59	-56.46	-9.012	-4.395	346.74	266.29	288.2	436.2	309.98	314.1	163	118.47	-99.29	170.2
ES(95%)	-1E-11	353.4	311.94	386.66	168.7	95.701	-13.39	116.3	113.2	105.01	-79.3	-39.86	42.788	10.43	22.06	257.4	221.06	163.2	277.8	212.34	184.6	-60.69	-61.61	-305.4	-182.6

Table F1.07- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for India

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.9E-11	-329.7	3793.7	3548.7	2797.9	2601.6	2371	1911	1929	1749.7	2241.7	1460.9	2220.2	1853	2212	2589.2	2276.6	1747	1648	1013	965.6	888.95	782.51	752.52	772.9
HVaR@99%*	-4.9E-11	364.2	617.57	2206.9	2218	2070.7	2787	2104	1411	1473.6	1256.9	1539.2	1452.6	1287	1339	1454.2	1184.8	995.7	797.8	319.22	187.3	263.68	-238.2	-103.4	-63.74
HVaR@98%	-2.6E-11	-1000	2183.6	764.4	1650	2841.7	2401	2444	2089	1689.1	1283.9	837.86	1305.1	897.2	878.4	953.18	1215.5	502.9	495.8	351.56	457.1	435.57	87.656	429.71	113.7
HVaR@95%	2.2E-11	414.1	1362.2	1882.4	1228.1	224.66	607.4	-175.8	6.951	1047.6	1915.4	1481.5	1488.6	1437	1722	1080.2	671.3	427.7	649.8	758.95	402.5	617.6	775.87	570.39	1266
ES(99%)**	0	-210.7	3061.6	2504.1	1915.4	2183.6	1372	1058	1517	989.38	1007.5	953.06	1054.5	735.6	882.7	948.71	789.96	848.4	791.4	892.79	883.3	901.15	700.15	621.49	567.8
ES(98%)	0	-149.9	1890.3	2517.5	1978.7	1613.7	1930	1573	1402	1360.9	1150.8	1236.2	1098.8	847.3	839.8	949.93	847.56	641.1	570.5	593.94	634.6	677.75	499.39	315.46	422
ES(95%)	0	-2.074	1538.2	1820.8	1612.7	1546.3	1628	1305	1174	1161.7	1122.8	1063.4	1158.1	992.3	977.1	1100.1	964.57	698.6	692.6	494.19	487.6	507.48	412.1	410.94	272.2

Table F1.08- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Indonesia

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-4.9E-11	2735	2141.9	-932.7	1790.1	7109.1	3160	829.9	-1801	-4030	-4078	-3236	-2359	-950.3	-269.9	210.1	114.66	594.4	4.105	255.11	-408.7	-1983	-3241	-2271	-2386
HVaR@99%*	-5.1E-11	1324	-223.3	-1134	-2411	10766	10207	8072	9039	5840.6	3253.7	3757.9	3709.7	3239	2189	2773.4	2974.3	2104	2154	2447.3	1846	571.74	1923.2	2570.3	2519
HVaR@98%	-2.3E-11	-422.2	-137.29	-2402	2121.1	8328.7	10400	7860	9490	7869.1	2907.1	2621.8	2659.3	3935	4271	4034.1	3841.8	3232	3264	3590.9	3377	649.68	1116.3	1528.1	1455
HVaR@95%	0	957.4	1654.8	-2212	514.74	7015	6262	5978	5915	4555.1	2249.8	1660.2	2184.9	3181	3522	3609.2	2936.5	2714	1965	1894.1	2162	819.53	-338.5	202.14	-322.7
ES(99%)**	-3.6E-11	1806	1437.3	-1540	791.04	11117	7947	5043	4527	1648.8	417.62	-1229	-559.7	224.2	-32.52	534.99	614.71	361.5	-420.7	-314.4	-645.1	-1079	-1696	-1790	-1603
ES(98%)	-2E-11	1198	971.02	-938.5	-755.1	10597	9124	5992	6363	3822.1	2067.1	1585.8	1839.9	1800	1902	1390.7	1405.1	974.3	369.9	293.5	-239.8	-322.1	-356.9	-148.5	-352.2
ES(95%)	-8.7E-12	1036	790.35	-1611	203.76	8678.1	8963	6927	6487	5139.6	3676.2	2881.8	2910.7	3082	2708	2247.1	2037.1	1566	1265	1120.5	754.1	791.05	630.69	864.29	861

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (Continued)

Table F1.09- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Ireland

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-3E-12	-305.1	-25.02	-2243	-1509.1	44982	46522	44506	43265	42340	41251	37848	36455	34029	33383	33207	31648	31016	30038	29061	20099	19434	19803	18993	20453
HVaR@99%*	-5E-11	-161.6	84.145	513.13	-210.81	20250	17998	16962	15808	15058	11449	10207	9314.5	9851.8	10014	8594.5	8509.8	8395.8	8546.7	7076.8	5960.1	5730.2	5970.8	5233.1	5145.13
HVaR@98%	-2E-11	-197.3	725.16	963.66	-168.78	10227	9254.5	9533	9879.7	10754	10130	11087	10837	9351.1	9611.3	9299.1	9569.2	9097.9	8270.7	7689	8350.9	7989.3	7093.7	6475.3	6921.84
HVaR@95%	2.5E-11	113.57	-229.3	-362.5	-582.65	5044	4534.1	3641.8	3818.2	3437.4	2829.6	2574.3	2770	3244.1	3029.7	2203.3	2957.7	3063	2508.8	2750.8	3006.9	3187.6	3098.5	2733.6	2382.61
ES(99%)**	-3E-11	-246.9	-19.05	-1236	-725.16	32460	34800	33578	32991	31764	30794	28833	27717	25639	24958	24651	23542	23163	22245	21692	17852	17146	16580	16064	16994.7
ES(98%)	0	-173.9	-137.3	-450.3	-635.72	23592	24558	23834	23074	22322	20634	19295	18574	17736	17642	17068	16602	16350	15770	15026	11875	11448	11462	10853	11179.1
ES(95%)	0	-122.8	68.217	-174.9	-175.8	12496	12340	11847	11524	11320	10509	10034	9678.9	9533.4	9484	9053.7	8802.8	8673.5	8485.2	8210	7046.9	6617.6	6694.4	6406	6615.15

Table F1.10- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Israel

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	0	425.75	1387	1043.2	947.42	2571.9	2051.9	2207.2	1863	1640.8	1242.8	3293.1	2874.9	2590.8	1880.5	1731.2	1628.3	1305.6	1346.2	1511.6	1413.3	-1331	-1387	-1500.1	-1662.4
HVaR@99%*	-7E-11	-1383	-1687	427.86	-121.74	844.54	-95.03	-79.38	-1555	-1002	-1481.8	-3143	-2968	-2704	-1192	-1134.2	-938.8	-714.62	-94.239	-55.44	-352.8	-3770	-4149	-4069.4	-4722.9
HVaR@98%	-5E-11	642.07	639.58	-577.3	-1271.7	-2064	-1067	-457.4	-1590	-408.5	-1029.4	-2227	-2516	-2270	-559.3	-678.83	-318.8	-583.32	-343.98	259.88	544.06	159.63	-866.5	-1237.5	-1181.7
HVaR@95%	-4E-11	181.01	513.17	693.09	-135.34	407.66	37.273	-50.31	422.52	374.46	496.52	-1289	-1012	-581.5	-649.6	-230.32	-43.58	-625.89	-477.03	491.09	545.64	745.32	717.84	285.81	833.394
ES(99%)**	0	498.31	1391.8	1550.7	1181.7	2892.4	2174.8	2058.5	1464.5	1606.9	1623.4	2703	2685.9	2520.1	2115.1	2221.2	1571.2	1317	1529.4	1497.7	1449.4	-528.9	-290	-449.27	-493.38
ES(98%)	-1E-11	13.098	162.97	260.02	202.31	1067.9	770.45	772.19	455.46	408.76	427.6	289.85	364.48	482.8	910.97	1124.5	875.7	736.08	889.98	1018.6	870.11	-1180	-1181	-1219.9	-1432.4
ES(95%)	0	95.482	401.87	160.42	71.065	240.35	130.48	424.53	472.93	325.75	287.11	-37.46	12.194	14.422	158.42	348.44	537.34	448.44	378.53	485.37	575.64	-286.3	-303.7	-306.87	-367.09

Table F1.11- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Italy

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.8E-11	491.89	-33.99	328.49	402.94	535.33	257.9	11.636	695.78	173.35	150.2	-429.8	-11.31	-23.37	-834.7	-271.98	138.94	-443	396.63	928.1	1058.1	1347.2	967.21	963.05	829.418
HVaR@99%*	2.6E-11	542.88	-969	-342	190.92	-635.1	-1155	93.877	1490.6	1739.5	1407.7	570.7	664.02	1031.1	2034.8	889.88	819.39	1123.7	1462.8	1447.4	869.23	1034.3	1001.9	1003.6	1236.37
HVaR@98%	-5E-11	874.42	98.504	534.62	1261.2	517.99	494.92	-1346	-1739	-1733	-528.55	652.31	383.51	374.09	746.99	1369.8	1038.9	1136.7	1300.6	1501.4	1288.8	1268.2	1399.9	1328.4	2011.37
HVaR@95%	-2E-11	-89.75	-197.5	16.464	717.16	168.54	517.1	240.52	75.466	417.64	208	893.79	653.95	202.11	616.24	782.44	354.39	332.26	200.13	720.03	599.94	677.05	678.86	768.84	749.08
ES(99%)**	2.3E-11	883.64	215.03	537.67	29.587	-171.6	170.96	-176.3	163.14	317.92	310.97	223.3	436.61	487.87	166.31	389.81	478.13	453.92	366.02	608.03	556.18	754.99	645.94	697	696.686
ES(98%)	0	761.69	-157.2	84.955	16.213	-430.2	-390.7	80.971	336.05	576.43	715.64	411.73	464.27	583.17	765.4	649.73	648.67	617.12	780.27	1129.7	1013.7	897.83	659.19	749.19	746.492
ES(95%)	0	472.59	48.151	280.72	331.66	260.19	235.95	321.78	334.7	302.49	538.85	406.11	446.07	505.49	750.47	817.27	729.93	644.28	738.41	1106.9	1011.3	940.96	824.42	806.43	775.97

Table F1.12- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Japan

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-3E-11	-317.4	-1729	-739.8	-1177.7	313.93	67.68	70.957	463.83	15.108	86.517	202.63	489.93	427.13	430.98	487.11	750.64	634.4	481.16	745.91	679.84	683.86	763.55	820.28	908.253
HVaR@99%*	-2E-11	397.87	-1102	441.69	-1806	-2084	1397	1190.6	-461.7	-735.5	707	1758.7	815.55	1333.7	1140	1588	860.87	1037.1	1176.7	1398.8	891.43	655.37	1713.8	1181.6	1034.8
HVaR@98%	0	-94.4	474.55	-87.4	-283.1	261.08	1075	-741.2	-277.8	78.706	254.78	851	651.15	825.6	982.7	561.21	-331.5	-611.43	-264.33	-384.2	-48.3	-234.3	-101	529.86	353.208
HVaR@95%	2.4E-11	774.6	-434.2	-824.5	-79.335	51.604	-210	122.5	-50.99	98.486	-337.86	382.09	330.83	388.77	534.53	395.66	98.235	488.73	473.6	142.09	135.37	181.86	152.49	513.2	318.106
ES(99%)**	-2E-11	-574.3	-737.9	-586.8	-232.07	-788.8	-810.9	-434.2	565.72	116.81	-8.1717	110.33	170.75	-247.9	381.02	382.59	544.41	442.32	412.27	472.18	372.05	420.03	514.52	556.97	714.916
ES(98%)	-2E-11	-92.2	-734.8	-343.9	-682.18	-968.5	102.79	416.85	245.27	-89.72	259.66	310.61	397.01	450.71	480.63	420.43	745.5	551.9	613.18	723.57	560.04	599.73	719.44	626.44	793.211
ES(95%)	0	15.441	-233.6	-358.5	-151.64	-375.1	15.069	-24.77	201.16	-140	293.96	253.32	262.78	296.4	296.9	272.45	302.47	267.2	243.64	262.84	247.33	264.11	406.62	432.17	420.729

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (Continued)

Table F1.13- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Mexico

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	5E-11	-1287	-2440	-3971	-3158	-4486	-3586	-3105	-3764	-2717	-2399	-2647	-3053	-2954	8233.6	4643	3834	4177	4079.5	4977.2	4798.2	4064.6	4111.9	718.33	1097
HVaR@99%*	2E-11	684.22	-1501	-1126	-1111	-1002	-1105	-942.2	-1979	-1309	-917.3	-1371	-1801	-1057	-923.7	700.93	927.29	1776	1729.2	1891.2	1943.3	5673.3	5749.2	5865	4126.9
HVaR@98%	1E-12	-473.1	-623.1	1325.8	438.37	193.19	58.028	-169.3	-139.7	-77.07	-350.4	238.64	-172.3	94.79	826.79	1279.7	1392.8	1340	1545	1793.8	1937	1810.7	1457.5	1927.3	1569.1
HVaR@95%	0	-173.1	277.95	215.86	300.97	-521.5	-444.8	-67.94	-287	245.98	377.68	64.464	11.049	-77.84	429.1	-39.28	-131.8	-260.1	-131	227.56	283.58	311.18	717.22	819.15	668.43
ES(99%)**	0	-648.8	-2014	-3203	-2946	-2288	-1719	-1860	-1977	-1491	-1127	-1077	-1491	-1394	5606.5	2954.4	2346.3	2623	2387	2324.3	2119.8	1808.5	1759.9	767.38	885.6
ES(98%)	1E-11	367.11	-1387	-1834	-1701	-1408	-1206	-1036	-1411	-1301	-1081	-1241	-1484	-1276	2838.5	1995.8	1741.4	2167	2037.3	2013.6	1880.2	2902.5	2808.5	2235	1791.5
ES(95%)	0	195	-835.3	-690.7	-684.1	-508.6	-457.3	-371.4	-500.6	-402.1	-319.2	-372.1	-528.9	-442.9	1307.6	1093.9	1041.2	1228	1160.5	1175.8	1124.5	1533.3	1498.1	1318.5	1178.3

Table F1.14- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for New Zealand

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2E-11	-624.5	-217.4	-5338	-5666	-5082	-4088	-3260	-2789	-2540	-2311	-1908	-1703	-1666	-1002	-831.4	-788.7	-504.9	-122.5	-79.81	-168.5	-48.22	-107	-35.73	-168.7
HVaR@99%*	-5E-11	-1307	-266.7	-2473	-5094	-4419	-3087	-2741	-3068	-3640	-3439	-3352	-1743	-1555	-1294	-1598	-1442	-729.2	-511.4	-28.39	144.3	624.94	798.83	864.99	942.04
HVaR@98%	1E-12	-1508	-355.1	-5233	-4173	-3154	-1952	-1594	-1388	-562.3	-103.9	-678.6	-1498	-1489	-1127	-96.44	-374.9	-487.5	-39.39	-331	-288.8	25.46	248.15	264.21	127.84
HVaR@95%	2E-11	-629	279.69	482.77	-67.35	-33.48	63.664	-171.4	-682.1	-965.4	-801.3	-345.1	-467.8	15.69	-90.13	202.6	25.744	114.9	-211.7	-121.2	13.75	58.34	-169.7	-61.98	71.531
ES(99%)**	-1E-12	-670.9	-380.9	-4496	-3604	-3915	-2062	-1554	-1228	-1112	-1010	-872.5	-1010	-932.6	-444.2	-196.6	-133.9	-52.27	160.1	170.22	399.36	300.86	254.16	190.88	100.92
ES(98%)	-1E-11	-946.4	-463.8	-4083	-4262	-3752	-2973	-2403	-2013	-1900	-1701	-1557	-1080	-1001	-771.5	-800.2	-699.8	-344.3	-86.35	16.986	73.574	166.8	180.08	172.89	192.06
ES(95%)	0	-644.7	-436.7	-2134	-2258	-1981	-1613	-1236	-931.6	-814.2	-699	-689	-477.1	-474	-418.5	-373.7	-351	-373	-313.3	-295.5	-196.5	-87.75	12.452	-2.349	-42.87

Table F1.15- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Singapore

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-2E-11	441.61	-192	443.19	414.16	1123.9	1686	1010	1132.4	1735.2	1762.1	780.35	1013.5	1001	1184	752.73	737.38	581.3	81.998	583.19	595.54	98.837	208.39	499.92	575.07
HVaR@99%*	7E-11	-5.535	-1035	-353.4	70.45	-14.9	404.01	-41.45	-311.8	304.06	248.75	-465	-614.2	-612.2	-433.8	369.53	557.16	445.4	114.94	1936.7	1738.9	575.28	468.86	351.77	482.16
HVaR@98%	-5E-11	732.44	89.916	390.09	-1077	-704.3	1024.5	628.1	468.56	-53.27	-138.8	-390	-1690	-631.8	-614	-1321	-1418	-687.5	72.487	275.54	285.43	353.59	189.38	1148.5	585.79
HVaR@95%	-5E-11	-94.15	-124.2	226.88	282.13	265.77	346.66	57.84	627.73	500.42	667.47	591.88	-165.4	-307	-358.2	173.82	139.87	280.4	-59.94	193.97	151.77	404.9	376.52	744.41	463.19
ES(99%)**	1E-12	-270.5	-316	-251.6	52.749	891.57	1355.3	1227	1047.5	1244.2	1151.9	309.18	437.29	537.7	709.63	443.95	529.38	693.3	655.66	518.43	504.85	540.76	553.36	626.36	563.29
ES(98%)	2E-11	-368	-466.7	-113.4	-10.35	610.37	741.24	621.9	581.32	706.12	642.52	-18.73	-152.1	-54.11	104.11	139.82	216.74	278.6	243.99	767.58	701.22	498.74	534.44	678.6	766.35
ES(95%)	0	32.777	-112.5	-56.64	9.1635	331.02	544.7	593.6	551.45	547.75	354.62	-90.71	-338	-234.2	-80.78	-80.6	-51.9	-62.56	-16.06	228.63	241.17	185.19	219.04	391.36	396.69

Table F1.16- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for South Africa

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-3E-11	-1639	-672.1	-765	-974.9	-364.5	-293.1	-214.5	81.071	942.49	811.35	699.19	436.14	520	358.45	310.56	248.64	395.9	562.62	837.54	860.28	822.89	390.7	299.7	231.32
HVaR@99%*	5E-11	-2539	-1664	-175.3	-735.5	-121.2	-868.2	-251.5	-802.6	33.948	-1573	-928.8	-422.8	-560.6	-393.7	-191.4	-228.8	130.1	-321.2	379.26	85.368	-33.4	-744.1	-782.4	283.91
HVaR@98%	-5E-11	-1364	-1335	-2854	-1521	-646.3	580.71	365.2	1279.5	-582.6	890.87	634.37	449.33	628.9	-159.4	335.09	360.11	55.11	-115.2	792.7	195.26	451.34	109.09	795.47	868.14
HVaR@95%	5E-11	88.606	-15.69	581.31	542.67	-401.8	402.47	692	783.86	850.19	462.02	378.38	754.17	488.8	222.47	380.99	347.9	252	947.53	160.21	28.027	362.71	423.06	165.74	-373.2
ES(99%)**	0	-996	-620.7	-299.4	-109	-126.3	-466.5	-570.2	-609.9	18.37	-6.817	3.5581	-74.56	-6.342	-102.4	-173	100.66	76.21	207.63	657.18	1024.6	965.02	732.68	609.31	11.525
ES(98%)	0	-1684	-859.5	-769.2	-696.5	-453.9	-586.3	-226.5	-452.9	-220.4	-535	-290.9	-143.8	-108.2	-17.61	122.65	-21.14	172.7	319.35	555.09	676.5	586.75	203.72	100.79	63.083
ES(95%)	0	-706	-462.8	-446.8	-510.4	-157.8	-192.7	150.6	114.78	-65.23	96.819	357.38	203.85	312.2	305.38	299.13	341.45	239.1	207.58	356.58	407.26	426.51	408.8	427.94	451.5

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (Continued)

Table F1.17- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for South Korea

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2E-11	2672.6	498.1	843.7	-3157	-2068.9	-1549	-1184	1133	1640	1411.6	2255.5	2141	2317.5	1273.1	1345	1426	1154	1549.3	2342.5	1849	1228	1341.3	1243.8	1607.4
HVaR@99%*	-3E-11	-2162	455.3	-613.6	-1257	-1940.4	-2248	-2176	-479.6	-353.4	-902.3	-2316	-406.2	-242.6	277.03	1098	372.1	1121	259.81	-187	-461.4	1640.4	1810.2	2475.9	2287.9
HVaR@98%	-3E-11	-149.5	1576	477.9	619.82	951.78	559.32	142.19	610.3	872	182.07	964.71	1279	1484.1	2119.6	1362	25.38	-1102	-636.2	-295.5	222.9	2204.7	954.84	429.41	1099.2
HVaR@95%	2E-11	435.01	-243.3	363	489.72	-304.74	-127.7	-1803	104	400.7	805.68	-36.12	336.5	279.21	330.59	462.2	143.6	116	608.8	434.31	546.7	-310.1	-593.5	-209.3	-216.1
ES(99%)**	5E-11	1945.5	-337.1	-872.9	-1237	-1492.1	-1977	-1342	106.1	104.9	38.692	523.51	1516	2392.6	1957.1	2165	2810	2401	2555.1	2442.3	2005	3174.7	2926.2	2356.6	2601.8
ES(98%)	0	325.63	2.222	-509.5	-811.6	-1208.5	-1457	-1645	379	-38.75	-217.4	-667.6	1181	1641.2	1279.2	1280	1709	1589	1262.8	878.49	544.2	2326.2	2409.3	2519.1	2365.3
ES(95%)	0	248.07	-35.86	-116.4	-103.9	-700.23	-593	-504.6	470.6	299.8	108.7	224.86	981.1	931.55	955.32	923	936.1	955.5	902.55	750.27	541.2	2017.1	1836.8	1743.7	1860.7

Table F1.18- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Spain

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2E-11	-78.92	385.9	281.8	-525.3	-386.86	-418.8	-622	-430	-923	-497	-515.2	-1392	-870.7	-683.4	-526.3	-215.6	-159.3	-438.9	-398.3	-728.2	-612.1	-517	-503.5	-680.5
HVaR@99%*	2E-11	519.21	419.9	116.8	3.1917	-41.007	33.19	-274.3	-853.7	-864.6	-468	-110.7	296.8	-363.6	-399.1	-527.9	-772.1	-675.7	-582.7	-520.3	-268.1	-533.2	-562.9	-436	-353
HVaR@98%	-1E-10	-579.3	197.7	-153.8	-265.2	-588.83	-105	150.22	-373.2	-227	-460.9	-241.9	-320.7	212.8	-223.8	446.3	-190.4	-68.68	222.64	197.71	514.4	322.09	725.11	492.31	495.52
HVaR@95%	-2E-11	-482.2	-223.7	138.5	57.521	-512.17	-217.9	-308.7	-215.3	361.2	657.21	320.35	530.2	591.78	696.31	488.1	117.5	-156.2	363.45	447.67	607.1	194.56	238.47	313.3	335.69
ES(99%)**	2E-11	-52.52	-265	-12.94	-706.3	-682.33	-320.4	-741.1	-323	-666.6	-428.9	-773.6	-915.8	-811.3	-623.1	-593.4	-609.7	-554.3	-459.6	-490.9	-616.9	-539.2	-481	-422.9	-545.6
ES(98%)	1E-11	103.41	-67.77	148.5	-428.6	-446.72	-162.4	-385.3	-497.1	-529.7	-455.4	-464.3	-420.2	-657.3	-427.9	-507.9	-536.8	-499.2	-328.7	-370	-425.5	-368.1	-349	-304.5	-379.2
ES(95%)	-1E-11	-51.22	111.3	252.1	-272.4	-203.98	-49.85	-27.93	-171.3	-73.76	-60.21	-37.56	-21.62	-65.06	-80.26	1.686	-27.32	16.04	114.99	77.419	14.58	36.248	20.347	50.304	25.886

Table F1.19- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Sweden

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	3E-11	19514	20003	13272	11752	10193	8216.4	8287.8	6406	4171	920.93	1119.1	1106	1073.7	1999.4	1113	2187	1805	1313.5	1079.6	1503	1608.5	1916.4	2021.4	2047.3
HVaR@99%*	2E-11	3744.6	5020	6727	4700.8	1063.7	2485.3	249.79	-718.6	-902.8	-0.508	-54.14	1493	1012.4	852.09	1359	1761	2272	1776.7	1991.9	2112	2163.1	2051.7	1965.1	1908.5
HVaR@98%	2E-11	31.452	4216	3966	1594.3	2167.2	1454.7	135.57	-35.26	-187.4	601.42	-473.7	-631.2	-443.2	280.4	916.1	13.17	-201.2	531.76	1004.1	821.4	1057.1	722.02	714.98	37.871
HVaR@95%	9E-11	2584.4	3133	1882	1749.2	1163.8	1269.1	1375.8	1011	458.1	906.71	1214.9	1634	1692.6	1072.6	613.1	494.3	823.3	776.91	863.63	841.5	701.21	485.04	226.35	765.35
ES(99%)**	0	12218	11732	8077	7723.2	6849.3	6055.9	5697.9	5448	4323	2605.7	3125.3	2282	2326.1	2414	1626	1390	829.7	185.21	268.75	333.4	372.15	725.53	729.98	1275.8
ES(98%)	0	7641.6	7061	6245	5392.2	3886.7	3607.6	2835.9	2510	2190	1537.4	1552.8	1548	1568.5	1367.3	1255	1417	1243	792.36	925.86	1138	1203.4	1513.1	1475.9	1691.9
ES(95%)	0	3969.4	4717	3563	2937.2	2133.4	1992.4	1526.6	1427	1260	973.7	716.81	666.8	610.9	564.51	583.9	443.9	445.3	194.99	256.29	315.6	353.26	512.26	503.57	491.01

Table F1.20- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Switzerland

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-5E-11	129.8	-2217	-525.5	-514.8	315.18	1302.8	782.88	1346	915.8	224.2	-2665	-1097	456.81	580.56	1320	1131	1191	1438	966.67	954.8	930.16	574.85	379.58	401.46
HVaR@99%*	-1E-12	-68.87	-124.6	-784.6	-764.9	9.8191	-108.4	-205.1	-237.6	184.6	-115	1335.3	935	656.38	-499.5	-929.4	-557.7	-936	-435.4	1255.6	1273	1752.4	1464.9	1614.9	1201
HVaR@98%	7E-11	-27.92	-615.3	-225.2	-809.4	-173.95	-193.4	440.58	-218	-277.8	-162.3	-1192	-843.8	532.31	-83.11	-459.2	-672.1	248.4	745.76	606.64	619.7	445.19	374.5	500.94	670.24
HVaR@95%	0	1.2565	-177.5	-279.1	-373.9	511.57	595.96	-10.09	140.7	103.5	188.77	260.86	251.7	441	668.81	936	396.7	202.4	-442.7	352.56	-274.5	-309.3	581.68	-251.6	-450
ES(99%)**	1E-12	293.47	-1350	-603.1	-551.9	-16.131	646.71	891.68	582.3	587.5	319.27	-247.4	-2.156	374.11	487	1443	1194	1266	1188.4	392.81	636.8	473.49	406.49	325.98	344.05
ES(98%)	0	13.514	-923.8	-619	-577.7	-232.18	81.361	392.96	98.07	406.4	105.51	412.75	358.1	637.4	293.74	372.5	183.4	467.5	346.17	669.05	970.6	1075	1013.4	982.45	978.71
ES(95%)	0	-27.84	-387	-290.9	-562.2	-149.96	156.93	115.91	6.188	55.22	-21.21	296.3	355.2	631.82	562.19	649.7	535	555.4	490.09	492.64	544.2	471.29	331.84	272.94	298.09

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (Continued)

Table F1.21- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Taiwan

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2.3E-11	-497.6	-673.8	-569.3	-281	-97.86	119.62	-259	-188.8	-87	-274.8	-403.1	-321.4	-428.5	-424.9	-443.6	-339.6	-333.2	-196.3	-138	-178.7	-52.78	-104	-96.082	-118.7
HVaR@99%*	-5E-11	213.19	642.6	-717.9	141.61	11.699	499.13	211.72	395.34	474.7	439.72	248.32	721.65	325.06	353.61	504.56	293.42	-122.4	319.32	98.662	-632.6	-242.7	174.7	224.86	192.25
HVaR@98%	-7E-11	-174.1	-301.3	-759.6	-100.7	-59.99	-671.8	-643.9	-307.4	87.836	204.04	-160.7	-372.4	-344.5	-878.2	-1030	-1220	-829.3	-815.6	-404.5	615.47	144.31	-507.9	-422.66	-216.32
HVaR@95%	-2E-11	234.93	-290.8	-604.3	-265.9	-748.5	86.417	-289.3	474.06	402.79	762.45	418.94	25.673	-293	83.188	68.46	205.89	-47.21	-1.322	229.94	300.4	292.09	606	325.09	442.79
ES(99%)**	0	-585.2	-1498	-668.9	42.928	41.996	-26.65	-310.3	-151.4	-153.7	-120.5	-127.7	-89.13	-174	-264.3	-246.4	67.332	-12.68	-72.92	-15.77	-75.47	26.186	-53.06	36.606	15.632
ES(98%)	0	-313.3	-702.5	-604.1	36.502	134.31	200.46	-217	-264.3	36.411	232.39	157.14	149.5	-130.9	-169.6	-16.84	91.219	17.166	100.48	135.71	-72.79	49.135	116.56	127.53	162.33
ES(95%)	0	-99.52	-226.9	-299.4	-55.51	-140.2	-130.4	-131.9	-181	65.463	95.746	-35.32	57.503	116.64	94.048	66.949	-1.332	3.8275	120.16	223.48	148.57	176.7	136.16	164.79	131.79

Table F1.22- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Thailand

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-2E-11	4360.6	-6380	-943.7	-56.2	-3642	1447.9	2262.7	1874.8	2981.6	3483.3	3492.6	3304.2	3361.6	3009.3	2269.1	1242.6	1168.9	-204.1	-869.5	-844	26.879	-58.91	-496.31	-416.63
HVaR@99%*	0	1427.4	897.4	396.91	-3377	-920.6	-1163	880.26	-1930	-1374	-1485	782.96	1461.8	830.11	535.76	1693.6	1762	1918.3	-807.7	-1030	-892.4	-372.5	-503.8	-277.31	-256.31
HVaR@98%	2.3E-11	1155.5	2986	-116.6	422.09	556.63	-66.44	634.49	2004.2	1776.1	2378	603.51	172.85	661.48	2355.8	1915.1	2232.5	1913.6	1896.4	1164.7	1700.5	1708.2	1379.4	1012.6	1040.7
HVaR@95%	9.5E-11	1299.2	978	621.59	1385.1	1243.7	617.44	1160.6	2194	1779.1	1598	1394.3	1422.1	1796.1	1625.1	1581	1700	1483.5	1294.4	2517.1	2665.6	2996.9	2439.3	2331.8	1694
ES(99%)**	0	2121.1	-882.9	-1778	-678.7	-983.2	-714.6	472.01	1878.8	2545.2	2580.4	2545.9	3459.9	3040.8	2288.3	795.81	828.26	724.23	114.42	-408.3	-345.1	-153.6	-468.6	-630.08	-657.48
ES(98%)	0	1256.5	162	-127	-1441	-909.8	-1008	584.82	845.45	1432.2	1211.6	1883.3	2466	2383.1	1543.5	1279.5	1412.9	1281.9	746.32	166.61	227.8	578.69	282.34	344.73	331.91
ES(95%)	0	497.93	658.4	504.88	235.14	212.3	-73.49	1032.4	1001.3	1320.6	1133.7	1199	1297.7	1361.3	1191.4	1072.6	1250.5	1139	990.67	750.34	974.98	1149	985.05	995.31	967.12

Table F1.23- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Turkey

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	0	3740.8	2819	710.01	435.9	-337.2	-869.5	-382.8	-450	638.49	526.07	-1273	-2049	-2304	-2591	-382	-626.1	-194.4	393.03	611.59	626.34	388.46	198.59	640.67	43.136
HVaR@99%*	2.9E-12	872.96	-738.3	144.78	-2341	-623	4.5039	-1492	881.45	958.49	773.69	265.63	1293.6	927.18	234.65	1976.3	1985.8	806	993.49	794.72	860.64	1033.6	1396.2	1324.2	407.3
HVaR@98%	0	-769.7	1205	1777.6	-828.5	55.072	-1363	1300.7	1735.2	508.22	172.97	619.52	868.16	1557.8	1061.3	1119.5	608.05	2116.7	1714.2	1569.1	1476	2053.3	2141.3	1351	1117.2
HVaR@95%	-3E-11	608.68	836.2	-943.6	-42.09	-414.4	494.3	573.47	809.12	-96.14	-415.6	847.59	1072.8	-615.9	55.108	250.63	326.41	864.12	1470	1702.2	1594.8	657.81	869.05	640.72	63.282
ES(99%)**	0	3356.3	445.3	-46.07	398.16	-199.3	-603.1	-235.2	-878.1	-302.8	-134	-595.7	-1042	-708.9	-791.4	-528.5	-668.3	-455.9	140.74	368.26	354.62	563.7	506.51	737.2	295.08
ES(98%)	0	2266.1	-321.9	-296.7	-1161	-524.2	-245.3	-554	-478.5	-326.8	-222.5	-166.5	-278.2	-283.5	-51.02	578.35	555.5	261.08	313.41	313.8	376.22	492.03	483.05	611.95	127.97
ES(95%)	0	1120.6	1002	994.26	166.67	492.12	346.51	329.48	33.067	313.21	203.33	40.988	308.72	250.93	165.35	366	259.78	297.92	212.97	213.75	335.04	408.49	468.69	540.15	364.27

Table F1.24- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for United Kingdom

Portfolio Number	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-5E-11	946.04	854.6	1478.9	122.97	1282.8	1115.8	872.17	672.05	453.37	226.47	365.19	254.41	518.11	1094.2	1095.1	864.71	582.07	602.15	643.42	705.1	774.35	1006.2	955.48	960.41
HVaR@99%*	4.8E-11	285.98	796.7	251.98	2078.2	578.63	593.84	-1134	-753.8	-373.4	-485	603.33	902.16	-4.811	178.15	301.61	347.58	-11	-224.3	-616.1	-435.8	-251.6	-679.9	-532.48	-831.13
HVaR@98%	0	-37.5	305.7	322.53	1104	267.34	922.1	433.71	-618.7	-548.6	-102.8	-127.8	-652.8	-696.2	-139.3	526.14	206.25	528.09	320.12	502.74	410.12	727.78	353.18	219.81	467.24
HVaR@95%	7.3E-13	489.34	1087	-86.85	318.13	-21.53	1094.1	615.76	695.6	1030.7	777.46	1178.5	334.11	236.11	387.82	312.16	656.75	630.26	342.41	310.33	261.9	454.82	251.33	774.28	155.72
ES(99%)**	-1E-11	1350.2	1078	891.49	225.66	832.01	590.83	436.82	640.28	573.24	248.81	217.25	52.43	642.01	671.58	605.05	368.34	194.09	269.36	363.43	294.78	346.52	298.37	274.28	370.19
ES(98%)	0	1057.3	870	955.46	928.95	527.76	491.02	277.15	142.93	299.45	52.044	370.29	400.49	320.51	531.91	450.69	282.29	202.9	216.81	140.86	91.339	109.22	25.665	32.102	24.534
ES(95%)	0	721.41	963.8	461.13	320.82	396.88	555.31	235.35	266.05	185.56	165.92	302.43	261.09	161.09	344.25	280.31	186.39	244.99	215.04	218.23	231.56	241.39	188.44	130.14	124.48

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F1 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios

Table F1.25- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for United States

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	0	2604.6	853.96	335.84	-846.5	2886.7	2886.1	2818.1	2439.1	2333.4	1830.9	1905.8	1552	1506.3	1441.5	1354	627.08	613.28	535.93	321.28	-18.66	-24.36	-60.66	128.89	32.018
HVaR@99%*	2.3E-11	256.86	-19.4	-300.1	-2980	-164.5	331.3	433.42	279.51	-157.2	663.89	600.94	-9.364	375.73	192.3	-138.6	-228.6	248.99	-113.8	310.09	567.73	288.92	276.32	272.49	380.79
HVaR@98%	-2.3E-11	2107.4	616.94	-166.9	-391.2	341.55	516.02	675.64	-379.6	-71.42	184.83	501.8	5.1094	453.78	162.5	-559.9	-148.5	-257.8	162.61	97.976	156.69	293.75	-283.2	-724.5	-838.3
HVaR@95%	2.3E-11	-203.9	-204.6	8.288	-198.1	750.14	656.97	127.42	-5.608	-230.1	-216.2	281.18	556.67	100.54	-16.67	767.94	440.03	215.28	312.06	29.176	320.33	93.464	181.06	141.46	489.41
ES(99%)**	0	1081.3	-310.6	-351.8	-912.2	513.98	1052.9	1079.7	658.98	997.96	457.82	542.27	366.09	555.47	108.88	102.3	-263	-201	-160.8	-625.5	-736.6	-756.2	-780.3	-199.3	-141.3
ES(98%)	0	287.98	-201.2	-266	-1180	24.928	688.64	647.09	423.55	503.07	280.73	375.75	296.43	396.07	138.83	38.676	-152.3	-55.79	-188.5	-352.5	-427.2	-410	-386	-39.37	71.749
ES(95%)	0	742.54	180.5	74.388	-355.2	406.63	446.94	357.1	259.1	421.44	199	285.88	-72.69	89.908	-8.638	-100.6	-172.1	-116.1	-113.2	-216.7	-232.4	-170.5	-199.1	-121.9	-168.6

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F2 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Foreign Portfolios

Table F2.01- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.8E-11	-7585	-845.7	-1285	-842.4	-742	-1167	-596.8	-1309	-1699	-1682	-328.2	-482.6	-305.1	-431.6	-108	-43.76	-106.1	-296.7	-549.9	-375.1	283.17	41.562	192.31	396.66
HVaR@99%*	4.8E-11	-1950	-3417	-3298	-447.7	445.63	782.26	-1576	-1427	1101	1749.1	224.68	1257.9	1011.6	1754	200.52	-729	-174.7	295.37	704.14	165.99	393.33	366	7.0774	-159.1
HVaR@98%	6.9E-11	-2702	-748.5	-955	-783.9	-634.7	-388.9	364.02	415.68	-178.8	1079.7	29.096	425.96	204.38	-257.3	2.4308	747.45	362.18	88.289	663.02	662.27	1478.1	92.144	623.93	893.59
HVaR@95%	6.8E-11	-486.7	35.283	594.32	904.83	363.26	225.87	-409.6	-25.25	-156.9	377.16	-227.4	169.57	-217.2	-188.8	-198.2	-163.3	-77.59	-561.8	-277.1	6.395	-120.8	757.73	365.2	441.9
ES(99%)**	0	-6792	-2908	-2447	-1848	-1377	-636.2	-580.8	-477	-725.3	-778.8	497.75	-756.5	-459.2	-605.6	-755.1	-925.3	-999	-646.1	-593.8	-478.4	-212.4	130.24	187.38	357.41
ES(98%)	0	-4391	-2866	-2215	-1182	-359	-143.2	-722.8	-732.5	32.571	260.82	568.02	124.83	110.51	168.43	73.059	-169.9	-126.8	100.75	208.11	247.7	207.95	543.48	588.3	467.97
ES(95%)	0	-2291	-1298	-1177	-496.4	-305.3	-101.1	-199.4	-72.19	-82.99	-43.44	-3.518	-50.53	-101.6	-85.93	-119.7	-170.7	-176.1	157.65	115.77	165.52	320.94	396.22	480.34	446.32

Table F2.02- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Second Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.7E-11	17925	19903	16598	16830	15921	16315	12406	10406	10648	10646	10217	9187.4	9023.7	8199.6	6157.5	7268.4	5759.4	7025.5	6138	5821.8	4983.4	4498.7	5075.5	4865.4
HVaR@99%*	1.5E-12	9372.4	4714.6	2342.6	798.22	515.46	1250.1	3510.6	2315.4	2134.5	1290.9	729.83	965	1425	1370.6	806.12	801.53	911.57	1891.1	1659.8	1474.2	1992.2	2134.5	1735.9	1305.6
HVaR@98%	-7E-11	7822.3	3173.6	2918	3390.2	2731.8	2623.7	2818.7	2235.4	2099.4	848.21	1079.5	2921.2	2507.3	2122.5	2423.4	2372.8	1224.9	2454.1	2331.3	1532.7	1201.4	2921.1	3443.3	3706.9
HVaR@95%	0	4452.6	3054.9	3545.7	2971	2923.4	2800.7	2761.5	1642.6	1720.1	1184.2	867.44	644.11	967.07	785.14	1154.6	1525.4	1373.7	1031.2	1028.7	1120.8	1247.4	1191.7	1147.4	888.01
ES(99%)**	2.3E-11	19682	11412	10641	11287	12057	11584	11209	9731.6	8942.4	7836.3	8151.5	6371.7	6237	6462.6	6503.6	6218.9	5948.7	6082.6	5787	5743.7	5771.6	6303.3	5640.2	5464.2
ES(98%)	0	14834	8991.5	7638.1	7078.9	6963.8	7104.3	7069.6	5957.2	5743.3	4916.8	4752.3	4220.3	3971.8	3894.5	3464.8	3542.1	3684.8	4464	4156.5	4176.5	4129.2	4260.1	3878.2	3762.1
ES(95%)	0	-9438	-5728	-5082	-4857	-4358	-4252	-3599	-3053	-3147	-2732	-2518	-2405	-2277	-2101	-2150	-2079	-1941	-2973	-2891	-2680	-2713	-2830	-2619	-2736

Table F2.03- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Third Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-5E-11	26465	15875	17195	17562	15900	17125	18171	16419	14511	11868	11252	10030	8465	7855.3	7281.1	6838.6	4633.9	3776.3	2850.7	3345	1506.1	1076.8	418.23	-87.98
HVaR@99%*	0	6902.9	6023.2	-1407	-429.7	902.36	3116.1	3296.3	1316.4	1814.9	2727.4	980.24	666.06	1213.5	1420.1	1542.7	-97.61	-342.7	-186.6	769.32	-83.5	229.12	236.84	543.53	633.54
HVaR@98%	2.6E-11	3836.9	1523	-1026	604.59	758.69	2549.7	2774.4	2784	2383.4	1819.9	2804.9	2835.4	1698	1099.3	110.15	1142.9	1415.4	1240.5	947.19	1046.9	668.91	1362.8	589.56	854.52
HVaR@95%	4.7E-11	-445.5	-17.15	221.49	581.06	658.09	1982	1477.8	1438.3	989.47	497.03	938.07	1201.3	487.63	618	323.05	518.07	209	539.35	287.42	426.8	962.62	1023.4	692.36	1103.5
ES(99%)**	-2E-11	15507	10093	10195	9703.8	9039.4	11574	10581	9845.6	9158	7338.7	6744.3	5964.7	5268.8	4622.7	4681.8	4900.8	4563.5	4088.5	3388.1	3630.6	2823.5	2648.3	2069.6	1811.7
ES(98%)	0	10567	7301.7	4306.4	4675.9	4824.3	7340.5	6797.8	6122.4	5845.9	4501.5	4130.8	3635.9	3052.4	2951.3	2851.7	2514.1	2134.9	1905.6	1995.2	1806.2	1635.2	1367.7	1375.3	1253.2
ES(95%)	0	4171	2787.2	1477.4	1761.5	1822.9	3779.3	2962.6	2588.9	2410.1	2138.7	2077.9	1869.7	1687.3	1448.5	1222.1	1189	1046.7	960.92	1038.2	1051.2	957.11	1100.4	1077.7	1018.9

Table F2.04- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Fourth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-2E-11	252.86	5326.1	5442.2	4748.9	3366.7	1763.8	-954.3	-1888	-1653	-2335	-2143	-1806	-3105	-2868	-2904	-3350	-2373	-2037	-1471	-1524	-1287	-1596	-1282	-1321
HVaR@99%*	-5E-11	6075.3	3549.9	464.4	1446.2	950.6	550.38	-653.2	-1515	-1042	-185.2	-169.5	-1841	-698.4	-572.9	-604.9	414.99	170.19	769.95	-141.2	-1534	-1997	-2472	-1834	-1431
HVaR@98%	0	1671.5	1397.8	-59.87	487.03	201.86	733.56	-4333	-3459	-1784	-1428	-802.7	-738.1	-1709	-1136	-1040	-443.6	-1443	-899.5	-522.4	-67.69	-29.83	-338.5	-327.5	-573.2
HVaR@95%	-2E-11	-91.19	650.05	767.15	514.46	1115.8	608.62	-1.751	756.13	515.41	589.05	309.92	584.54	645.59	941.12	155.32	-52.32	-153.3	-246.7	88.189	205.55	56.705	214.86	150.36	301.37
ES(99%)**	1.2E-11	2100.6	3609.9	3748.9	2314.4	2238.5	2808	678.54	97.627	-355.8	-947	-815.2	-780.3	-2951	-2268	-2254	-1922	-1876	-1764	-1405	-1097	-846.6	-861.9	-657.2	-706.2
ES(98%)	-1E-11	3254.6	2639.9	2204.9	1679.7	1507.6	1863.5	-574.6	-1126	-1136	-987.7	-754.6	-1105	-1696	-1458	-1513	-928.6	-966.8	-777.2	-970.8	-1151	-1315	-1389	-1198	-1177
ES(95%)	0	1907.8	1056.6	1178.6	1332.2	849.54	917.36	-942	-1007	-1015	-745.4	-671.5	-452.8	-709.3	-657.2	-637.5	-357.5	-419.4	-466.3	-487.6	-438.2	-321.6	-425	-337.1	-415.7

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F2 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Foreign Portfolios (Continued)

Table F2.05- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Fifth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-4.7E-11	5390.1	5975.2	2725.3	4739.8	5365.1	4774.1	9516.6	5029.3	4391.6	3465.8	2421.9	2766.4	1993.8	1432.9	1529.3	2359.8	2035.8	1399.5	1339	1192.7	1616.1	1359.6	1308.4	1169.7
HVaR@99%*	1.5E-12	-477.6	204.22	528.01	53.192	1540.9	800.17	3220.9	3147.1	2838.8	3191.6	3077.5	2412.1	2440.7	2823.2	2014.2	1325.7	1101.3	1187.4	2706.8	2609.2	1056.3	495.44	962.95	916.86
HVaR@98%	0	117.75	2633.8	602.31	385.84	603.51	1154.2	3410.7	3273.6	2974.4	2919.8	2861.8	2429.5	1898.4	1445.1	1993.2	853.09	1021.3	1517.6	907.05	869.36	489.75	256.43	649.77	362
HVaR@95%	-2.3E-11	948.86	871.25	943.68	852.13	-84.7	177.24	3039	2882.8	2343.2	2428.3	1876.1	1050.5	1766.4	1128	1233.4	907.02	257.61	731.16	251.49	780.24	304.2	791.37	895.36	571.76
ES(99%)**	-2.3E-11	3536	4020.3	2266.8	4135.7	3067	3276.2	7832.1	6419	6149.5	5569.5	5394	4457.9	4414.4	4008.1	3782.2	3203.6	2934.7	2627.9	2110.3	1956.8	2231	1977.2	1766.3	1674.7
ES(98%)	0	2102.3	2348.7	1742.8	2142.1	2350	2380.8	5808.6	4898.3	4578	4379.8	4139.4	3396.2	3299.8	3174.4	2741.2	2193	1942.8	1894.2	2039.5	1953.7	1860.8	1622.6	1440	1092.7
ES(95%)	0	1224.7	1754.1	766.25	1072.2	1093.3	1359.5	4350.8	4023.8	3668.4	3411.2	2985.7	2482.3	2378	2205.5	2120.7	1609.4	1279	1199.6	1160.7	1084.3	899.65	860.82	808.67	721.33

Table F2.06- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Sixth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	2.9E-12	2745.8	4650.5	2477.2	2780.6	2780.5	4214.9	17668	49540	45647	41888	40054	37716	36342	35956	35158	34844	33266	31125	29962	30352	30079	27338	26594	26422
HVaR@99%*	-2.3E-11	253.45	1193.7	536.82	2121.5	1457.6	1357	4852.3	15187	13400	13073	13568	13610	13397	13071	11848	12843	12907	11598	9516.3	9428.2	9679.7	7877.4	7116.8	7247.9
HVaR@98%	-6.7E-11	1864	1912	1080.2	462.74	540.69	1382.7	4708.7	8638.4	9472.6	7957.4	7657.8	8777.1	8651.6	8115.9	9363.5	8108.6	8789	8381.9	8150.1	7103.7	6974.6	7095.4	7393.2	5971.9
HVaR@95%	-1.5E-12	985.87	1211.3	884.95	820.55	635.87	805.25	5990.6	4484.5	4754.9	4750.8	4714.6	4026.8	3801.9	4098	4145.6	4260.9	4310	4084.4	3707.8	3420.7	3074.6	2532.9	2589.8	2951.3
ES(99%)**	-1.3E-11	2685.1	1503.7	2584.7	1816.7	1832.5	3066.3	12979	34502	32244	30126	29702	28535	28095	27376	26772	25983	24743	23045	22411	21906	21666	19824	19250	18824
ES(98%)	0	1949	1345.6	1629.7	1575.7	1288.2	1972.3	8896	24488	22742	21707	21467	20700	19979	19349	18514	18322	17659	16436	15501	15316	14980	13702	13129	12828
ES(95%)	0	1316.4	1282.1	1304.6	1207.6	870.71	1262.4	6860.7	12479	12297	11367	11046	10535	10350	10236	10039	9503.3	9264.2	8835	8567.1	8315.9	8194.1	7702.2	7550.5	7149.6

Table F2.07- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Seventh Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.9E-11	-401.3	-2508	-1830	-2318	-1630	-1917	-1249	-2189	-2113.7	-974.01	-1644	-1726.8	-1911.2	-1704.3	-1753	-1822	-1737.6	-1061.7	40.008	-155.4	-162.2	-484.4	-755.4	-731.9
HVaR@99%*	4.7E-11	907.04	-467.8	-371.8	-367.6	-1452	501.92	-1296.3	-858	-794.62	288.57	1488.2	1079.3	1062.7	1554	1447	638.18	717.29	845.4	1090.7	428.68	312.9	1200.7	1548.2	1038.6
HVaR@98%	-7.1E-11	-370.2	1347.2	-31.6	-1126	87.719	-393.9	926.34	104.4	790.56	795.01	1197.9	1323.8	1633.8	682.65	711.81	1337	308.94	173.01	1236.9	1048.9	534.51	1018.8	756.63	1296.1
HVaR@95%	2.1E-11	409.96	-434.3	-480.5	352.7	314.68	155.53	398.73	574.93	546.34	275.58	504.44	-379.27	136.41	589.1	559.9	61.292	174.71	122.64	151.55	-132.9	15.536	35.93	687.42	457.37
ES(99%)**	3.5E-11	-1726	-214	-2308	-1048	-877.5	-632.2	1058.4	129.03	-631.43	-67.6	-277.1	-93.234	-813.7	-612.31	-525.6	-622.1	-155.41	-118.92	-300.2	-82.85	94.591	53.053	-264.7	-387.9
ES(98%)	1.2E-11	-1209	46.909	-1312	-529.8	-863.7	-113.9	119.34	-162.2	-577.15	84.436	501.09	544.07	171.1	213.83	271.06	-33.08	304.32	420.23	548.46	443.65	348.74	631.2	546.23	306.81
ES(95%)	-5.8E-12	-534.6	25.286	-313.3	318.55	112.42	-71.19	394.55	266.74	244.6	329.58	673.73	669.79	746.3	543.74	532.92	315.88	370.64	543.53	657.14	457.5	358.26	681.75	697.91	661.46

Table F2.08- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Eighth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	-7.3E-11	242.81	-23.66	-3465	-2520	-1898	-368.7	-365.55	-557.1	-123.93	-141.87	-883	-692.01	-1287.8	-847.41	-862	-1700	-1715	-856.17	-1368	-791.6	-509.1	267.17	275.91	21.515
HVaR@99%*	-2.3E-11	-2446	-827.4	-1198	-1158	-220.5	-363.1	-1883.2	-1174	-333.25	425.54	514.54	205.57	-379.13	242.83	-78.56	-612.1	-34.161	-67.549	-102.8	244.09	459.51	1370.5	1265.1	1031.1
HVaR@98%	-2.2E-11	-919.8	-1098	-893.1	-517.7	-231.7	405.58	-164.57	826.32	-148.03	1340	592.72	123.32	327.2	-138.84	908.15	-148.1	-213.65	-395.51	-393.3	79.969	482.26	616.68	701.45	742.5
HVaR@95%	4.6E-11	335.65	-659.8	127	-247.4	-299.3	-249.4	943.16	424.01	0.3878	448.49	163.75	77.192	369.1	595.42	-190.9	152.56	278.2	329.53	-113.7	84.161	347.95	864.63	727.49	595.34
ES(99%)**	-2.6E-11	-299.7	-169.5	-2467	-1998	-1735	-297.1	-462.56	-705.7	-367.97	-508.53	-649.2	-926.92	-624.61	-551.5	-752	-478.5	-934.56	-562.48	-651.8	-310.8	-195.6	502.51	335.53	276.29
ES(98%)	-2.5E-11	-1207	-370.9	-1733	-1694	-1166	-375.2	-946.34	-818.9	-377.19	232.13	-15.19	-128.64	-273.09	-437.12	-462.6	-534.9	-451.01	-360.46	-443.4	-120.8	6.3696	685.48	669.97	601.54
ES(95%)	0	-669.8	-464.9	-595.2	-919.7	-747.2	-152.4	173.95	71.701	68.612	354.23	313.82	286.74	185.28	162.72	70.494	-27.22	8.9215	116.43	133.36	137.58	290.67	799.61	664.02	683.97

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F2 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Foreign Portfolios

Table F2.09- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Ninth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	4.66E-11	1581.7	171.58	3283.2	2386	1129.4	1048.9	23990	21802	19695	17687	16623	15492	14497	12107	10970.3	10685.4	9463.9	9104.8	7992.4	7500.5	7998.4	7418.5	7270.5	6380.7
HVaR@99%*	2.33E-11	-2334	-1650	-4017	1097.7	2245.6	1663.5	10920	10767	8909.87	7576.8	6031.7	5925.2	6223.8	5596.6	5846.04	4148.19	4206	3848.1	2606.2	2925.8	708.27	1306.6	919.16	1782.88
HVaR@98%	2.33E-11	2371.1	489.92	906.07	1717.6	735.88	796.22	3759.7	2892.4	3663.06	2348.1	4917	4560.1	4629.5	4073.3	3563.95	1757.65	1594.6	2149.2	1976	2634.5	1982.9	1972	1842.8	1814.57
HVaR@95%	7.28E-13	1706.4	911.39	2300.6	2480.6	2062.9	1448.2	3235.3	3831.7	4262.67	3841.3	3428.5	3240.1	3004.8	2264.7	2033.02	1666.39	1950.3	2277.7	1427.2	1641.5	2684.6	2713.7	2098.5	1943.87
ES(99%)**	2.18E-11	927.61	352.37	2778.3	1856.7	580.74	1277.3	18832	17243	15801.9	14075	12421	11589	10243	9374.6	8702.83	8394.42	7798	7527.8	7051.1	6776.2	6122.2	5970.5	6237.7	5777.14
ES(98%)	1.6E-11	773.55	-143.3	1952.4	1127.1	1133.5	1127.6	13650	12648	11732.2	10079	9048.5	8574.4	8179.5	7505.6	6966.16	6552.1	6028.5	5741.2	4869.2	4771.7	3739.2	3603	3782.9	3636.64
ES(95%)	0	1502.2	551.12	2147.6	1680.5	1101.6	1252.2	7138.4	6526.5	6468.29	5702.9	5020.3	4815.5	4405	4235.4	4011.25	3758.38	3465	3240.1	3044.6	2720.6	2475.9	2728.5	2584.5	2501.91

Table F2.10- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Companies with Tenth Highest Market Capitalization

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	0	-4231	-1332	-1577	-1821	-1235	-726.13	-4086.6	-3853.7	-2039.5	-3061.4	-2057.9	-2433.5	-3573.1	-4093.6	-2656.4	-1795.1	-2111.4	-2170.2	-1693.3	-1848.1	-2174	-1663.8	-1768.4	-387.81
HVaR@99%*	4.66E-11	63.358	940.26	-758.9	344.73	318.36	527.56	2503.4	1395.6	1361.98	1508.1	319.2	546.12	1337.8	1477.6	927.13	-386.27	-711.53	-904.21	775.2	871	533.19	1049.2	962.8	-287.3
HVaR@98%	-2.2E-11	846.98	787.83	-952.7	-125	-557.5	2263.2	-347.48	26.483	122.339	-533.86	-358.05	282.14	478.82	96.075	157.649	614.613	-35.191	60.23	-924.2	-806.61	-241.5	-570.59	-414.94	910.94
HVaR@95%	2.4E-11	-155.6	403.78	978.68	-38.62	-387.1	1458.9	-998.92	-1237.3	-754.68	-797.25	97.505	-208.28	-275.97	351.54	56.5974	125.002	258.69	168.13	18.705	-12.595	259.34	1128.2	701.73	463.619
ES(99%)**	0	-2352	-3586	-2795	-1329	-371.9	647.77	-1054.5	-757.25	-587.19	-902.69	-999.2	-1114.8	-1996.9	-2202.2	-1939.5	-1892.3	-1959.9	-1355	-1234.4	-1363	-1632	-1363.5	-1228.1	-396.12
ES(98%)	1.16E-11	-1037	-1081	-1685	-557.9	-113.3	995.98	348.28	391.71	219.764	145.83	-451.95	-456.5	-319.62	-614.98	-516.41	-1131.3	-1327.5	-1028.6	-504.98	-437.69	-550.6	-252.2	-216.32	19.9748
ES(95%)	0	-726.5	-180.9	35.202	-215.5	-242.1	1248	-108.75	-138.92	-215.23	-342.73	-399.31	-246.97	-245.41	-386.8	-96.49	-157.51	-214.79	-167.71	-327	-139.38	-276.4	3.8335	15.09	142.217

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix F3 - Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Frechet Random Walk Model and Geometric Brownian Motion Model

Table F3.01- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Frechet Random Walk Model

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	1.1E-10	1533.7	-1725	-570.4	-464.7	-784.3	-768.1	-734.7	-591.9	-549.4	-370.6	40.045	1142	1123.8	1106	1103	270.55	22.56	15.172	19.891	42.471	47.556	46.141	54.69	53.479
HVaR@99%*	-1E-10	144.46	985.94	813.89	306.52	705.51	550.79	1127	953.32	580.67	65.555	277.06	341.65	-71.87	-116.2	-97.74	-220.1	-47.27	-213.3	-85.37	376.74	437.25	704.8	588.32	626.19
HVaR@98%	0	-58.78	-203.2	154.21	-113.8	-413.6	170.83	286.31	460.47	452.73	801.23	11.534	14.572	200.45	-60.2	42.162	-94.4	59.892	-611.4	82.15	-94.55	166.77	282.24	618.09	75.995
HVaR@95%	0	-70.95	95.118	175.6	-82.18	355.47	28.223	173.66	171.15	-101.7	142.1	-121.4	-127.9	-109.2	11.483	8.9063	135.77	78.37	204.15	-202.2	78.787	73.356	145.07	-314.4	147.88
ES(99%)**	5.8E-11	551.29	-1163	-564.2	-220.9	-443.9	-429.4	-419.5	-270.2	-339.5	-191.2	209.58	781.08	509.52	-189.1	-54.41	615.59	371.78	326.95	351.39	346.42	338.75	233.84	50.068	61.312
ES(98%)	0	331.87	-130.5	108.04	42.897	2.8276	-13.27	184.22	135.85	63.304	-87.08	197.66	517.41	288.64	-30	-67.15	48.163	182.65	108.74	166.94	262.53	272.98	404.38	299.65	327.11
ES(95%)	2E-11	91.455	87.431	134.47	90.156	106.93	116.87	114.85	109.32	94.243	174.48	69.468	183.62	150.65	156.05	38.67	15.333	6.1356	-13.37	44.208	53.187	44.11	157.49	215.52	142.2

Table F3.02- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Geometric Brownian Motion Model

Portfolio Numbe	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Maximum Loss	0	-3.828	-106.4	24.112	113.09	50.612	245.47	249.93	-21.44	251.87	-128	-197.7	-200.8	-134.1	-128.9	-345.4	-341.7	32.933	27.676	-70	17.296	-293.6	-279.8	-271.6	-215.6
HVaR@99%*	0	232.33	-48.57	-332.1	252.25	96.862	28.145	-8.066	-81.2	-224.2	17.81	-114.4	-0.489	-56.36	-51.4	183.77	224.1	245.89	49.997	1.4569	50.519	-54.73	-3.961	-54.62	-65.78
HVaR@98%	-1E-10	382.59	227.67	-41.15	-118.2	115.95	11.235	6.014	-70.76	-69.39	63.377	11.146	25.095	-63.53	-40.3	15.145	-40.73	-50.19	78.086	-37.75	-29.27	-15.24	-20.68	-18.86	59.376
HVaR@95%	0	134.2	281.72	-56.82	4.2821	25.662	42.31	-32.19	-28.6	-29.62	-31.82	-10.72	-58.81	-27.3	18.83	-31.21	-48.78	-139	-156.7	-66.99	-90.08	-5.634	-16.9	-118.6	-107.4
ES(99%)**	0	80.08	-41.88	43.775	80.806	52.094	135.71	136.03	101.74	135.01	-131.4	-99.51	-90.58	-77.92	-74.66	-114.5	-156.5	-129.5	-122.6	-93.67	-114.7	-179	-166	-145.4	-131.4
ES(98%)	0	133.93	-129.8	-60.73	113.53	68.431	73.729	78.836	-28.94	3.3107	-81.11	-87.68	-52.08	-53.08	-57.49	-13.3	4.2095	12.567	6.3545	-33.22	-34.12	-104.3	-85.67	-101.4	-84.63
ES(95%)	0	50.077	-34.07	-5.758	23.178	35.987	21.476	-12.26	-21.11	-21.28	-18.73	-37.2	-27.2	-34.82	-39.51	-15.57	-37.07	-17.88	-24.51	-25.57	-20.89	-50.45	-46.42	-52.35	-43.93

* HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

** ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*** Port 1,…,Port 25 represents portfolio

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios

Table G1.01- Estimates of Component VaR@95% Confidence Level for Australia

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-26741.6	-10347.2	-5737.69	-4631.6	-3828.92	-3079.16	-2649.48	-2324.75	-2050.61	-1843.25	-1663.28	-1531.66	-1390.3	-1293.74	-1230.1	-1152.9	-1086.6	-1015.9	-949.319	-895.16	-848.52	-804.96	-769.2	-733.99	-700.869
Pos 2		-14113.3	-7689.3	-5547.09	-4266.99	-3844.01	-3185.32	-2746.07	-2475.49	-2189.67	-1991.75	-1806.97	-1642.23	-1510.41	-1386.9	-1290.4	-1197.3	-1125.7	-1102.6	-1042.3	-983.54	-942.86	-902.5	-862.46	-824.61
Pos 3			-13414.2	-9512.25	-7150.21	-5689.63	-4716.9	-4007.08	-3457.67	-3052.34	-2727.79	-2458.29	-2332.32	-2129.76	-1948	-1804.7	-1666.7	-1564.3	-1466.04	-1370.6	-1297.7	-1223.8	-1158	-1108.6	-1054.26
Pos 4				-4326.17	-3706.71	-2946.65	-2515.55	-2209.16	-1950.05	-1740.19	-1561.13	-1436.72	-1306.51	-1217.72	-1124.1	-1055.5	-996.75	-940.99	-879.662	-831.36	-790.03	-750.34	-715	-679.8	-651.072
Pos 5					-3746.63	-2967.95	-2541.47	-2227.22	-1976.55	-1780.49	-1606.04	-1487.02	-1348.38	-1257.85	-1163.9	-1092.6	-1028.4	-964.47	-905.694	-860.22	-817.64	-779.38	-743.3	-711.4	-682.947
Pos 6						-3750.58	-3136.21	-2697.37	-2401.51	-2107.7	-1920.58	-1742.19	-1583.73	-1451.89	-1324.6	-1232	-1146.9	-1076.6	-1056.19	-989.73	-933.99	-890.04	-853.1	-815.56	-776.797
Pos 7							-2487.7	-2186.23	-1891.93	-1683.95	-1522.97	-1393.1	-1266.63	-1180.76	-1079.7	-1014.6	-955.38	-896.41	-843.38	-797.11	-758.34	-720.5	-685.8	-657.19	-629.98
Pos 8								-1702.49	-1495.44	-1346.39	-1227.73	-1121.2	-1021.31	-950.918	-880.03	-825.1	-782.37	-735.28	-691.325	-653.75	-624.64	-596.79	-569.8	-548.6	-527.133
Pos 9									-1726.34	-1559.48	-1427.4	-1300.93	-1180.29	-1100.49	-1017.2	-955.78	-895.76	-841.54	-811.13	-775.69	-736.64	-718.29	-683.6	-653.7	-627.491
Pos 10										-1823.12	-1648.8	-1507.66	-1393.96	-1299.36	-1203.1	-1129.5	-1067.4	-1004.2	-942.613	-886.87	-845.57	-804.14	-769.1	-735.22	-705.474
Pos 11											-1494.22	-1364.79	-1245.86	-1160.91	-1065.4	-1001.2	-941.69	-879.48	-839.687	-803.59	-758.45	-727.36	-700.2	-673.64	-649.14
Pos 12												-1308.86	-1207.58	-1130.49	-1050.3	-984.69	-926.19	-877.5	-822.818	-781.78	-738.81	-704.94	-673.4	-643.64	-617.738
Pos 13													-1417.44	-1309.83	-1207.7	-1127.4	-1054.5	-992.02	-929.373	-870.9	-824.4	-780.38	-745.5	-711.59	-684.937
Pos 14														-866.075	-796.16	-771.08	-731.06	-685.45	-641.194	-613.78	-581.68	-557.4	-532.9	-510.88	-492.604
Pos 15															-1645.1	-1531.1	-1428.4	-1319.4	-1224.48	-1155.1	-1091	-1037.4	-988.5	-945.9	-893.036
Pos 16																-712.76	-676.92	-632.72	-596.727	-570.58	-544.75	-522.13	-498.9	-476.29	-458.387
Pos 17																	-768.69	-719.49	-669.215	-640.21	-612.35	-584.21	-557.9	-530.83	-512.179
Pos 18																		-1075.9	-999.954	-938.96	-898.02	-846.45	-806.6	-770.04	-729.479
Pos 19																			-1133.74	-1062.6	-1001.7	-967.18	-930.3	-887.09	-849.411
Pos 20																				-896.58	-846.39	-806.55	-768.2	-742.08	-709.334
Pos 21																					-825.64	-782.66	-746.5	-708.81	-680.924
Pos 22																						-690.18	-658.5	-631.5	-609.422
Pos 23																							-661.2	-632.29	-607.17
Pos 24																								-737.18	-709.96
Pos 25																									-756.228

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.02- Estimates of Component VaR@95% Confidence Level for Brazil

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-52942.1	-20086.7	-12211	-9425	-7645.42	-6371.4	-5460.84	-4817.2	-4304.6	-3849.6	-3507.7	-3189.68	-2946.34	-2774.97	-2406.51	-2249.98	-2108.66	-2005.26	-1894.9	-1803.94	-1709.37	-1625.47	-1545.95	-1487.55	-1433.14
Pos 2		-32468.8	-19863	-14531	-11251.6	-9169.07	-7792.1	-6704.9	-5778.4	-5177.5	-4694.22	-4234.48	-3893.38	-3615.54	-2969.93	-2773.73	-2596.38	-2474.85	-2342.58	-2228.22	-2123.49	-2013.19	-1928.18	-1853.02	-1775.23
Pos 3			-9276.3	-6181.8	-4696.1	-3794.01	-3223.52	-2719.3	-2318.7	-2030	-1767.6	-1616.67	-1462.92	-1298.34	-1075.4	-1007.97	-960.009	-883.183	-877.111	-826.629	-787.068	-755.326	-728.159	-696.152	-673.309
Pos 4				-10888	-8777.48	-7304.38	-6259.98	-5467	-4863.6	-4375.5	-3977.73	-3617.7	-3329.67	-3083.59	-2590.42	-2423.96	-2280.67	-2189.94	-2073.09	-1969.95	-1875.83	-1785.15	-1705.46	-1634.87	-1555.2
Pos 5					-8005.24	-6541.03	-5645.16	-5058.4	-4457	-3999.1	-3645.12	-3323.24	-3059.16	-2849.08	-2397.19	-2248.74	-2118.75	-2007.96	-1905.84	-1817.02	-1731.23	-1640.07	-1570.24	-1513.16	-1442.17
Pos 6						-5574.4	-4757.35	-4138.5	-3604.7	-3233.5	-2925.81	-2646.15	-2439.49	-2261.38	-1883.47	-1767.87	-1661.81	-1579.71	-1498.91	-1428.35	-1360.89	-1297.08	-1234.94	-1187.93	-1132.11
Pos 7							-3029.94	-2660.4	-2361.4	-2133.4	-1947.86	-1791.06	-1649.59	-1515.89	-1284.21	-1211.37	-1135.51	-1085.26	-1035.09	-986.317	-949.88	-909.673	-875.976	-840.179	-803.95
Pos 8								-5030.4	-4477.4	-4032.5	-3677.27	-3343.04	-3079.78	-2876.73	-2389.4	-2233.47	-2103.36	-2005.71	-1896.61	-1809.56	-1726.47	-1639.56	-1572.15	-1513.84	-1447.99
Pos 9									-4305.9	-3840	-3443.94	-3092.88	-2832.23	-2601.65	-2147.69	-2010.65	-1896.6	-1808.54	-1708.52	-1627.19	-1540.13	-1466.56	-1400.05	-1344.88	-1280.55
Pos 10										-3935.6	-3562.35	-3241.36	-2975.86	-2759.31	-2272.61	-2131.92	-2012.22	-1926.44	-1829.23	-1747.71	-1666.8	-1586.67	-1525.99	-1469.1	-1398.04
Pos 11											-3597.34	-3265.4	-3036.12	-2851.58	-2427.11	-2269.34	-2136.3	-2044.04	-1928.94	-1845.19	-1751.75	-1664.19	-1584.77	-1523.92	-1463.39
Pos 12												-2288.66	-2088.09	-1867.1	-1481.34	-1399.26	-1316.28	-1245.96	-1193.45	-1132.55	-1081.37	-1035.78	-996.171	-950.921	-919.652
Pos 13													-2139.97	-1981.61	-1683.44	-1577.31	-1508.14	-1436.1	-1360.44	-1298.89	-1236.49	-1173.39	-1115.52	-1074.33	-1019.69
Pos 14														-3592.21	-3003.53	-2814.22	-2629.04	-2518.09	-2371.02	-2264.29	-2147.65	-2039.62	-1935.12	-1865.17	-1781.78
Pos 15															-5738.9	-5320.23	-4906.43	-4476.93	-4187.69	-3929.92	-3652.21	-3427.61	-3216.84	-3055.74	-2878.46
Pos 16																-1438.18	-1342.49	-1255.23	-1192.15	-1135.77	-1077.54	-1043.23	-1000.63	-967.199	-931.51
Pos 17																	-1645.02	-1539.72	-1465.1	-1400.17	-1354.01	-1285.94	-1235.39	-1187.96	-1140.57
Pos 18																		-2408.94	-2278.8	-2171.85	-2068.77	-1962.2	-1876.53	-1802.83	-1722.56
Pos 19																			-714.826	-681.769	-650.536	-623.624	-600.835	-572.53	-556.174
Pos 20																				-1221.53	-1158.68	-1102.49	-1049.3	-1009.25	-966.508
Pos 21																					-1388.3	-1327.6	-1262.05	-1207.98	-1157.16
Pos 22																						-954.921	-907.661	-857.765	-825.549
Pos 23																							-1076.46	-1028.59	-990.829
Pos 24																								-1071.8	-1025.23
Pos 25																									-1207.19

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.02- Estimates of Component VaR@95% Confidence Level for Brazil

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-52942.1	-20086.7	-12211	-9425	-7645.42	-6371.4	-5460.84	-4817.2	-4304.6	-3849.6	-3507.7	-3189.68	-2946.34	-2774.97	-2406.51	-2249.98	-2108.66	-2005.26	-1894.9	-1803.94	-1709.37	-1625.47	-1545.95	-1487.55	-1433.14
Pos 2		-32468.8	-19863	-14531	-11251.6	-9169.07	-7792.1	-6704.9	-5778.4	-5177.5	-4694.22	-4234.48	-3893.38	-3615.54	-2969.93	-2773.73	-2596.38	-2474.85	-2342.58	-2228.22	-2123.49	-2013.19	-1928.18	-1853.02	-1775.23
Pos 3			-9276.3	-6181.8	-4696.1	-3794.01	-3223.52	-2719.3	-2318.7	-2030	-1767.6	-1616.67	-1462.92	-1298.34	-1075.4	-1007.97	-960.009	-883.183	-877.111	-826.629	-787.068	-755.326	-728.159	-696.152	-673.309
Pos 4				-10888	-8777.48	-7304.38	-6259.98	-5467	-4863.6	-4375.5	-3977.73	-3617.7	-3329.67	-3083.59	-2590.42	-2423.96	-2280.67	-2189.94	-2073.09	-1969.95	-1875.83	-1785.15	-1705.46	-1634.87	-1555.2
Pos 5					-8005.24	-6541.03	-5645.16	-5058.4	-4457	-3999.1	-3645.12	-3323.24	-3059.16	-2849.08	-2397.19	-2248.74	-2118.75	-2007.96	-1905.84	-1817.02	-1731.23	-1640.07	-1570.24	-1513.16	-1442.17
Pos 6						-5574.4	-4757.35	-4138.5	-3604.7	-3233.5	-2925.81	-2646.15	-2439.49	-2261.38	-1883.47	-1767.87	-1661.81	-1579.71	-1498.91	-1428.35	-1360.89	-1297.08	-1234.94	-1187.93	-1132.11
Pos 7							-3029.94	-2660.4	-2361.4	-2133.4	-1947.86	-1791.06	-1649.59	-1515.89	-1284.21	-1211.37	-1135.51	-1085.26	-1035.09	-986.317	-949.88	-909.673	-875.976	-840.179	-803.95
Pos 8								-5030.4	-4477.4	-4032.5	-3677.27	-3343.04	-3079.78	-2876.73	-2389.4	-2233.47	-2103.36	-2005.71	-1896.61	-1809.56	-1726.47	-1639.56	-1572.15	-1513.84	-1447.99
Pos 9									-4305.9	-3840	-3443.94	-3092.88	-2832.23	-2601.65	-2147.69	-2010.65	-1896.6	-1808.54	-1708.52	-1627.19	-1540.13	-1466.56	-1400.05	-1344.88	-1280.55
Pos 10										-3935.6	-3562.35	-3241.36	-2975.86	-2759.31	-2272.61	-2131.92	-2012.22	-1926.44	-1829.23	-1747.71	-1666.8	-1586.67	-1525.99	-1469.1	-1398.04
Pos 11											-3597.34	-3265.4	-3036.12	-2851.58	-2427.11	-2269.34	-2136.3	-2044.04	-1928.94	-1845.19	-1751.75	-1664.19	-1584.77	-1523.92	-1463.39
Pos 12												-2288.66	-2088.09	-1867.1	-1481.34	-1399.26	-1316.28	-1245.96	-1193.45	-1132.55	-1081.37	-1035.78	-996.171	-950.921	-919.652
Pos 13													-2139.97	-1981.61	-1683.44	-1577.31	-1508.14	-1436.1	-1360.44	-1298.89	-1236.49	-1173.39	-1115.52	-1074.33	-1019.69
Pos 14														-3592.21	-3003.53	-2814.22	-2629.04	-2518.09	-2371.02	-2264.29	-2147.65	-2039.62	-1935.12	-1865.17	-1781.78
Pos 15															-5738.9	-5320.23	-4906.43	-4476.93	-4187.69	-3929.92	-3652.21	-3427.61	-3216.84	-3055.74	-2878.46
Pos 16																-1438.18	-1342.49	-1255.23	-1192.15	-1135.77	-1077.54	-1043.23	-1000.63	-967.199	-931.51
Pos 17																	-1645.02	-1539.72	-1465.1	-1400.17	-1354.01	-1285.94	-1235.39	-1187.96	-1140.57
Pos 18																		-2408.94	-2278.8	-2171.85	-2068.77	-1962.2	-1876.53	-1802.83	-1722.56
Pos 19																			-714.826	-681.769	-650.536	-623.624	-600.835	-572.53	-556.174
Pos 20																				-1221.53	-1158.68	-1102.49	-1049.3	-1009.25	-966.508
Pos 21																					-1388.3	-1327.6	-1262.05	-1207.98	-1157.16
Pos 22																						-954.921	-907.661	-857.765	-825.549
Pos 23																							-1076.46	-1028.59	-990.829
Pos 24																								-1071.8	-1025.23
Pos 25																									-1207.19

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G 1- Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.03- Estimates of Component VaR@95% Confidence Level for Chile

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-28911	-11032	-6960.62	-5040.25	-4112.76	-3390.81	-2836.11	-2489.38	-2221.63	-1957.77	-1785.34	-1635.93	-1506.77	-1338.6	-1250.88	-1141.35	-1077.73	-1009.75	-957.294	-910.291	-859.088	-814.505	-778.36	-754.422	-726.436
Pos 2		-16603	-10403.6	-7721.52	-5991.67	-4849.47	-4059.92	-3514.5	-3098.68	-2725.83	-2451.33	-2223.1	-2032.52	-1737.54	-1616.24	-1478	-1378.04	-1303.04	-1220.09	-1154.03	-1089.93	-1034.58	-976.596	-940.511	-897.206
Pos 3			-9514.25	-6871.79	-5399.31	-4375.2	-3711.95	-3241.66	-2854.33	-2512.6	-2270.87	-2063.33	-1897.47	-1665.84	-1549.45	-1428.5	-1337.86	-1261.07	-1187.58	-1121.73	-1064.65	-1009.71	-966.267	-931.408	-890.989
Pos 4				-6608.25	-5175.58	-4211.39	-3514.38	-3048.83	-2692.18	-2373.96	-2151.96	-1942.41	-1774.19	-1552.39	-1441.41	-1321.43	-1234.74	-1171.4	-1108.29	-1052.04	-996.422	-948.846	-901.763	-876.24	-834.268
Pos 5					-4160.75	-3378.01	-2842.2	-2488.7	-2233.65	-2006.17	-1822.76	-1670.22	-1534.6	-1330.56	-1249.83	-1155.76	-1089.28	-1029.65	-973.963	-940.464	-890.373	-846.272	-809.826	-774.656	-746.917
Pos 6						-2233.15	-1850.31	-1543.52	-1369.86	-1224.46	-1096.09	-1017.56	-933.835	-827.825	-775.071	-721.801	-683.103	-636.861	-607.888	-569.818	-541.685	-519.557	-489.881	-453.735	-432.095
Pos 7							-2515.79	-2129.97	-1886.19	-1693.42	-1516.31	-1387.74	-1274.94	-1106.48	-1025.49	-950.872	-900.798	-874.913	-830.606	-783.787	-748.068	-717.325	-693.569	-657.444	-627.624
Pos 8								-2020.53	-1789.81	-1573.49	-1407.58	-1285.73	-1190.42	-1050.21	-979.456	-896.467	-837.364	-787.205	-742.405	-708.012	-675.407	-641.184	-608.075	-593.156	-567.392
Pos 9									-821.207	-748.264	-682.996	-628.227	-583.172	-529.529	-511.159	-482.607	-458.338	-433.299	-415.223	-397.322	-376.363	-361.899	-346.653	-327.35	-315.398
Pos 10										-1381.86	-1209.6	-1097.12	-1007.59	-893.477	-834.343	-773.79	-722.491	-672.242	-632.92	-592.687	-569.697	-541.629	-514.648	-480.96	-459.78
Pos 11											-1473.53	-1341.16	-1240.02	-1088.88	-1015	-935.706	-883.139	-832.669	-786.628	-746.657	-712.138	-680.306	-654.791	-621.573	-599.908
Pos 12												-981.784	-898.221	-783.158	-736.758	-665.695	-631.349	-594.644	-565.639	-539.96	-512.156	-495.732	-481.167	-459.095	-443.74
Pos 13													-795.7	-695.723	-653.111	-607.16	-571.199	-538.751	-506.44	-481.672	-458.674	-442.757	-424.76	-401.432	-385.682
Pos 14														-1746.02	-1603	-1484.15	-1373.71	-1237.56	-1149.78	-1075.31	-1008.69	-949.238	-884.77	-797.704	-760.962
Pos 15															-465.018	-438.25	-416.78	-392.093	-375.362	-353.914	-337.358	-325.226	-312.843	-294.464	-284.832
Pos 16																-611.716	-565.922	-522.557	-497.456	-461.269	-442.826	-425.089	-397.863	-367.774	-350.789
Pos 17																	-522.039	-490.307	-470.192	-443.974	-420.152	-400.132	-386.271	-368.455	-351.187
Pos 18																		-854.297	-810.449	-761.846	-726.526	-690.402	-657.759	-626.489	-602.501
Pos 19																			-442.798	-423.129	-404.558	-388.946	-375.402	-352.895	-336.861
Pos 20																				-669	-636.151	-603.606	-579.596	-555.298	-529.002
Pos 21																					-384.505	-365.609	-348.644	-329.469	-317.972
Pos 22																						-424.989	-406.997	-383.845	-371.276
Pos 23																							-764.867	-730.89	-706.381
Pos 24																								-1029.35	-972.361
Pos 25																									-640.716

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.04- Estimates of Component VaR@95% Confidence Level for France

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-34142	-14487.9	-9042.09	-6458.31	-4953.3	-3946.19	-3271.1	-2842.2	-2393	-2146.39	-1905.13	-1741.09	-1572.41	-1446.68	-1272	-1172.33	-1095.66	-1027.06	-948.746	-901.145	-850.518	-813.356	-768.783	-725.631	-681.27
Pos 2		-18546.8	-10315.8	-6676.23	-4814.81	-3677.52	-3000.3	-2609.5	-2129.9	-1868.29	-1612.37	-1453.42	-1303.47	-1194.17	-1017.75	-954.941	-891.901	-826.716	-758.125	-719.25	-677.704	-648.601	-610.836	-574.292	-540.79
Pos 3			-9132.74	-6791.16	-5252.66	-4218.3	-3459.1	-3042.5	-2567	-2331.6	-2119.05	-1951.53	-1772.6	-1626.79	-1382.51	-1278.5	-1204.64	-1126.03	-1040.58	-993.9	-936.402	-894.016	-861.39	-803.829	-762.93
Pos 4				-6281.74	-5054.67	-4183.46	-3570.5	-3093.5	-2668	-2410.48	-2190.06	-1989.94	-1823.68	-1672.94	-1522.45	-1414.61	-1314.78	-1250.5	-1170.5	-1110.55	-1056.93	-1003.04	-969.799	-919.76	-876.81
Pos 5					-5986.44	-5092.77	-4375.4	-3795	-3342	-2993.34	-2718.03	-2486.78	-2293.49	-2139.41	-1984.87	-1870.48	-1742.81	-1644.57	-1540.64	-1469.06	-1402.08	-1340.4	-1279.24	-1216.34	-1155.2
Pos 6						-6096.08	-5241.3	-4537.2	-3976.7	-3579.66	-3241.97	-2966.85	-2727.49	-2530.79	-2319.87	-2163.39	-2028.65	-1920.68	-1801.27	-1720.66	-1639.04	-1563.69	-1497.16	-1421.77	-1355.1
Pos 7							-4133.5	-3558.2	-3136	-2798.62	-2497.58	-2283.91	-2118.05	-1967.11	-1861.71	-1745.52	-1631.09	-1559.04	-1471.92	-1396.89	-1394.07	-1325.12	-1263.44	-1206.79	-1156.2
Pos 8								-431.18	-301.29	-271.679	-239.252	-214.908	-208.532	-193.89	-120.323	-116.001	-112.212	-96.6908	-85.5019	-88.3876	-77.6421	-75.8358	-73.3347	-62.1863	-56.768
Pos 9									-4002.7	-3511.62	-3185.99	-2846.8	-2588.25	-2364.09	-2229.71	-2060	-1910.38	-1809.73	-1740.23	-1644.23	-1556.05	-1475.82	-1403.07	-1366.71	-1328.6
Pos 10										-1450.76	-1332.63	-1241.81	-1154.68	-1079.23	-903.824	-853.063	-806.951	-754.071	-679.941	-653.279	-617.562	-591.084	-565.947	-525.588	-486.22
Pos 11											-2406.41	-2193.6	-2019.03	-1863.72	-1666.29	-1542.37	-1441.58	-1359	-1279.48	-1219.58	-1148.91	-1091.68	-1048.54	-997.129	-949.65
Pos 12												-1789.03	-1670.37	-1565.47	-1422.32	-1340.32	-1267.8	-1189.76	-1105	-1052.11	-997.371	-955.112	-913.299	-857.799	-809.38
Pos 13													-1865.66	-1752.15	-1605.02	-1523.95	-1472	-1381.93	-1292.7	-1230.81	-1165.38	-1113.62	-1068.66	-1006.8	-956.3
Pos 14														-1621.17	-1463.48	-1384.43	-1310.45	-1239.46	-1164.93	-1110.33	-1058.27	-1011.81	-964.474	-911.295	-864.9
Pos 15															-3189.47	-2962.07	-2748.95	-2602.76	-2507.36	-2360.91	-2241.26	-2122.08	-2022.35	-1964.88	-1900.7
Pos 16																-1457.83	-1378.83	-1295.19	-1219.03	-1155.94	-1097	-1052.65	-1005.76	-955.593	-910.51
Pos 17																	-1286.77	-1199.92	-1124.03	-1069.09	-1004.35	-967.173	-930.449	-871.346	-820.95
Pos 18																		-1486.49	-1415.3	-1339.48	-1280.49	-1217.4	-1162.45	-1114.63	-1073.3
Pos 19																			-1450	-1363.92	-1296.94	-1226.47	-1169.04	-1160.79	-1135.3
Pos 20																				-986.41	-936.877	-894.523	-860.865	-813.12	-773.59
Pos 21																					-1437.18	-1363.77	-1298.99	-1241.52	-1191.1
Pos 22																						-1136.08	-1077.17	-1027.55	-981.77
Pos 23																							-599.842	-562.828	-529.55
Pos 24																								-1163.72	-1139.8
Pos 25																									-1147.3

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.05- Estimates of Component VaR@95% Confidence Level for Germany

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-45258.9	-20262.1	-12949	-8993.23	-6846.9	-5577.87	-4689.48	-4022.93	-3492.35	-3065.32	-2785.84	-2528.83	-2304.35	-2103.23	-1952.78	-1832.85	-1678.74	-1573.96	-1481.35	-1400.07	-1320.23	-1252.23	-1189.43	-1146.19	-1092.99
Pos 2		-17397	-11292	-8077.23	-6437.9	-5295.9	-4417.8	-3862.52	-3369.09	-2972.43	-2694.55	-2455.41	-2230.87	-2054.09	-1898.1	-1818.85	-1669.89	-1561.45	-1471.05	-1392.57	-1318.26	-1247.59	-1188.3	-1144.93	-1090.09
Pos 3			-1792.8	-1264.31	-868.11	-711.284	-581.78	-468.254	-392.957	-351.098	-302.913	-309.521	-292.149	-271.382	-255.819	-237.93	-232.889	-230.996	-226.113	-211.066	-198.213	-194.586	-186.125	-175.185	-175.431
Pos 4				-5792.69	-4290.8	-3524.68	-2922.32	-2517.08	-2199.19	-2134.8	-1894.86	-1748.58	-1599.66	-1488.76	-1387.92	-1276.75	-1173.69	-1108.97	-1047.97	-985.476	-929.608	-883.734	-839.979	-799.64	-759.794
Pos 5					-6908	-5636.03	-4712.35	-4050.33	-3523.64	-3121.31	-2809.72	-2569.74	-2345.51	-2157.93	-1997.74	-1900.02	-1768.36	-1663.52	-1566.89	-1472.66	-1398.17	-1328.89	-1262.11	-1210.41	-1154.51
Pos 6						-3837.16	-3275.67	-2910.3	-2726.82	-2416.96	-2202.62	-2019.03	-1846.61	-1707.86	-1573.6	-1466.82	-1350.06	-1275.16	-1197.47	-1148.37	-1099.25	-1048.5	-1005.5	-970.676	-921.583
Pos 7							-2866.15	-2423.17	-2111.7	-1867.19	-1636.62	-1503.51	-1380.97	-1295.42	-1204.79	-1112.03	-1033.83	-974.64	-920.244	-857.589	-807.038	-766.689	-728.127	-699.015	-670.974
Pos 8								-3493.12	-3093.78	-2734.18	-2583.8	-2356.95	-2155.26	-1990.07	-1826.29	-1715.41	-1586.31	-1492.72	-1400.01	-1335.4	-1278.39	-1207.26	-1156.65	-1115.92	-1060.91
Pos 9									-3079.18	-2744.75	-2472.89	-2265.32	-2079.52	-1920.52	-1771.26	-1645.54	-1516.27	-1429.7	-1345.26	-1292.56	-1239.81	-1180.95	-1132.42	-1081.1	-1028.44
Pos 10										-2145.79	-1887.77	-1738.72	-1598.9	-1489.23	-1399.39	-1283.8	-1200.47	-1130.29	-1072.3	-1005.71	-953.825	-907.56	-865.958	-815.768	-777.002
Pos 11											-2535.52	-2306.69	-2102.54	-1926.02	-1763.2	-1657.39	-1529.99	-1434.88	-1350.62	-1287.65	-1226.34	-1161.18	-1113.86	-1076.46	-1024.09
Pos 12												-253.309	-247.729	-236.471	-224.239	-209.086	-206.277	-206.647	-207.124	-194.42	-187.675	-187.517	-181.283	-170.99	-170.296
Pos 13													-1195.18	-1115.09	-1037.58	-939.077	-893.964	-846.844	-793.936	-747.708	-714.373	-691.74	-651.063	-609.852	-584.199
Pos 14														-1297.19	-1214.98	-1126.68	-1054.51	-990.886	-927.928	-868.865	-818.41	-779.504	-740.419	-701.7	-671.632
Pos 15															-1171.1	-1074.67	-1007.24	-948.448	-891.335	-828.832	-778.689	-743.449	-704.151	-661.092	-636.532
Pos 16																-1718.78	-1590.28	-1497.66	-1411.93	-1345.39	-1277.05	-1216.3	-1163.97	-1122.9	-1072.73
Pos 17																	-1164.18	-1101.06	-1047.52	-974.082	-913.056	-865.568	-814.789	-761.831	-730.278
Pos 18																		-239.819	-237.836	-222.647	-213.423	-211.008	-200.316	-188.61	-189.407
Pos 19																			-392.381	-363.368	-339.458	-329.227	-310.538	-289.671	-282.751
Pos 20																				-1281.57	-1222.05	-1164.68	-1127.51	-1079.41	-1035.48
Pos 21																					-774.438	-737.616	-711.983	-682.692	-652.669
Pos 22																						-257.82	-246.751	-231.531	-230.66
Pos 23																							-876.052	-838.621	-804.62
Pos 24																								-1115.92	-1063.51
Pos 25																									-323.921

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.06- Estimates of Component VaR@95% Confidence Level for Hong Kong

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-26730	-11268.4	-7456.61	-5315.95	-4113.1	-3403.39	-2875.64	-2489.8	-2184.97	-1926.6	-1749.44	-1597.32	-1471.38	-1372.68	-1280.81	-1197.28	-1128.7	-1059.69	-1003.74	-950.408	-904.921	-855.961	-818.688	-770.569	-719.674
Pos 2		-17478.8	-11034.6	-8555.2	-6704.18	-5517.5	-4662.36	-4001.3	-3514.01	-3129.79	-2804.76	-2547.28	-2358.31	-2180.5	-2014.48	-1878.03	-1760.98	-1655.13	-1565.59	-1473.66	-1402.3	-1329.91	-1267.48	-1197.74	-1124.19
Pos 3			-7470.38	-5182.06	-4072.59	-3419.28	-2916.89	-2552.3	-2237.38	-1965.89	-1801.88	-1648.32	-1503.57	-1404.42	-1311.01	-1222.07	-1148.58	-1080.24	-1023.73	-975.272	-920.966	-874.27	-832.107	-784.747	-727.115
Pos 4				-8260.59	-6561.34	-5410.68	-4575.45	-3912.6	-3459.15	-3061.62	-2751.7	-2494.25	-2306.66	-2140.98	-1984.32	-1851	-1734.38	-1627.57	-1541.17	-1452.06	-1384.77	-1317.34	-1255.23	-1183.25	-1109.82
Pos 5					-7184.34	-5910.34	-4985.06	-4290.9	-3915.33	-3445.69	-3108.7	-2845.53	-2607.9	-2427.14	-2267.24	-2116.77	-1980.39	-1871.45	-1769.95	-1670.23	-1582.3	-1506.09	-1437.1	-1359.66	-1270.57
Pos 6						-1463.39	-1336.38	-1229.4	-1035.84	-929.493	-841.712	-759.646	-687.602	-627.757	-576.926	-533.138	-498.954	-465.972	-440.577	-418.423	-390.266	-367.035	-349.68	-326.376	-303.813
Pos 7							-1073.44	-979.76	-819.901	-698.063	-623.37	-562.288	-520.919	-472.922	-432.987	-401.305	-373.312	-348.905	-330.304	-310.795	-291.354	-276.887	-261.548	-244.513	-224.171
Pos 8								-1705.3	-1444.71	-1260.77	-1128.74	-1025.85	-928.306	-849.218	-787.307	-749.262	-693.358	-648.348	-612.422	-576.58	-542.693	-519.48	-491.088	-455.23	-418.563
Pos 9									-3508.64	-3098.45	-2818.91	-2582.35	-2361.81	-2200.09	-2049.01	-1908.85	-1795.75	-1693.04	-1601.94	-1520.79	-1444.2	-1371.82	-1307.52	-1239.99	-1162.49
Pos 10										-3160.75	-2831.01	-2564.4	-2329.92	-2122.88	-1965.76	-1802.41	-1714.11	-1598.45	-1509.98	-1420.53	-1344.76	-1286.59	-1227	-1181.74	-1117.07
Pos 11											-2832.3	-2591.84	-2390.3	-2227.02	-2087.69	-1952.83	-1837.52	-1729.14	-1636.15	-1600.58	-1515.58	-1444.17	-1378.63	-1314.22	-1238.57
Pos 12												-2380.82	-2173.95	-2005.93	-1867.25	-1725.09	-1616.17	-1605.87	-1521.91	-1435.59	-1349	-1289.54	-1229.31	-1157.85	-1082.73
Pos 13													-2034.43	-1881.33	-1741.53	-1614.4	-1520.35	-1430.45	-1353.52	-1284.03	-1244	-1178.94	-1129.8	-1063.7	-990.504
Pos 14														-1640.42	-1533.52	-1434.45	-1352.43	-1268.21	-1200.61	-1139.36	-1092.84	-1030.01	-984.746	-930.09	-863.13
Pos 15															-1408.15	-1327.25	-1235.65	-1160.95	-1096.09	-1044.68	-998.734	-948.663	-906.328	-860.717	-808.103
Pos 16																-1558.9	-1452	-1348.89	-1274.34	-1213.78	-1148.09	-1084.81	-1034.11	-980.553	-924.389
Pos 17																	-1129.08	-1050.09	-998.006	-939.503	-899.68	-855.348	-820.668	-765.045	-711.003
Pos 18																		-1473.87	-1401.18	-1321.25	-1242.25	-1187.82	-1135.07	-1066.03	-995.652
Pos 19																			-407.023	-385.741	-366.566	-348.12	-332.944	-313.298	-289.53
Pos 20																				-1675.71	-1593.46	-1522.11	-1450.07	-1376.39	-1291.44
Pos 21																					-1321.88	-1254.43	-1202.4	-1146.15	-1077.12
Pos 22																						-216.056	-204.137	-189.509	-166.768
Pos 23																							-685.177	-649.684	-602.717
Pos 24																								-340.226	-454.247
Pos 25																									-431.75

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.07- Estimates of Component VaR@95% Confidence Level for India

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-42237.7	-17705.4	-9562.11	-7410.1	-5872.56	-4860.79	-4113.94	-3502.58	-3100.08	-2836.42	-2610.94	-2390.35	-2185	-2019.1	-1873.23	-1743.88	-1631.96	-1536.99	-1441.41	-1364.73	-1286.81	-1224.13	-1165.13	-1109.06	-1056.36
Pos 2		-13849.4	-6274.15	-4637.9	-3764.83	-3080.41	-2611.26	-2241.42	-1979.57	-1767.19	-1564.63	-1405.82	-1287.3	-1215.03	-1140.76	-1068.57	-991.484	-933.136	-885.08	-832.867	-794.058	-757.198	-724.705	-693.84	-657.459
Pos 3			-19769.7	-13920	-10658.1	-8611.13	-7199.13	-6121.42	-5349.18	-4618.19	-4096.83	-3689.35	-3355.51	-3066.03	-2815.76	-2605.57	-2412.78	-2265.01	-2117.06	-1989.02	-1879.51	-1788.08	-1703.57	-1614.17	-1536.88
Pos 4				-7142.4	-5578.86	-4567.53	-3882.54	-3329.44	-2946.34	-2708.57	-2500.25	-2318.39	-2132.94	-1973.92	-1842.65	-1708.11	-1613.21	-1524.41	-1443.95	-1374.42	-1302.09	-1242.06	-1188.34	-1138.54	-1089.46
Pos 5					-4668.05	-3867.32	-3263.38	-2834.41	-2503.37	-2234.78	-2009.73	-1826.88	-1679.4	-1574.54	-1462.95	-1350.17	-1259.26	-1179	-1114.42	-1056.72	-1008.86	-959.58	-919.634	-877.698	-827.929
Pos 6						-4447.3	-3790.23	-3469.25	-3030.04	-2661.19	-2366.55	-2153.1	-2001.52	-1862	-1739.82	-1655.82	-1540.91	-1434.16	-1340.34	-1258.6	-1208.63	-1154.82	-1099.89	-1051.35	-1001.8
Pos 7							-2066.98	-1755.6	-1551.6	-1385.95	-1238.23	-1112.35	-1011.38	-937.662	-864.331	-814.775	-761.545	-732.788	-688.669	-653.369	-624.469	-599.642	-571.059	-553.133	-521.093
Pos 8								-3451.08	-3060.28	-2624.46	-2308.86	-2093.83	-1934.27	-1800.43	-1663.98	-1609.84	-1483.11	-1379.88	-1303.46	-1222.44	-1169.38	-1110.04	-1056.71	-1010.61	-970.592
Pos 9									-1891.87	-1691.32	-1524.09	-1377.56	-1264.56	-1181.07	-1078.32	-1001.34	-944.61	-886.247	-836.138	-787.451	-749.159	-714.644	-681.54	-652.192	-629.05
Pos 10										-3144.04	-2975.34	-2745.28	-2524.9	-2325.73	-2152.05	-1993.95	-1891.15	-1795.13	-1700.27	-1622.12	-1528.57	-1457.11	-1392.76	-1339.66	-1297.75
Pos 11											-2752.28	-2532.46	-2316.54	-2143.84	-1978.25	-1833.16	-1728.55	-1641.89	-1559.76	-1513.42	-1433.76	-1366.27	-1304.51	-1253.63	-1199.01
Pos 12												-2709.89	-2504.18	-2311.97	-2145.67	-1994.48	-1913.38	-1807.63	-1737.64	-1644.7	-1561.57	-1487.14	-1422.19	-1358.53	-1305.04
Pos 13													-1391.45	-1290.83	-1214.73	-1133.88	-1060.53	-993.1	-941.887	-890.701	-849.507	-809.747	-771.577	-739.592	-711.956
Pos 14														-913.463	-863.747	-809.269	-757.574	-714.133	-670.183	-625.203	-605.272	-577.916	-561.26	-543.767	-513.092
Pos 15															-1362.39	-1270.56	-1187.32	-1111.77	-1046.96	-982.599	-933.949	-891.012	-850.792	-809.649	-775.435
Pos 16																-1322.02	-1236.34	-1149.45	-1080.81	-1018.48	-980.652	-934.485	-885.818	-847.417	-805.892
Pos 17																	-1539.29	-1464.19	-1408	-1332	-1254.72	-1200.82	-1154.2	-1106.29	-1044.71
Pos 18																		-1187.81	-1126.97	-1099.92	-1035.73	-990.264	-941.978	-900.45	-867.18
Pos 19																			-1300.02	-1229.36	-1162.41	-1108.14	-1061.04	-1016.83	-970.414
Pos 20																				-1266.47	-1200.35	-1144.11	-1089.52	-1047.54	-1004.2
Pos 21																					-1004.62	-958.664	-912.764	-874.633	-840.009
Pos 22																						-532.111	-507.232	-488.686	-464.818
Pos 23																							-616.623	-596.625	-569.442
Pos 24																								-705.462	-671.414
Pos 25																									-1287.09

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.08- Estimates of Component VaR@95% Confidence Level for Indonesia

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-46575	-17340	-10137.2	-7077.14	-4820.66	-3301.27	-2882.99	-2618.49	-2137.46	-1986.02	-1829.72	-1685.19	-1575.2	-1483.16	-1396.93	-1318.34	-1257.81	-1199.95	-1148.25	-1102.59	-1061.06	-1019.25	-977.473	-939.207	-917.594
Pos 2		-23898	-15692.8	-11169.2	-7415.57	-4916.57	-4374.59	-4001.45	-3311.25	-3063.64	-2900.3	-2621.03	-2421.59	-2277.33	-2159.02	-2006.66	-1917.99	-1828.45	-1753.06	-1685.16	-1611.49	-1512.88	-1461.01	-1405.69	-1348.19
Pos 3			-17052.6	-12443.9	-8232.35	-5531.95	-4881.22	-4420.55	-3553.63	-3309.79	-3136.93	-2858.11	-2654.2	-2497.25	-2360.8	-2204.52	-2100.48	-1999.41	-1914.49	-1829.1	-1746.56	-1639.79	-1569.33	-1513.88	-1452
Pos 4				-16432.6	-11248.6	-7946.65	-7046.97	-6295.98	-5309.08	-4939.59	-4599.67	-4191.59	-3863.36	-3613.88	-3443.52	-3193.9	-3035.2	-2883.83	-2779.23	-2643.75	-2519.68	-2393.36	-2295.41	-2196.99	-2113.7
Pos 5					-15660.5	-10180	-8470.77	-7291.8	-6070.28	-5401.17	-4753.32	-4238.54	-3937.86	-3604.3	-3311.24	-3050.7	-2856.89	-2678.43	-2514.76	-2362.03	-2248.43	-2110.94	-2019.55	-1935.69	-1799.81
Pos 6						-20938.9	-17138.1	-14481.4	-11747.3	-10296.6	-9014.6	-8062.04	-7354.18	-6765.12	-6188.94	-5712.21	-5295.32	-4930.13	-4590.42	-4285.83	-4046.01	-3809.35	-3603.17	-3398.92	-3184.21
Pos 7							-6461.16	-5682.79	-5073.41	-4663.96	-4241.47	-3897.36	-3595.68	-3334.73	-3149.24	-2975.03	-2809.49	-2655.04	-2528.03	-2397.42	-2284.99	-2178.53	-2075.02	-1994.94	-1903.56
Pos 8								-3940.8	-3205.38	-2952.54	-2745.37	-2501.52	-2316.8	-2166.2	-2047.02	-1909.3	-1817.87	-1729.12	-1651.41	-1573.15	-1504.72	-1417.02	-1361.66	-1312.61	-1249.92
Pos 9									-9379.8	-8244.86	-7296.78	-6511.67	-5947.41	-5453.92	-5015.16	-4616.25	-4289.09	-3987.93	-3741.3	-3533.57	-3354.66	-3180.4	-3018.09	-2863.56	-2707.98
Pos 10										-4364.07	-4095.43	-3730.77	-3459.87	-3256.75	-3101.03	-2905.55	-2784.69	-2701.04	-2596.78	-2474.63	-2364.46	-2242.72	-2157.08	-2084.1	-2003.82
Pos 11											-4157.71	-3702.64	-3406.07	-3167.49	-2977.71	-2759.37	-2617.95	-2483.24	-2357.56	-2241.37	-2134.89	-2006.62	-1923.93	-1841.98	-1785.07
Pos 12												-4131.02	-3788.46	-3518.67	-3274.5	-3064.73	-2853.59	-2689.74	-2538.9	-2416.29	-2291.97	-2161.48	-2066.13	-1964.17	-1862.03
Pos 13													-1311.49	-1225.83	-1157.29	-1099.7	-1047.59	-990.775	-937.73	-888.569	-857.734	-812.143	-778.483	-744.051	-713.175
Pos 14														-1803.94	-1683.51	-1549.15	-1474.23	-1402.18	-1331.57	-1264.29	-1210.52	-1135.52	-1084.51	-1051.08	-997.624
Pos 15															-2980.6	-2753.31	-2607.59	-2492.08	-2392.54	-2278.4	-2174.25	-2060.3	-1974.51	-1902.34	-1833.25
Pos 16																-2611.58	-2448.95	-2295.19	-2152.08	-2040.46	-1942.43	-1786.16	-1708.02	-1618.16	-1528.1
Pos 17																	-1594.46	-1520.39	-1450.69	-1386.28	-1328.19	-1239.82	-1197.25	-1153.12	-1113.07
Pos 18																		-2417.47	-2317.56	-2203.58	-2102.77	-1984.98	-1910.87	-1838.77	-1762.01
Pos 19																			-2562.08	-2439.88	-2332.44	-2200.95	-2111.68	-2042.44	-1968.6
Pos 20																				-1394.65	-1333.89	-1252.36	-1205.6	-1155.1	-1105.96
Pos 21																					-700.297	-665.65	-641.207	-621.242	-595.866
Pos 22																						-2936.4	-2764.19	-2608.65	-2469.03
Pos 23																							-1528.1	-1453.34	-1396.59
Pos 24																								-1411.16	-1359.1
Pos 25																									-2402.1

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.09- Estimates of Component VaR@95% Confidence Level for Ireland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-34440	-14870	-9095.95	-6607.36	-5166.66	-3091.03	-2550.8	-2165.23	-1905.65	-1680.04	-1465.95	-1306.26	-1191.47	-1079.53	-991.409	-910.895	-851.138	-797.829	-753.158	-666.809	-551.061	-524.632	-488.957	-468.992	-442.217
Pos 2		-16432	-10062.8	-7295.37	-5712.2	-3759.41	-3115.61	-2688.85	-2374.36	-2098.71	-1798.88	-1621.68	-1483.07	-1340.53	-1225.52	-1121.02	-1037.26	-973.156	-912.976	-816.684	-661.483	-633.93	-602.494	-575.633	-546.253
Pos 3			-7894.47	-5616.44	-4463.29	-2838.69	-2344.88	-2019	-1761.5	-1571.89	-1390.94	-1264.42	-1157.95	-1054.48	-980.912	-912.596	-853.791	-807.253	-756.273	-691.078	-563.331	-527.35	-507.119	-480.67	-449.884
Pos 4				-5507.27	-4314.7	-2688.31	-2207.96	-1935.87	-1703.07	-1539.9	-1354.09	-1245.62	-1157.37	-1055.21	-977.434	-917.697	-866.309	-817.797	-779.262	-709.727	-594.846	-566.112	-536.513	-501.378	-475.154
Pos 5					-2057.17	-1264.5	-1118.73	-1029.22	-916.82	-858.084	-770.975	-727.543	-678.722	-632.653	-601.484	-568.759	-538.304	-508.984	-480.796	-438.023	-376.305	-361.6	-345.66	-331.43	-318.61
Pos 6						-10041.4	-8189.32	-6942.14	-5997.9	-5239.43	-4613.82	-4086.1	-3709.05	-3273.64	-2957.06	-2702.13	-2486.05	-2301.15	-2173.14	-2074.06	-1709.51	-1604.93	-1478.46	-1389.63	-1298.98
Pos 7							-2955.22	-2556.85	-2228.29	-2007.35	-1771.44	-1624.11	-1512.42	-1364.47	-1268.5	-1178.47	-1105.83	-1035.3	-963.109	-873.202	-746.38	-706.481	-679.955	-641.232	-605.563
Pos 8								-1217.22	-1070.24	-966.606	-851.692	-794.564	-757.893	-671.586	-640.136	-594.48	-564.478	-538.413	-493.471	-474.664	-422.152	-402.971	-385.768	-381.166	-362.617
Pos 9									-1016.93	-920.053	-808.208	-763.65	-716.899	-630.608	-599.896	-588.801	-560.01	-528.427	-492.18	-457.896	-406.393	-384.896	-367.182	-353.303	-330.008
Pos 10										-1245.25	-1130.39	-1025.22	-950.698	-861.963	-817.429	-771.05	-740.187	-701.593	-661.56	-613.602	-531.368	-510.48	-487.118	-469.117	-441.454
Pos 11											-1921.56	-1708.89	-1566.08	-1384.12	-1255.81	-1139.13	-1060.8	-981.637	-916.936	-820.202	-671.929	-644.09	-617.147	-583.381	-551.437
Pos 12												-1382.98	-1261.78	-1158.77	-1084.1	-1008.31	-947.693	-880.797	-843.984	-766.521	-659.801	-641.546	-612.421	-577.563	-542.729
Pos 13													-542.453	-507.137	-485.935	-468.084	-448.465	-428.176	-401.015	-385.98	-342.352	-323.607	-314.781	-295.354	-284.05
Pos 14														-1537.62	-1429.13	-1326.4	-1240	-1151.36	-1092.79	-989.013	-779.827	-747.612	-711.854	-667.365	-631.424
Pos 15															-746.592	-708.904	-662.166	-632.389	-607.101	-545.206	-522.267	-501.772	-483.923	-457.316	-443.258
Pos 16																-816.202	-777.926	-731.801	-682.758	-634.4	-577.538	-552.216	-517.836	-488.765	-477.697
Pos 17																	-832.143	-785.804	-738.872	-706.496	-616.846	-581.217	-574.218	-550.364	-516.764
Pos 18																		-510.404	-481.638	-434.765	-360.548	-344.455	-341.504	-327.317	-300.301
Pos 19																			-758.724	-705.614	-587.706	-561.488	-519.608	-484.402	-461.939
Pos 20																				-1348.83	-1199.72	-1116.48	-1066.29	-1021.61	-950.047
Pos 21																					-3936.62	-3674.47	-3440.93	-3253.29	-3048.65
Pos 22																						-741.658	-676.669	-655.638	-600.237
Pos 23																							-781.935	-764.309	-709.611
Pos 24																								-679.326	-647.488
Pos 25																									-664.557

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.10- Estimates of Component VaR@95% Confidence Level for Israel

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-40518	-17813.8	-9829.88	-7500.34	-5969.47	-5132.82	-4283.86	-3665.14	-3159.69	-2841.92	-2548.01	-2272.36	-2101.44	-1952.01	-1804.71	-1707.18	-1597.6	-1510.66	-1428.16	-1356.5	-1282.73	-1211.74	-1147.8	-1097.56	-1051.59
Pos 2		-17491.1	-9734	-7042.42	-5490.6	-4669.92	-3874.28	-3325.14	-3026.13	-2696.58	-2436.21	-2213.94	-2042.15	-1899.59	-1746.14	-1642.74	-1531.57	-1441.93	-1361.46	-1284.41	-1220.61	-1155.83	-1097.06	-1050.87	-1004.09
Pos 3			-26831.3	-18389	-13397.9	-8025.72	-6668.21	-5543.7	-4537.48	-3773.49	-3193.88	-2679.07	-2361.38	-2184.96	-2002.79	-1581.76	-1494.16	-1410.55	-1330.9	-1260.65	-1175.26	-1113.55	-1070.77	-1030.73	-980.416
Pos 4				-5789.84	-4564.64	-3827.88	-3266.06	-2841.57	-2461.42	-2212.3	-2036.84	-1783.25	-1656.73	-1537.51	-1426.32	-1351.83	-1263.51	-1196.7	-1125.1	-1069.75	-1017.42	-966.71	-923.869	-880.374	-844.132
Pos 5					-3989.31	-3249.84	-2660.53	-2241.85	-1943.4	-1745.18	-1596.62	-1391.1	-1298.35	-1208.03	-1094.29	-1030.09	-963.047	-909.625	-862.638	-813.903	-775.854	-745.459	-713.652	-684.223	-650.236
Pos 6						-5727.15	-4790.8	-4196.95	-3677.66	-3309.42	-3004.96	-2663.63	-2477.68	-2289.72	-2123.75	-2028.63	-1900.48	-1796.08	-1698.8	-1617.86	-1540.83	-1457.68	-1389.07	-1328.46	-1269.25
Pos 7							-3038.06	-2660.12	-2231.95	-1968.22	-1777.87	-1507.16	-1389.78	-1276.7	-1185.74	-1104.21	-1028.85	-966.81	-905.576	-867.4	-822.517	-766.501	-736.695	-697.697	-680.731
Pos 8								-2579.26	-2203.87	-1938.34	-1724.46	-1467.09	-1350	-1251.54	-1164.91	-1093.2	-1017.49	-965.161	-906.819	-870.187	-828.817	-790.311	-759.318	-724.55	-694.103
Pos 9									-3557.66	-3106.32	-2756.84	-2744.2	-2509.98	-2312.19	-2118.97	-1950.21	-1785.76	-1670.39	-1564.97	-1471.59	-1403.77	-1323.75	-1256.09	-1206.66	-1148.9
Pos 10										-2755.08	-2476.51	-2166.64	-1998.73	-1850.05	-1743.64	-1628.41	-1534.95	-1447.36	-1372.53	-1304.03	-1235.46	-1176.72	-1111.92	-1066.98	-1024.13
Pos 11											-2334.41	-2028	-1874.55	-1736.87	-1593.6	-1490.81	-1383.97	-1312.63	-1229.66	-1174.9	-1115.42	-1072.32	-1027.8	-979.505	-941.142
Pos 12												-3695.79	-3257.23	-2979.05	-2691.52	-2454.2	-2249.06	-2086.98	-1941.72	-1805.43	-1687.41	-1592.16	-1495.22	-1427.21	-1349.43
Pos 13													-1667.43	-1537.98	-1431.34	-1352.86	-1268.7	-1197.45	-1127.41	-1067.73	-1013.37	-955.617	-911.06	-871.732	-845.114
Pos 14														-583.794	-528.234	-481.632	-454.159	-433.405	-408.849	-383.354	-361.192	-351.745	-329.779	-317.84	-303.332
Pos 15															-1524.96	-1407.74	-1309.45	-1233.88	-1184.17	-1127.33	-1057.91	-952.341	-894.078	-841.466	-801.682
Pos 16																-1958.7	-1836.67	-1734.58	-1635.12	-1547.54	-1470.96	-1393.17	-1329.04	-1267.88	-1214.06
Pos 17																	-1358.71	-1269.14	-1204.63	-1144.84	-1072.77	-1015.56	-955.98	-919.612	-877.775
Pos 18																		-576.581	-549.562	-517.908	-490.14	-473.727	-466.553	-448.857	-431.761
Pos 19																			-641.927	-604.138	-568.316	-532.129	-506.719	-485.595	-463.796
Pos 20																				-739.446	-701.788	-659.168	-625.536	-596.528	-569.147
Pos 21																					-814.409	-757.653	-719.983	-686.51	-653.626
Pos 22																						-981.73	-924.84	-906.315	-870.117
Pos 23																							-516.145	-494.405	-475.416
Pos 24																								-419.603	-404.178
Pos 25																									-698.301

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.11- Estimates of Component VaR@95% Confidence Level for Italy

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-37436	-16102.4	-9508.58	-7507.66	-5828.88	-4651.91	-3862.55	-3295.01	-2813.76	-2496	-2231.24	-2001.98	-1829.4	-1698.93	-1594.64	-1490.7	-1403.27	-1335.11	-1286.15	-1236.63	-1170.77	-1112.21	-1055.12	-1012.45	-966.604
Pos 2		-15151.8	-9965.65	-6805.02	-5456.14	-4533.83	-3882.76	-3346.37	-2995.14	-2698.38	-2419.02	-2222.57	-2041.87	-1895.65	-1756.96	-1647.75	-1540.49	-1449.23	-1356.95	-1261.49	-1198.85	-1141.71	-1097.34	-1049.45	-1006.94
Pos 3			-11913.5	-7990.02	-6391.59	-5334.63	-4569.24	-3948.56	-3518.41	-3134.33	-2793.77	-2550.02	-2337.68	-2155.85	-2007.73	-1871.48	-1752.1	-1646.06	-1558.83	-1468.04	-1390.99	-1331.69	-1276.47	-1221.68	-1167.35
Pos 4				-9689.38	-7400.26	-5847.13	-4834.45	-4136.57	-3542.43	-3146.31	-2840.24	-2550.9	-2312.16	-2140.87	-2020.52	-1873.7	-1750.26	-1681.78	-1611.14	-1547.37	-1471.92	-1398.21	-1329.59	-1273.26	-1216.11
Pos 5					-4962.47	-4347.82	-3728.31	-3208.81	-2819.46	-2524.73	-2234.72	-2058.65	-1907.83	-1780.33	-1653.5	-1544.45	-1449.52	-1354.07	-1275.1	-1181.68	-1121.72	-1068.01	-1015.25	-970.693	-929.152
Pos 6						-4661.61	-4072.42	-3529.45	-3107.07	-2784.52	-2459.15	-2258.14	-2084.74	-1939.57	-1789.36	-1669.27	-1571.08	-1474.49	-1377.67	-1279.28	-1215.14	-1166.95	-1112.06	-1061.98	-1019.67
Pos 7							-3775.05	-3303.46	-2946.24	-2634.9	-2364.92	-2158.58	-1997.22	-1848.56	-1703.31	-1595.25	-1499.33	-1398.85	-1313.7	-1231.04	-1174.03	-1124.01	-1075.61	-1027.67	-984.527
Pos 8								-3116.32	-2735.6	-2433.69	-2301.16	-2088.6	-1926.89	-1780.74	-1628.1	-1519.87	-1431.13	-1352.68	-1264.15	-1180.98	-1130.68	-1074.6	-1025.46	-983.637	-942.764
Pos 9									-3475.7	-3108.1	-2759.38	-2529.51	-2318.03	-2141.21	-1978.75	-1846.27	-1723.05	-1619.82	-1520.49	-1416.31	-1346.32	-1288.14	-1225.77	-1173.13	-1122.28
Pos 10										-1351.76	-1194.92	-1085.76	-987.816	-913.42	-825.678	-775.662	-725.688	-682.51	-636.123	-583.039	-562.859	-536.732	-516.816	-493.97	-480.137
Pos 11											-2579.38	-2351.79	-2162.3	-2002.16	-1848.74	-1732.69	-1618.77	-1512.76	-1424.12	-1332.32	-1267.11	-1197.23	-1140.06	-1091.11	-1042.37
Pos 12												-1651.58	-1529.12	-1415.99	-1273.43	-1197.08	-1122.63	-1054.39	-968.242	-886.222	-850.21	-810.383	-775.263	-744.527	-711.386
Pos 13													-1374	-1283.71	-1166.24	-1095.14	-1040.4	-983.98	-911.248	-844.257	-807.041	-769.928	-740.691	-711.92	-686.359
Pos 14														-742.075	-685.967	-651.986	-616.063	-573.971	-544.368	-508.821	-484.658	-460.44	-442.831	-428.645	-415.401
Pos 15															-2041.54	-1903.78	-1774.22	-1656.34	-1581.05	-1532.53	-1450.52	-1385.95	-1318.61	-1261.78	-1203.4
Pos 16																-957.446	-906.197	-850.328	-799.72	-744.047	-710.137	-671.66	-644.004	-617.072	-604.232
Pos 17																	-1081.03	-1026.61	-971.281	-917.593	-878.338	-835.132	-800.162	-767.263	-740.192
Pos 18																		-1475.25	-1401.63	-1323.24	-1256.21	-1197.22	-1138.65	-1088.54	-1043.02
Pos 19																			-1324.36	-1332.11	-1252.67	-1187.27	-1135.18	-1082.13	-1029.93
Pos 20																				-1538.29	-1453.07	-1384.32	-1325.5	-1265.88	-1204.46
Pos 21																					-721.248	-689.027	-655.878	-631.526	-610.054
Pos 22																						-1112.21	-1058.38	-1013.71	-975.265
Pos 23																							-631.109	-609.291	-585.452
Pos 24																								-442.512	-427.389
Pos 25																									-644.077

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.12- Estimates of Component VaR@95% Confidence Level for Japan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-38875	-15817	-10183.1	-7468.2	-6087.26	-4995.52	-4225.35	-3672.76	-3197.7	-2881.75	-2592.85	-2352.45	-2170.61	-2040.33	-1892.34	-1776.24	-1651.69	-1557.9	-1471.36	-1385.97	-1318.33	-1261.1	-1198.09	-1150.2	-1096.73
Pos 2		-19088	-11271.7	-8029.92	-6021.71	-4902.88	-4258.65	-3709.58	-3371.65	-3034.79	-2759.66	-2533.1	-2297.1	-2109.37	-1970.93	-1839.59	-1735.62	-1634.01	-1539.35	-1464.93	-1389.25	-1326.29	-1261.39	-1199.21	-1152.73
Pos 3			-10818.4	-7647.54	-5912.97	-4739.43	-3849.94	-3294.74	-2834.2	-2503.62	-2177.73	-1963.4	-1804.18	-1678.97	-1544.83	-1443.79	-1335.3	-1258.54	-1181.68	-1111.31	-1056.21	-1017.47	-971.22	-932.896	-882.871
Pos 4				-9011.37	-7085.85	-5828.88	-5017.17	-4393.19	-3841.41	-3428.69	-3004.37	-2763.26	-2559.06	-2359.67	-2213.92	-2054.57	-1936.39	-1817.92	-1718.18	-1630.8	-1569.82	-1488.39	-1400.23	-1349.66	-1295.38
Pos 5					-6727.08	-5541.03	-4604.55	-3937.81	-3390.07	-3018.03	-2653.68	-2390.89	-2236.12	-2090.86	-1932.78	-1805.1	-1662	-1565.01	-1469.38	-1381.83	-1320.78	-1260.17	-1188.99	-1155.86	-1096.98
Pos 6						-3576.94	-2882.7	-2470.59	-2136.4	-1965.59	-1768.78	-1576.09	-1468.47	-1369.87	-1252.03	-1192.34	-1072.18	-1022.61	-956.127	-901.246	-859.823	-820.515	-783.051	-754.795	-713.946
Pos 7							-4818.22	-4239.02	-3783.26	-3340.52	-2986.24	-2770.68	-2542.98	-2328.98	-2198.9	-2031.41	-1950.65	-1822.93	-1734.76	-1656.71	-1575.96	-1491.46	-1407.12	-1341.62	-1298.37
Pos 8								-3325	-2953.03	-2653.26	-2364.03	-2193.98	-2011.46	-1864.1	-1751.4	-1635.62	-1544.25	-1451.59	-1368.03	-1303.85	-1240.94	-1182.19	-1118.88	-1068.91	-1028.57
Pos 9									-4313.19	-3828.38	-3440.51	-3183.34	-2910.19	-2665.27	-2501.87	-2322.02	-2190.84	-2051.28	-1940.82	-1855.02	-1762.63	-1684.06	-1601.49	-1528.47	-1473.92
Pos 10										-1080.93	-1028.28	-917.391	-835.882	-792.63	-715.362	-730.313	-647.79	-646.897	-593.116	-549.656	-518.17	-499.14	-489.209	-466.117	-435.828
Pos 11											-2861.65	-2579.59	-2355.9	-2183.16	-2010.84	-1891.53	-1765.59	-1671.35	-1584.73	-1493.38	-1415.16	-1351.17	-1347.57	-1275.72	-1220.1
Pos 12												-2660.45	-2441.67	-2243.69	-2129.4	-1982.23	-1879.91	-1767.55	-1671.74	-1610.65	-1533.64	-1459.63	-1382.57	-1316.26	-1272.26
Pos 13													-1932.48	-1812.81	-1666.07	-1556.23	-1440.31	-1354.45	-1267.97	-1191.55	-1138.02	-1092.1	-1038.43	-1010.47	-962.446
Pos 14														-1862.96	-1718.9	-1623.55	-1504.51	-1427.29	-1345.69	-1265.38	-1201.75	-1157.1	-1100.21	-1061.09	-1008.37
Pos 15															-2005.95	-1858.59	-1768.36	-1661.77	-1585.31	-1518.93	-1449.67	-1378.37	-1301.7	-1240.25	-1202.72
Pos 16																-724.699	-650.948	-646.502	-601.184	-554.945	-525.771	-505.642	-489.896	-470.244	-442.27
Pos 17																	-2091.73	-1948.86	-1868.66	-1786.46	-1696.14	-1595.07	-1501.35	-1422.93	-1386.89
Pos 18																		-525.453	-480.033	-444.012	-423.305	-411.281	-397.028	-382.644	-358.639
Pos 19																			-1899.37	-1802.51	-1706.32	-1620.21	-1548.11	-1471.02	-1429.16
Pos 20																				-1610.62	-1528.09	-1450.55	-1371.84	-1304.9	-1259.08
Pos 21																					-1251.42	-1196.84	-1135.42	-1091.06	-1044.92
Pos 22																						-1143.01	-1095.83	-1055.48	-1003.45
Pos 23																							-1303.77	-1240.34	-1179.63
Pos 24																								-1048.02	-985.308
Pos 25																									-1527.37

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.13- Estimates of Component VaR@95% Confidence Level for Mexico

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-39258	-16648	-10026.2	-7092.87	-5609.85	-4581.17	-3855.19	-3298.65	-2922.64	-2543.64	-2303.77	-2102.11	-1938.27	-1766.13	-1545.73	-1444.68	-1359.17	-1272.92	-1204.9	-1142.35	-1086.58	-997.939	-954.293	-911.505	-875.161
Pos 2		-18132	-11152.6	-8341.85	-6655.78	-5461.26	-4647.71	-4051.59	-3569.31	-3136.24	-2822.47	-2542.24	-2319.97	-2096.84	-1802.16	-1693.32	-1593.7	-1499.82	-1419.02	-1341.28	-1275.12	-1177.43	-1123.32	-1075.55	-1049
Pos 3			-6189.43	-3620.15	-2502.44	-1881.32	-1528.05	-1237.03	-1123.3	-1004.24	-919.115	-820.428	-765.412	-687.492	-621.854	-578.113	-545.592	-496.049	-474.279	-455.014	-436.547	-406.508	-390.121	-370.075	-327.817
Pos 4				-9605.68	-7606.19	-6212.92	-5318.42	-4627.17	-4086.08	-3588.46	-3230.22	-2957.7	-2709.01	-2475.76	-2090.67	-1949.15	-1837.43	-1735.87	-1644.54	-1559.2	-1484.06	-1366.06	-1305.03	-1258.03	-1219.05
Pos 5					-7136.58	-5870.57	-5021.69	-4368.6	-3852.92	-3375.58	-3036.65	-2776.83	-2540.9	-2313.59	-1992.22	-1858.93	-1744.13	-1655.39	-1564.75	-1481.38	-1407.14	-1308.91	-1249.42	-1198.57	-1158.89
Pos 6						-4186.81	-3541.04	-3082.61	-2734.13	-2418.06	-2179.91	-1960.24	-1791.46	-1631.52	-1376.48	-1289.81	-1216.77	-1136.03	-1075.79	-1019.27	-969.753	-876.746	-835.348	-804.429	-759.998
Pos 7							-3730.38	-3238.5	-2867.96	-2517.12	-2279	-2080.59	-1913.15	-1750	-1527.85	-1417.55	-1340.57	-1264.22	-1199.25	-1137.66	-1084.19	-995.476	-953.774	-921.289	-898.45
Pos 8								-3433.79	-3052.41	-2702.37	-2444.54	-2221.29	-2030.26	-1851.47	-1635.41	-1523.63	-1438.41	-1340.52	-1272.07	-1207.66	-1151.31	-1077.3	-1028.38	-986.348	-942.628
Pos 9									-727.432	-658.454	-610.569	-555.49	-525.073	-485.744	-438.861	-415.706	-398.575	-380.588	-367.178	-353.356	-341.864	-323.396	-313.485	-300.385	-283.252
Pos 10										-1937.18	-1726.75	-1510.54	-1395.66	-1323.4	-1047.6	-999.488	-941.331	-887.052	-840.783	-790.987	-753.29	-694.366	-664.232	-640.424	-605.516
Pos 11											-984.183	-867.891	-827.001	-757.724	-688.25	-645.244	-605.343	-545.74	-522.065	-500.171	-480.225	-449.17	-432.248	-404.992	-368.679
Pos 12												-1950.16	-1783.08	-1632.14	-1364.44	-1278.04	-1199.74	-1140.97	-1080.3	-1028.24	-978.049	-899.301	-861.926	-825.437	-799.006
Pos 13													-689.722	-636.214	-513.312	-491.899	-466.137	-428.199	-413.037	-398.146	-385.102	-362.201	-351.965	-338.073	-317.009
Pos 14														-1409.61	-1192.24	-1125.37	-1051.85	-989.963	-935.383	-885.456	-840.825	-766.377	-735.751	-712.124	-659.258
Pos 15															-2017.78	-1855.89	-1730.75	-1610.63	-1512.94	-1423.3	-1343.83	-1248.83	-1187.06	-1119.91	-1082.38
Pos 16																-977.007	-916.544	-855.833	-813.562	-773.345	-738.305	-691.366	-664.174	-636.804	-606.82
Pos 17																	-926.133	-868.193	-828.315	-794.441	-761.101	-715.711	-687.244	-660.726	-627.807
Pos 18																		-1295.47	-1223.93	-1156.66	-1098.11	-1026.13	-982.58	-942.936	-905.129
Pos 19																			-334.929	-323.798	-314.254	-294.506	-285.257	-276.401	-260.817
Pos 20																				-503.202	-483.826	-452.758	-436.996	-423.41	-394.398
Pos 21																					-314.254	-294.506	-285.257	-276.401	-260.817
Pos 22																						-1130.49	-1071.61	-1002.73	-919.721
Pos 23																							-395.275	-380.964	-366.59
Pos 24																								-900.13	-864.81
Pos 25																									-1399.17

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.14- Estimates of Component VaR@95% Confidence Level for New Zealand

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-31955	-13080.1	-8218.45	-5615.96	-4435.9	-3660.32	-3086.24	-2667.56	-2350.36	-2107.19	-1891.93	-1731.86	-1574.89	-1462.59	-1355.71	-1240.84	-1158.39	-1081.09	-1007.31	-951.809	-890.892	-841.891	-801.206	-761.486	-727.836
Pos 2		-18309.6	-11213.6	-7746.57	-6009.41	-4818.26	-4038.19	-3501.81	-3063.87	-2709.73	-2411.97	-2193.2	-1971.7	-1814.88	-1671.95	-1532.38	-1441.96	-1334.08	-1237.48	-1168.26	-1088.23	-1034.38	-987.105	-940.228	-904.115
Pos 3			-8159.1	-5317.4	-4291.37	-3511.71	-2989	-2578.06	-2279.55	-2030.17	-1825.42	-1663.1	-1512.42	-1395.86	-1297.32	-1183.95	-1099.23	-1013.07	-934.993	-887.385	-838.746	-797.639	-763.043	-719.099	-689.615
Pos 4				-10577.3	-8137.24	-6594.27	-5468.34	-4679.7	-4085.36	-3574.25	-3207.88	-2882.25	-2572.2	-2340.85	-2160.85	-1966.61	-1863.86	-1726.1	-1630.83	-1537.81	-1445.86	-1373.18	-1307.26	-1246.18	-1189.81
Pos 5					-3191.46	-2633	-2259.04	-1948.75	-1740.29	-1542.31	-1403.32	-1278.97	-1151.51	-1074.23	-1016.93	-951.82	-895.725	-837.684	-784.453	-750.534	-717.476	-682.651	-652.498	-618.08	-596.112
Pos 6						-2601.46	-2244.85	-1914.34	-1696.71	-1517.58	-1376.6	-1245.82	-1143.59	-1059.97	-985.606	-888.801	-839.08	-783.094	-729.823	-691.262	-656.015	-626.482	-596.922	-571.556	-547.686
Pos 7							-2277	-1979.33	-1767.84	-1596.73	-1454.87	-1335.4	-1210.22	-1118.65	-1039.17	-969.664	-907.025	-835.07	-785.153	-747.481	-713.426	-681.121	-650.489	-625.34	-601.983
Pos 8								-2543.81	-2263.92	-2048.98	-1847.12	-1680.92	-1521	-1412.99	-1309.66	-1182.24	-1112.02	-1052.38	-971.047	-919.987	-871.941	-828.644	-789.341	-756.373	-724.71
Pos 9									-1780.23	-1604.99	-1464.74	-1338.32	-1206.88	-1123.64	-1047.27	-962.512	-902.468	-851.449	-796.591	-751.02	-718.264	-687.648	-656.375	-622.294	-601.648
Pos 10										-1668.07	-1525.95	-1400.29	-1275.68	-1178.52	-1098.99	-1008.02	-941.726	-882.127	-834.304	-792.255	-752.595	-722.542	-692.208	-668.861	-643.133
Pos 11											-1435.65	-1318.38	-1200.75	-1120.98	-1049.46	-960.238	-895.749	-832.722	-765.913	-731.069	-696.544	-666.772	-635.666	-609.55	-585.56
Pos 12												-1361.17	-1209.75	-1120.45	-1041.97	-945.177	-899.214	-833.345	-770.711	-731.914	-687.12	-655.498	-630.349	-598.795	-576.912
Pos 13													-1755.84	-1605.11	-1466.21	-1374.27	-1250.94	-1164.68	-1096.47	-1038.7	-965.897	-911.661	-860.053	-821.954	-782.462
Pos 14														-892.72	-842.763	-773.531	-724.922	-672.25	-630.72	-599.114	-572.664	-541.713	-518.62	-493.686	-473.629
Pos 15															-986.951	-918.567	-863.886	-806.48	-750.724	-713.071	-674.299	-648.628	-618.53	-590.841	-569.125
Pos 16																-1431.55	-1291.67	-1189.96	-1118.84	-1052.89	-989.601	-917.766	-870.254	-807.196	-769.152
Pos 17																	-1129.47	-1067.44	-998.891	-945.741	-895.841	-855.101	-822.429	-774.074	-745.249
Pos 18																		-1288.01	-1181.43	-1114.6	-1022.32	-953.668	-908.084	-853.124	-815.972
Pos 19																			-1201.01	-1137.25	-1053.14	-985.698	-936.257	-883.009	-834.546
Pos 20																				-758.365	-707.457	-671.161	-638.304	-604.372	-581.713
Pos 21																					-920.104	-874.429	-839.418	-783.295	-753.242
Pos 22																						-657.644	-623.353	-594.941	-567.043
Pos 23																							-705.488	-675.787	-648.388
Pos 24																								-686.817	-650.382
Pos 25																									-461.167

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Table G1.15- Estimates of Component VaR@95% Confidence Level for Singapore

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-38609	-17121	-11036.4	-7918.24	-6105.64	-4931.74	-4165.2	-3594.18	-3122.97	-2761.1	-2480.85	-2265.52	-2079.62	-1916.28	-1775.59	-1645.54	-1547.1	-1455.29	-1379.63	-1297.69	-1231.46	-1168.31	-1120.79	-1059.74	-1013.76
Pos 2		-18137	-11425	-8305.64	-6398.28	-5229.5	-4417.29	-3812.69	-3331.51	-2948.64	-2654.87	-2425.81	-2215.32	-2050.55	-1902.16	-1763.27	-1646.38	-1534.04	-1443.78	-1359.57	-1277.57	-1209	-1152.73	-1093.02	-1043
Pos 3			-10810.4	-7752.74	-6041.7	-4941.67	-4188.82	-3629.62	-3177.94	-2825.77	-2509.01	-2294.49	-2104.21	-1942.99	-1805.89	-1679.64	-1575.09	-1483.48	-1407.46	-1318.14	-1244.87	-1179.78	-1131.67	-1073.2	-1029.84
Pos 4				-6531.84	-5094.53	-4242.43	-3614.5	-3093.62	-2682.36	-2421.29	-2208.77	-2020.14	-1854.28	-1716.86	-1587.62	-1484.65	-1389.19	-1304.66	-1228.6	-1163.57	-1100.17	-1034.86	-985.734	-934.988	-897.627
Pos 5					-5133.01	-4162.76	-3456.61	-2915.18	-2505.58	-2249.6	-2020.12	-1862.61	-1698.23	-1574	-1470.34	-1367.79	-1276.33	-1188.58	-1115.98	-1049.5	-992.141	-937.007	-893.694	-856.861	-819.515
Pos 6						-3368.8	-2825.45	-2327.11	-1977.56	-1755.56	-1578.11	-1457.93	-1334.76	-1261.04	-1182.1	-1109.48	-1039.61	-980.374	-926.612	-881.127	-834.314	-784.705	-748.599	-709.506	-681.108
Pos 7							-3173.68	-2768.47	-2475.32	-2236.64	-2031.63	-1847.19	-1693.67	-1568.39	-1453.99	-1365.93	-1285.41	-1213.2	-1151.21	-1099.05	-1041.2	-1003.46	-961.408	-931.85	-895.728
Pos 8								-4654.82	-4261.85	-3803.14	-3417.31	-3109.89	-2820.09	-2603.92	-2417.93	-2259.46	-2133.77	-2006.43	-1887.4	-1786.03	-1689.99	-1628.12	-1555.19	-1476.82	-1411.88
Pos 9									-3744.14	-3344.08	-3020.62	-2736.01	-2497.84	-2301.22	-2131.19	-1975.88	-1876.38	-1776.36	-1672.93	-1590.98	-1511.55	-1478.21	-1411.97	-1341.59	-1280.31
Pos 10										-2160.89	-1931.32	-1752.39	-1599.36	-1487.8	-1380.29	-1293.41	-1215.04	-1143.85	-1071.65	-1027.45	-977.972	-922.308	-877.317	-838.716	-806.592
Pos 11											-2741.24	-2498.5	-2294.69	-2134.92	-1965.04	-1832.93	-1729.16	-1642.22	-1555.5	-1470.24	-1406.59	-1339.94	-1274.11	-1218.96	-1169.6
Pos 12												-204.357	-177.993	-171.983	-158.111	-142.262	-116.943	-104.441	-93.5567	-83.9021	-77.4366	-68.0425	-62.8765	-56.7358	-54.006
Pos 13													-1661.05	-1525.2	-1425.4	-1338.2	-1267.28	-1200.8	-1130.62	-1055.21	-999.348	-949.059	-906.517	-870.929	-828.18
Pos 14														-814.707	-756.995	-701.425	-654.428	-622.143	-588.645	-557.857	-531.189	-503.779	-479.935	-460.622	-443.743
Pos 15															-687.089	-636.735	-582.752	-552.557	-518.041	-472.786	-442.892	-414.386	-391.188	-363.112	-346.874
Pos 16																-881.177	-824.236	-773.193	-730.773	-686.155	-654.034	-610.811	-584.814	-552.862	-530.371
Pos 17																	-1125.95	-1073.91	-1016.13	-960.984	-930.857	-898.733	-860.924	-823.322	-789.809
Pos 18																		-1258.54	-1206.72	-1139.41	-1108.28	-1061	-1014.35	-967.912	-938.722
Pos 19																			-1150.77	-1084.72	-1029.62	-977.725	-931.3	-889.347	-860.053
Pos 20																				-1261.58	-1197.6	-1125.17	-1069.17	-1024.94	-984.351
Pos 21																					-928.151	-885.758	-847.898	-804.542	-777.747
Pos 22																						-1527.02	-1461.33	-1392.35	-1331.53
Pos 23																							-747.38	-712.656	-680.443
Pos 24																								-1201.05	-1149.19
Pos 25																									-615.335

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.16- Estimates of Component VaR@95% Confidence Level for South Africa

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-43237	-15270.3	-9249.85	-7019.37	-5427.6	-4399.16	-3685.53	-3167.07	-2873.45	-2451.32	-2203.34	-2016.81	-1870.96	-1733.33	-1619.96	-1519.4	-1431.56	-1339.83	-1259.43	-1212.26	-1147.91	-1092.3	-1028.91	-985.485	-945.136
Pos 2		-18313.7	-10454.2	-6782.19	-4573.96	-3615.82	-2846.05	-2252.36	-1958.14	-2376.96	-2066.73	-1816.22	-1618.36	-1436.45	-1303.44	-1192.87	-1112.27	-1016.59	-944.486	-885.547	-826.806	-785.469	-829.892	-786.505	-743.843
Pos 3			-10622.1	-7546.77	-5664.79	-5151.06	-4154.16	-3451.97	-3055.42	-2691.39	-2401.47	-2181.3	-1992.51	-1829.5	-1682.29	-1562.28	-1450.9	-1357.06	-1274.77	-1209.13	-1137.41	-1082.23	-1037.4	-986.549	-940.416
Pos 4				-6839.23	-6160.92	-4794.54	-4424.79	-3996.94	-3468.4	-2875.09	-2680.01	-2488.61	-2306.01	-2165.05	-2027.22	-1907.68	-1798.48	-1702.16	-1611.04	-1519.01	-1454	-1385.38	-1294.97	-1244.55	-1192.87
Pos 5					-6243.84	-4845.79	-4409.6	-4001.62	-3521.62	-2940.38	-2721.93	-2536.28	-2357.85	-2217.8	-2078.45	-1954.28	-1837.69	-1744.21	-1656.68	-1561.85	-1486.92	-1417.61	-1328.17	-1274.03	-1223.6
Pos 6						-5221.45	-4171.11	-3414.69	-3037.35	-2689.65	-2394.72	-2162.95	-1961.94	-1797.25	-1651.53	-1537.18	-1428.44	-1328.93	-1244.19	-1185.67	-1119.21	-1064.63	-1023.12	-974.553	-932.524
Pos 7							-4221.91	-3815.38	-3309.54	-2766.6	-2585.25	-2410.59	-2240.4	-2105.15	-1975.66	-1852.15	-1745.66	-1654.88	-1566.09	-1476.21	-1410.47	-1345.86	-1262.09	-1210.59	-1161.36
Pos 8								-3949.61	-3454.5	-2851.86	-2637.1	-2442.62	-2270.86	-2134.89	-2007.85	-1890.47	-1782.6	-1682.64	-1594.53	-1493.19	-1423.27	-1357.18	-1267.44	-1214.87	-1163.92
Pos 9									-3209.68	-2762.92	-2468.38	-2245.39	-2066.73	-1913.28	-1779.82	-1668.18	-1561.74	-1466.53	-1391.11	-1345.57	-1265.23	-1201.66	-1139.86	-1090.48	-1041.41
Pos 10										-2547.89	-2156.87	-1850.53	-1629.82	-1425.13	-1264.09	-1145.37	-1065.05	-965.427	-890.973	-823.758	-764.61	-726.989	-793.223	-746.554	-708.575
Pos 11											-2539.97	-2344.53	-2185.54	-2034.09	-1902.67	-1772.75	-1666.05	-1571.31	-1487.71	-1404.09	-1404.38	-1338.71	-1259.3	-1204.7	-1157.04
Pos 12												-2153.85	-2014.52	-1896.26	-1791.61	-1685.4	-1592.05	-1510.45	-1431.66	-1355.66	-1286.67	-1227.69	-1155.92	-1108.01	-1066.08
Pos 13													-2023.66	-1889.55	-1773.62	-1664.98	-1570.15	-1496.28	-1416.11	-1335.83	-1276.92	-1220.39	-1148.4	-1100.4	-1056.91
Pos 14														-2108.1	-1988.94	-1871.31	-1761.77	-1674.29	-1584.69	-1496.16	-1424.42	-1360.95	-1281.67	-1230.06	-1181.74
Pos 15															-1640.86	-1544.61	-1466.55	-1399.01	-1334.95	-1269.66	-1206.19	-1153.95	-1084.42	-1042.9	-1004.45
Pos 16																-1781.29	-1674.58	-1580.68	-1502.52	-1425.26	-1349.15	-1283.42	-1217.5	-1167.44	-1121.24
Pos 17																	-1126.96	-1068.34	-1014.16	-955.657	-908.137	-866.959	-828.988	-798.686	-769.481
Pos 18																		-1531.71	-1452.7	-1368.47	-1294.43	-1239.06	-1160.55	-1109.83	-1069.29
Pos 19																			-1170.05	-1109.12	-1051.57	-1005.36	-947.27	-909.166	-868.817
Pos 20																				-1559.46	-1465.45	-1396.85	-1319.6	-1256.71	-1205.23
Pos 21																					-1269.12	-1211.75	-1145.84	-1099.78	-1056.36
Pos 22																						-762.067	-724.525	-699.789	-674.737
Pos 23																							-882.341	-839.663	-800.289
Pos 24																								-872.398	-840.667
Pos 25																									-972.642

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.17- Estimates of Component VaR@95% Confidence Level for South Korea

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-60815	-25884.2	-16855.6	-12176.6	-9681.56	-8196.5	-7394.82	-6296.12	-5348.28	-4853.31	-4353.54	-3953.55	-3550.19	-3228.01	-3004.61	-2785.32	-2577.5	-2431.47	-2262.99	-2145.45	-2033.44	-1871.67	-1789.06	-1713.49	-1644.63
Pos 2		-27608.3	-16861.7	-12147.7	-9181.71	-7478.29	-6280.6	-5393.05	-4589.6	-4129.79	-3723.22	-3386.36	-3005.33	-2735.98	-2561.69	-2371.51	-2179.84	-2089.05	-1945.45	-1843.76	-1738.61	-1601.35	-1528.26	-1473.25	-1417.2
Pos 3			-13107	-9691.28	-7681.77	-6229.83	-5179.1	-4508.51	-3842.02	-3408.68	-3089.14	-2829.55	-2555.65	-2353.42	-2200.32	-2030.23	-1868.28	-1777.92	-1665.21	-1585.76	-1513.77	-1422.13	-1356.4	-1297.66	-1246.85
Pos 4				-8962.97	-6985.49	-5636.87	-4630.17	-4066	-3423.06	-3042.01	-2760.79	-2522.7	-2257.81	-2077.64	-1954.01	-1811.14	-1667.81	-1580.3	-1483.16	-1416.86	-1351.79	-1258.3	-1199.55	-1154.75	-1112.58
Pos 5					-9747.25	-8057.28	-6786.29	-5960	-5257.93	-4719.2	-4289.85	-3939.11	-3607.93	-3318.18	-3088.14	-2899.68	-2715.63	-2568.01	-2420.03	-2301.79	-2191.1	-2072.89	-1980.35	-1893.42	-1812.86
Pos 6						-6794.53	-5810.73	-5037.61	-4358.6	-4010.64	-3660.5	-3360.75	-3036.9	-2776.42	-2581.86	-2405.19	-2237.57	-2118.67	-1989.17	-1882.8	-1792.76	-1676.78	-1605.58	-1543.96	-1479.92
Pos 7							-7968.17	-6773.5	-5682.46	-5183.53	-4663.83	-4247.21	-3816.55	-3460.7	-3194.38	-2971.69	-2761.31	-2611.07	-2429.93	-2297.45	-2181.75	-2035.07	-1950.04	-1865.53	-1788.61
Pos 8								-5100.2	-4465.57	-3965.37	-3670.61	-3363.47	-3237.55	-3153.71	-2945.2	-2801.18	-2651.13	-2492.58	-2426.29	-2300.25	-2185.95	-2055.86	-1957.03	-1874.4	-1799.08
Pos 9									-4648.19	-4049.93	-3654.24	-3337.19	-3080.64	-2797.23	-2610.03	-2425.58	-2256.86	-2099.73	-1959.51	-1858.86	-1765.19	-1654.33	-1585.84	-1518.9	-1455.88
Pos 10										-4562.55	-4110.02	-3759.22	-3404.11	-3109.67	-2889.76	-2700.38	-2520.93	-2388.88	-2235.07	-2112.24	-2009.99	-1860.1	-1781.07	-1704.4	-1633.06
Pos 11											-3640.53	-3346.18	-3057.52	-2864.05	-2664.53	-2531.76	-2385.16	-2249.6	-2132.74	-2015.08	-1916.32	-1811.38	-1727.63	-1653.72	-1580.54
Pos 12												-3094.95	-2826.93	-2619.99	-2441.5	-2278.18	-2113.55	-2002.18	-1890.28	-1816.16	-1744.77	-1641.1	-1568.77	-1534.57	-1477.77
Pos 13													-3616.18	-3453.63	-3169.16	-2994.76	-2868.82	-2684.79	-2585.28	-2451.65	-2323.22	-2232.53	-2129.2	-2033.27	-1943.02
Pos 14														-3278.9	-3046.75	-2893.53	-2746.3	-2591.63	-2525.12	-2393.17	-2264.67	-2154.26	-2051.97	-1961.77	-1877.51
Pos 15															-1568.58	-1438.47	-1317.36	-1251.97	-1178.29	-1129.49	-1092.26	-1006.49	-955.097	-912.849	-888.566
Pos 16																-3426.05	-3331.51	-3125.12	-2973.37	-2810.98	-2663.8	-2541.21	-2435.7	-2324.76	-2223.37
Pos 17																	-3705.89	-3481.63	-3304.27	-3121.71	-2962.56	-2853.27	-2736.42	-2611.09	-2501.4
Pos 18																		-2319.87	-2185.79	-2076.54	-1983.14	-1839.37	-1769.7	-1703.53	-1630.46
Pos 19																			-2394.18	-2279.27	-2166.03	-2050.3	-1954.36	-1871.29	-1792.95
Pos 20																				-1308.48	-1248.72	-1176.28	-1123.41	-1092.84	-1061.98
Pos 21																					-1995.34	-1859.15	-1779.93	-1705.26	-1638.68
Pos 22																						-2458.69	-2353.34	-2239.54	-2141.8
Pos 23																							-2161.65	-2073.71	-1988.48
Pos 24																								-1432.71	-1380.7
Pos 25																									-1141.08

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.18- Estimates of Component VaR@95% Confidence Level for Spain

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-41409	-18868	-11850.6	-8525.52	-6641.9	-5346.34	-4481.6	-3813.05	-3296.2	-2932.25	-2638.21	-2362.62	-2149.14	-1975.33	-1841.57	-1702.07	-1598.9	-1533.98	-1442.41	-1366.5	-1291.76	-1242.16	-1215.42	-1155.08	-1098.71
Pos 2		-18175.9	-12247.8	-9009.53	-7139.6	-5818.47	-4925.98	-4208.42	-3677.89	-3289.14	-2964.48	-2711.71	-2482.75	-2292.37	-2128.09	-1979.56	-1864.13	-1756.07	-1653.66	-1562.36	-1472.38	-1403.14	-1338.24	-1276.45	-1216
Pos 3			-11874.8	-8729.44	-6855.1	-5600.16	-4770.26	-4071.54	-3529.67	-3141.98	-2820.44	-2571.39	-2346.51	-2163.58	-2000.15	-1859.22	-1752.45	-1660.76	-1571.86	-1482.05	-1395.04	-1330.17	-1270.9	-1212.22	-1155.64
Pos 4				-5157.81	-4083	-3383.92	-2902.97	-2528.76	-2215.8	-2005.87	-1800.58	-1624.55	-1485.57	-1359.45	-1240.04	-1153.35	-1075.89	-1000.13	-941.528	-894.831	-847.612	-806.095	-755.42	-722.393	-690.579
Pos 5					-4054	-3543.32	-3003.47	-2637.25	-2344.47	-2095.27	-1884.82	-1701.33	-1590.39	-1472.15	-1358.77	-1266.46	-1188.02	-1112.52	-1041.18	-992.868	-943.405	-894.477	-849.967	-812.017	-775.035
Pos 6						-2133.92	-1829.39	-1630.29	-1470.26	-1315.78	-1197.57	-1084.53	-1024.36	-949.836	-870.959	-819.948	-770.755	-715.083	-669.492	-638.345	-606.381	-576.136	-537.525	-517.051	-497.055
Pos 7							-2596.24	-2245.06	-1996.21	-1807.75	-1652.24	-1503.93	-1377.21	-1269.82	-1185.86	-1107.08	-1047.06	-987.347	-944.06	-892.815	-848.147	-806.271	-756.293	-723.267	-696.851
Pos 8								-2632.08	-2344.27	-2086.94	-1878.21	-1720.64	-1592.26	-1469.59	-1370.4	-1283.92	-1193.52	-1114.7	-1053.55	-1008.73	-959.01	-915.48	-860.359	-822.46	-786.666
Pos 9									-1771.36	-1578.67	-1440.93	-1287.63	-1189.68	-1090.58	-998.137	-946	-872.202	-810.42	-760.913	-729.152	-697.167	-655.795	-611.093	-586.51	-563.411
Pos 10										-1277.24	-1163.46	-1069.3	-977.818	-907.8	-835.976	-791.249	-735.957	-688.573	-656.922	-624.478	-604.027	-568.417	-542.242	-523.399	-508.754
Pos 11											-878.776	-800.092	-725.503	-665.856	-616.56	-596.114	-549.939	-517.083	-492.055	-469.047	-451.008	-427.509	-400.819	-390.517	-379.029
Pos 12												-1732.15	-1573.38	-1456.16	-1375.93	-1288.35	-1201.42	-1119.51	-1060.39	-999.857	-945.391	-914.562	-859.148	-824.323	-791.132
Pos 13													-1415.11	-1309.68	-1215.24	-1141.57	-1059.42	-988.845	-922.975	-879.063	-837.814	-790.577	-740.483	-709.749	-679.434
Pos 14														-1381.72	-1290.74	-1212.76	-1147.54	-1078.22	-1017.39	-958.186	-908.371	-858.616	-811.927	-778.657	-742.521
Pos 15															-1122.61	-1045.44	-972.586	-922.521	-867.638	-821.069	-774.184	-746.461	-723.78	-695.784	-666.038
Pos 16																-597.766	-550.857	-506.297	-489.452	-471.42	-459.918	-431.699	-400.403	-391.28	-379.495
Pos 17																	-1119.82	-1045.2	-983.903	-924.784	-874.355	-832.077	-793.929	-758.821	-727.402
Pos 18																		-1272.2	-1199.03	-1125.45	-1062.74	-1017.63	-978.173	-935.579	-894.073
Pos 19																			-1036.39	-980.14	-935.323	-891.367	-844.531	-808.575	-780.396
Pos 20																				-812.298	-775.273	-736.152	-696.098	-667.983	-644.089
Pos 21																					-566.818	-529.256	-493.526	-477.085	-462.783
Pos 22																						-977.114	-936.82	-895.626	-857.741
Pos 23																							-1008.36	-962.44	-921.275
Pos 24																								-250.236	-246.281
Pos 25																									-313.204

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.19- Estimates of Component VaR@95% Confidence Level for Sweden

Pos/Por	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-47541	-17467.9	-11610.7	-8486.74	-6657.21	-5393.95	-4567.92	-3977.29	-3428.73	-3063.17	-2760.96	-2492.26	-2291.98	-2114.29	-1934.99	-1800.11	-1686.43	-1578.77	-1486.46	-1409.82	-1351.78	-1286.88	-1231.2	-1184.45	-1134.06
Pos 2		-33154.1	-21228.5	-15488.3	-11987.9	-9569.52	-8046.08	-6845.59	-5936.44	-5389.14	-4893.96	-4415.47	-4033.69	-3814.69	-3488.02	-3241.05	-3041.76	-2839.27	-2669.61	-2527.36	-2419.04	-2295.74	-2197.23	-2093.31	-1995.96
Pos 3			-6781.36	-5107.2	-4234.17	-3574.73	-3080.06	-2672.07	-2371.84	-2147.43	-1941.49	-1773.73	-1649.65	-1523.48	-1417.74	-1327.81	-1252.65	-1178.44	-1111.35	-1055.55	-1001	-955.28	-909.822	-869.365	-830.088
Pos 4				-6014.38	-4822	-4026.92	-3412.87	-2975.35	-2624.9	-2354.3	-2107.89	-1933.37	-1781.61	-1644.01	-1523.07	-1421.13	-1331.89	-1265.41	-1194.07	-1131.24	-1079.94	-1031.72	-990.387	-946.661	-909.198
Pos 5					-4595.18	-3978.05	-3488.57	-2996.61	-2817.83	-2528.63	-2256.33	-2124.38	-1969.66	-1809.07	-1735.88	-1635.21	-1532.43	-1454.34	-1371.11	-1298.53	-1219.55	-1164.31	-1097.66	-1047.25	-996.491
Pos 6						-4970.9	-4283.66	-3713.11	-3358.49	-3000.93	-2660.89	-2457.4	-2283.06	-2090.06	-1968.56	-1849.82	-1732.86	-1638.04	-1548.54	-1469.95	-1393.38	-1332.76	-1263.18	-1203.87	-1148.36
Pos 7							-2822.32	-2400.09	-2170.72	-1962.19	-1734.74	-1605.45	-1489.2	-1383.22	-1297.02	-1246.24	-1176.77	-1117.11	-1051.31	-1002.59	-942.375	-902.802	-846.762	-810.665	-773.176
Pos 8								-3567.98	-3101.1	-2755.59	-2490.77	-2244.5	-2055.02	-1891.42	-1737.31	-1603.75	-1500.07	-1417.34	-1328.84	-1257.46	-1203.57	-1144.75	-1096.38	-1053.37	-1001.67
Pos 9									-3305.17	-2957.87	-2619.54	-2446.71	-2260.48	-2072.14	-2064.57	-1934.38	-1808.12	-1714.96	-1620.73	-1537.09	-1447.08	-1381.89	-1305.19	-1242.6	-1182.65
Pos 10										-2701.32	-2459.73	-2245.7	-2072.65	-1941.88	-1796.98	-1687.69	-1594.17	-1496.47	-1416.19	-1347.25	-1283.39	-1225.07	-1170.22	-1120.53	-1075.01
Pos 11											-4727.43	-4296.57	-3949.16	-3667.35	-3375.5	-3137.26	-2934.82	-2754.92	-2589.94	-2451.85	-2349.73	-2234.42	-2134.34	-2034.94	-1945.01
Pos 12												-2229.93	-2057.82	-1894.14	-1790.3	-1679.73	-1574.09	-1500.63	-1423.1	-1348	-1277.45	-1220.52	-1158.69	-1105.99	-1056.87
Pos 13													-1730.14	-1594.57	-1485.8	-1403.14	-1314.96	-1242.95	-1180.11	-1125.73	-1063.76	-1019.55	-962.787	-925.432	-886.528
Pos 14														-2082.65	-1910.78	-1787.72	-1686.23	-1583.91	-1500.09	-1425.58	-1362.19	-1295.71	-1239.21	-1189.51	-1138.12
Pos 15															-2158.88	-2024.88	-1889.89	-1790.96	-1693.09	-1604.98	-1511.71	-1443.31	-1362.16	-1296.85	-1233.83
Pos 16																-1389.29	-1313.65	-1241.09	-1172.33	-1123.89	-1063.21	-1014.4	-953.916	-914.255	-873.94
Pos 17																	-1221.55	-1156.01	-1091.54	-1041.67	-992.147	-947.922	-887.342	-853.957	-823.675
Pos 18																		-1351.01	-1288.19	-1221.22	-1153.6	-1104.96	-1052.35	-1011.58	-968.619
Pos 19																			-946.592	-898.007	-856.148	-820.747	-787.146	-756.958	-727.567
Pos 20																				-656.5	-623.435	-596.378	-568.685	-551.827	-535.16
Pos 21																					-1553.92	-1480.24	-1423.83	-1362.59	-1310.18
Pos 22																						-897.753	-855.323	-821.786	-793.799
Pos 23																							-1679.49	-1605.55	-1541.93
Pos 24																								-517.152	-505.169
Pos 25																									-540.441

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 -Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.20- Estimates of Component VaR@95% Confidence Level for Switzerland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-27096	-12073.6	-7436.7	-5524.03	-4102.52	-3390.16	-2805.32	-2431.21	-2082.16	-1840.06	-1652.14	-1458.92	-1349.27	-1218.67	-1138.6	-1071.89	-1004.29	-945.877	-899.381	-843.66	-801.877	-767.304	-726.885	-693.099	-665.593
Pos 2		-11729.7	-7055.87	-5148.13	-3779.47	-3103.82	-2560.5	-2196.83	-1883.16	-1671.58	-1485.6	-1333.64	-1237.47	-1140.1	-1065.56	-1003.09	-942.141	-889.92	-847.277	-781.416	-747.515	-715.654	-671.252	-639.106	-616.694
Pos 3			-10154.9	-7361.75	-6167.47	-5026.69	-4224.09	-3663.7	-3259.94	-2891.05	-2598.28	-2359.04	-2160.64	-1979.18	-1850.77	-1740.02	-1631.67	-1544.46	-1459.89	-1389.35	-1317.54	-1253.67	-1208.31	-1157.51	-1106.29
Pos 4				-5472.91	-4156.25	-3372.89	-2814.09	-2449.05	-2128.63	-1889.98	-1710.27	-1534.94	-1412.15	-1288.04	-1205.53	-1131.7	-1065.09	-1009.52	-959.804	-905.744	-862.586	-825.248	-781.341	-748.134	-719.028
Pos 5					-7608.19	-6219.7	-5256.18	-4569.66	-4066.51	-3609.57	-3241.24	-2952.15	-2705.99	-2456.13	-2296.18	-2163.49	-2022.73	-1915.58	-1809.22	-1719.57	-1623.68	-1541.8	-1485.75	-1424.42	-1361.33
Pos 6						-5227.43	-4454.27	-3815.58	-3342.49	-2986.06	-2676.78	-2399.32	-2210.87	-2027.59	-1882.13	-1786.91	-1670.67	-1576.13	-1493.45	-1402.72	-1331.61	-1267.5	-1201.23	-1147.66	-1099.22
Pos 7							-5935.27	-5145.59	-4513.85	-3993.95	-3594.24	-3235.92	-2963.04	-2700.67	-2515.99	-2372.64	-2219.77	-2102.38	-1987.6	-1863.71	-1763.61	-1681.55	-1603.25	-1533.79	-1469.58
Pos 8								-3119.84	-2734.84	-2406.45	-2189.74	-1940.7	-1798.63	-1617.71	-1521.42	-1420.8	-1326.87	-1247.89	-1182.66	-1127.86	-1067.34	-1017.51	-979.484	-937.486	-898.73
Pos 9									-3727.2	-3313.19	-2995.42	-2734.19	-2511.11	-2310.14	-2164.61	-2013.66	-1891.03	-1767.53	-1672.71	-1603	-1531.54	-1458.59	-1402.79	-1339.97	-1277.35
Pos 10										-2482.85	-2219.2	-1985.87	-1829.62	-1672.16	-1546.91	-1446.81	-1359.69	-1246.46	-1173.96	-1103.63	-1058.02	-1011.51	-954.25	-910.023	-872.093
Pos 11											-2258.64	-2028.35	-1873.72	-1711.46	-1606.08	-1487.76	-1389.21	-1304.3	-1231.03	-1185.98	-1128.86	-1074.73	-1028.84	-982.396	-942.761
Pos 12												-3575.2	-3257.05	-2984.72	-2754.38	-2550.6	-2396.66	-2252.6	-2125.19	-1999.7	-1890.8	-1798.08	-1727.33	-1649.19	-1577.11
Pos 13													-1241.76	-1136.94	-1059.51	-981.288	-926.967	-865.266	-826.775	-795.638	-766.499	-736.912	-703.793	-676.283	-654.051
Pos 14														-2292.89	-2112.79	-1949.77	-1821.04	-1694.91	-1593.39	-1510.06	-1436.85	-1357.11	-1279.35	-1211.11	-1161.29
Pos 15															-1567.36	-1465.1	-1382.99	-1299.8	-1229.75	-1172.49	-1111.11	-1060.01	-1016.94	-976.244	-938.142
Pos 16																-1767.98	-1663.16	-1588.16	-1507.53	-1416.27	-1345.45	-1282.13	-1220.57	-1168.52	-1120.9
Pos 17																	-408.122	-379.425	-366.991	-334.429	-319.67	-313.135	-290.966	-278.467	-274.25
Pos 18																		-1699.3	-1616.09	-1515.66	-1430.24	-1367.04	-1298.67	-1248.09	-1197.34
Pos 19																			-521.441	-483.265	-464.681	-451.17	-427.968	-413.197	-401.821
Pos 20																				-1597.94	-1504.76	-1428.79	-1384.68	-1327.33	-1264.59
Pos 21																					-686.913	-657.641	-623.634	-600.062	-580.348
Pos 22																						-454.348	-422.841	-411.273	-399.948
Pos 23																							-1289.95	-1232.06	-1177.51
Pos 24																								-883.113	-850.726
Pos 25																									-228.076

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.21- Estimates of Component VaR@95% Confidence Level for Taiwan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-49248	-21534	-14068.8	-10267.6	-7888.93	-6335.36	-5331.54	-4541.95	-3878.95	-3651.97	-3263.01	-2919.59	-2735.83	-2509.76	-2287.59	-2127.79	-1969.27	-1841.76	-1739.92	-1670.98	-1571.31	-1486.51	-1410.24	-1339.45	-1305.6
Pos 2		-15808.7	-9484.3	-7038.1	-5626.41	-4607.45	-4043.66	-3565.13	-3209.09	-2828.78	-2576.5	-2351.38	-2134.79	-1958.89	-1839.6	-1717.76	-1604.15	-1511.8	-1424.93	-1348.08	-1291.75	-1226.23	-1175.12	-1119.96	-1068.46
Pos 3			-11986.8	-8568.17	-6570.25	-5231.04	-4416.98	-3743.97	-3198.79	-2956.19	-2670.29	-2411.03	-2318.21	-2150.67	-1956.64	-1802.4	-1678.4	-1558.07	-1463.05	-1390.26	-1299.57	-1222.92	-1156.9	-1095.14	-1069.76
Pos 4				-8445.89	-6797.95	-5969.99	-5031.51	-4379.92	-3799.81	-3407.57	-3084.02	-2810.42	-2575.35	-2384.97	-2205.49	-2071.98	-1948.5	-1846.84	-1754.47	-1672.77	-1583.26	-1514.03	-1445.97	-1382.95	-1330.13
Pos 5					-4430.14	-3682.22	-3136.24	-2742.9	-2394.06	-2074.53	-1917.43	-1768.52	-1612.05	-1497.03	-1383.5	-1309.5	-1230.68	-1170.85	-1110.03	-1045.24	-991.471	-952.972	-913.631	-879.43	-832.162
Pos 6						-5314.29	-4443.14	-3829.5	-3325.74	-2937.04	-2675.5	-2449.36	-2231.53	-2073.12	-1914.25	-1809.4	-1705.42	-1616.6	-1528.06	-1449.66	-1367.84	-1308.3	-1252.47	-1198.77	-1146.92
Pos 7							-4684.22	-4171.21	-3780.23	-3355.92	-3039.9	-2767.32	-2532.26	-2347.83	-2220.65	-2063.62	-1928.32	-1817.48	-1721.51	-1634.61	-1571.26	-1494.3	-1425.13	-1357.47	-1298.41
Pos 8								-4165.85	-3814.4	-3337.76	-3017.77	-2747.99	-2487.79	-2300.52	-2194.43	-2048.36	-1919.75	-1808	-1712.58	-1616.38	-1561.01	-1487.3	-1419.24	-1354.32	-1291.55
Pos 9									-4251.37	-3693.04	-3364.76	-3091.25	-2789.88	-2573.39	-2522.64	-2359.67	-2212.11	-2084.72	-1964.65	-1849.02	-1792.98	-1703.42	-1629.45	-1555.38	-1475.68
Pos 10										-3993.43	-3563.23	-3190.33	-2975.26	-2743.26	-2512.82	-2332.56	-2165.02	-2018.37	-1905.76	-1829.84	-1723.97	-1628.58	-1542.88	-1461.4	-1431.71
Pos 11											-2282.96	-2228.09	-2020.95	-1894.09	-1760.73	-1671.53	-1598.22	-1515.71	-1422.08	-1335.3	-1268.65	-1209.3	-1162.47	-1114.77	-1058.41
Pos 12												-2500	-2267.37	-2125.94	-1982.53	-1869.66	-1787.69	-1700.38	-1609.66	-1516.5	-1443.91	-1380.55	-1325.88	-1273.18	-1210.95
Pos 13													-2646.33	-2464.06	-2239.7	-2060.27	-1920.55	-1792.02	-1683.48	-1600.63	-1503.45	-1418.01	-1343.07	-1274.5	-1245.49
Pos 14														-2406.28	-2233.1	-2088.99	-2002.8	-1891.31	-1788.83	-1692.35	-1608	-1534.87	-1466.52	-1401.49	-1347.18
Pos 15															-2430.83	-2270.26	-2129.39	-2009.87	-1898.67	-1790.05	-1742.34	-1657.6	-1585.34	-1514.37	-1439.34
Pos 16																-2089.01	-1979.83	-1882.95	-1786.33	-1685.53	-1597.67	-1530.94	-1468.42	-1408.77	-1337.11
Pos 17																	-1790.39	-1705.94	-1616.94	-1526.34	-1447.49	-1385.24	-1330.45	-1275.7	-1216.67
Pos 18																		-1534.7	-1470.42	-1392.89	-1320.12	-1272.5	-1224.43	-1185.43	-1128.19
Pos 19																			-2082.55	-1993.33	-1894.29	-1827.32	-1750.85	-1686.62	-1620.91
Pos 20																				-1806.31	-1710.5	-1634.21	-1560.31	-1491.11	-1444.06
Pos 21																					-1618.95	-1541.91	-1472.93	-1402.9	-1335.15
Pos 22																						-1686.98	-1618.87	-1583.6	-1515.05
Pos 23																							-1213.25	-1172.63	-1113.83
Pos 24																								-1373.06	-1307.71
Pos 25																									-1460.82

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.22- Estimates of Component VaR@95% Confidence Level for Thailand

Pos/Por	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-49480	-20651	-11862	-8505.55	-6641.83	-5692.01	-4694.34	-4032.1	-3437.7	-3089.75	-2733.93	-2437.35	-2197.57	-1979.43	-1859.55	-1725.48	-1602.8	-1493.27	-1422.34	-1342.91	-1277.49	-1216.53	-1153.26	-1105.76	-1058.8
Pos 2		-18975	-11192.9	-7907.17	-6026.56	-4976.37	-4111.24	-3533.31	-3036.3	-2717.39	-2420.85	-2172.59	-1961.23	-1783.84	-1680.38	-1559.07	-1439.64	-1343.45	-1273.14	-1189.39	-1130.8	-1079.76	-1019.1	-978.204	-935.573
Pos 3			-16609.9	-12490.2	-9804.53	-7989.75	-6921.07	-6003.88	-5397	-4838.82	-4421.91	-4071.58	-3769.3	-3510.06	-3258.4	-3045.87	-2855.13	-2699.43	-2547.95	-2406.13	-2288.79	-2182.05	-2080.07	-1987.01	-1904.95
Pos 4				-10726.1	-8487.4	-6976.49	-6105.78	-5325	-4728.3	-4238.32	-3885.92	-3564.56	-3255.62	-3016.4	-2805.38	-2623.3	-2458.52	-2316.17	-2185.83	-2061.25	-1957.68	-1867.74	-1771.09	-1696.84	-1625.34
Pos 5					-9102.54	-7449.25	-6329.07	-5470.73	-4797.1	-4319.31	-3908.82	-3547.19	-3191.11	-2934.68	-2767.61	-2607.49	-2442.69	-2301.06	-2180.49	-2089.63	-1985.47	-1892.81	-1800.17	-1728.25	-1654.78
Pos 6						-4983.28	-4111.32	-3549.37	-3026.4	-2713.24	-2414.83	-2164.52	-1977.8	-1791.9	-1671.7	-1551.03	-1439.75	-1339.75	-1274.8	-1192.16	-1130.02	-1080.02	-1027.38	-988.608	-949.366
Pos 7							-6775.33	-5866.03	-5218	-4689.88	-4296.18	-3984.53	-3657.86	-3412.89	-3163.13	-2968.27	-2786.46	-2638.3	-2492.13	-2360.11	-2242.91	-2142.43	-2041	-1953.64	-1869.35
Pos 8								-1520.73	-1269	-1120.52	-980.908	-867.068	-767.468	-699.4	-637.229	-573.214	-547.372	-503.379	-468.453	-436.424	-416.379	-397.412	-380.639	-363.613	-349.844
Pos 9									-4663.9	-4155.85	-3772.49	-3486.27	-3177.84	-2960.78	-2736.21	-2558.65	-2398.28	-2304.73	-2164.57	-2041.83	-1941	-1849.42	-1765.29	-1687.13	-1617.9
Pos 10										-2084.97	-1877.84	-1691.65	-1528.19	-1407.83	-1325.09	-1234.5	-1150.47	-1075.23	-1027.41	-977.815	-929.137	-888.109	-848.223	-812.326	-781.414
Pos 11											-4912.42	-4518.82	-4160.44	-3878.94	-3595.79	-3422.81	-3205.3	-3021.05	-2859.41	-2713.65	-2576.44	-2460.66	-2341.78	-2239.32	-2144.1
Pos 12												-3849.75	-3525.72	-3350.43	-3107.25	-2906.48	-2728.58	-2589.5	-2445.95	-2312.22	-2199.99	-2100.07	-2000.87	-1912.59	-1829.01
Pos 13													-1799.7	-1628.96	-1501.9	-1376.16	-1288.27	-1202.72	-1135.42	-1071.23	-1020.03	-970.56	-926.224	-884.499	-847.888
Pos 14														-3510.97	-3242.82	-3035.77	-2858.56	-2709.14	-2552.88	-2413.87	-2294.59	-2188.98	-2088.33	-1995.19	-1915.45
Pos 15															-1916.74	-1805.51	-1682.97	-1570.25	-1497.54	-1420.52	-1356.63	-1294.83	-1238.14	-1194.52	-1141.78
Pos 16																-3409.69	-3199.52	-3014.81	-2855.46	-2719.68	-2583.35	-2474.38	-2353.92	-2246.12	-2150.47
Pos 17																	-1128.73	-1056.44	-993.975	-932.976	-893.518	-857.27	-817.694	-784.595	-757.247
Pos 18																		-2507.11	-2361.28	-2236.86	-2122.1	-2019.65	-1922.15	-1839.98	-1758.05
Pos 19																			-2152.55	-2060.79	-1966.3	-1868.52	-1771.92	-1702.61	-1626.49
Pos 20																				-2723.35	-2585.11	-2457.9	-2338.04	-2240.38	-2143.38
Pos 21																					-543.705	-511.97	-494.37	-474.986	-454.656
Pos 22																						-849.726	-808.855	-779.495	-752.232
Pos 23																							-661.379	-635.987	-614.948
Pos 24																								-490.771	-469.441
Pos 25																									-322.23

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.23- Estimates of Component VaR@95% Confidence Level for Turkey

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-74623	-34871.4	-22628.9	-16802.5	-13494.9	-11043.2	-9390.97	-8275.56	-7315.84	-6584.59	-5991.14	-5485.46	-5061.16	-4697.34	-4382.65	-4095.1	-3854.62	-3632.78	-3445.3	-3270.87	-3113.64	-2971.75	-2839.09	-2716.28	-2603.69
Pos 2		-36666.3	-23738.7	-17558.4	-13969.5	-11349.6	-9629.98	-8444.77	-7455.99	-6699.82	-6093.79	-5583.55	-5149.56	-4779.01	-4456.29	-4161.82	-3912.92	-3694.65	-3505.22	-3325.67	-3162.91	-3012.59	-2879.89	-2756.77	-2642.56
Pos 3			-21115	-15717.1	-12324.5	-10170.4	-8765.25	-7570.57	-6753.44	-6095.51	-5545.98	-5065.65	-4656.17	-4324.38	-4034.24	-3776.08	-3550.22	-3354.47	-3172.91	-3012.34	-2864.46	-2724.44	-2603.47	-2490.97	-2390.53
Pos 4				-15611.4	-12308.9	-10126.6	-8656.83	-7516.32	-6663.55	-6009.84	-5491.09	-5039.69	-4641.34	-4319.14	-4040.96	-3796.19	-3586.43	-3381.95	-3194.02	-3036.44	-2892.84	-2758.84	-2643.93	-2533.51	-2429.26
Pos 5					-15123.1	-12247.3	-10400.3	-9176.97	-8070.52	-7244.69	-6577.92	-6017.25	-5539.46	-5145.54	-4806.28	-4495.01	-4229.76	-3994.41	-3794.87	-3602.3	-3432.44	-3270.5	-3128.25	-2995.24	-2873.04
Pos 6						-11095.5	-9368.56	-8027.99	-7135.39	-6379.34	-5762.46	-5241.9	-4840.52	-4488.33	-4157.4	-3874.1	-3637.79	-3423.53	-3210.95	-3041.22	-2887.95	-2757.25	-2632.21	-2514.51	-2402.17
Pos 7							-9968.53	-8613.67	-7735.56	-6968.1	-6299.42	-5750.16	-5272.64	-4890.43	-4547.12	-4259.4	-4007.01	-3781.12	-3571.21	-3391	-3224.56	-3075.1	-2935.87	-2808.42	-2692.38
Pos 8								-9904.36	-8682.76	-7781.27	-7076.33	-6461.5	-5949.51	-5505.65	-5127.63	-4785.17	-4494.98	-4231.17	-4016.52	-3810.93	-3623.68	-3455.22	-3302.11	-3158.98	-3028.15
Pos 9									-7566.25	-6806.97	-6164.5	-5634.45	-5178.93	-4811.75	-4482.31	-4203.26	-3950.77	-3730.83	-3522.31	-3339.79	-3178.58	-3025.53	-2890.04	-2766.69	-2650.41
Pos 10										-6425.58	-5820.26	-5343.9	-4925.98	-4572.15	-4264.59	-4004.86	-3770.53	-3562	-3372.18	-3204.08	-3050.13	-2908.32	-2778.71	-2659.91	-2553.83
Pos 11											-5004.25	-4584.04	-4216.83	-3913.79	-3656.29	-3428.22	-3232.59	-3048.9	-2886.4	-2743.34	-2615.4	-2491.06	-2383.25	-2283.89	-2192.99
Pos 12												-5493.83	-5054.7	-4686.88	-4376.91	-4105	-3864.38	-3652.87	-3460.55	-3289.44	-3135.22	-2990.15	-2855.5	-2738.33	-2626.36
Pos 13													-3534.31	-3271.91	-3057.28	-2868.61	-2699.07	-2555.33	-2427.9	-2305.37	-2194.73	-2098.4	-2009.35	-1929.74	-1852.83
Pos 14														-3998.47	-3738.51	-3516.47	-3315.77	-3132.33	-2966.29	-2820.18	-2686.15	-2559.06	-2449.72	-2347.63	-2251.65
Pos 15															-4366.16	-4099.48	-3859.59	-3644.09	-3452.79	-3277.76	-3121.86	-2972.23	-2842.84	-2726.43	-2612.53
Pos 16																-3609.49	-3403.07	-3218.82	-3049.24	-2902.23	-2767.58	-2639.17	-2526.37	-2430.46	-2345.44
Pos 17																	-3523.95	-3321.88	-3145.51	-2992	-2855.22	-2722.14	-2604.16	-2498.15	-2393.88
Pos 18																		-3039.3	-2875.56	-2735.02	-2609.11	-2493.71	-2384.36	-2287.07	-2195.37
Pos 19																			-3568.81	-3388.8	-3223.96	-3074.03	-2938.94	-2816.66	-2704.77
Pos 20																				-2861.38	-2729.55	-2601.77	-2490.88	-2389.31	-2296.38
Pos 21																					-2640.56	-2520.44	-2412.49	-2315.3	-2227.81
Pos 22																						-2802.37	-2681.87	-2568.48	-2469.55
Pos 23																							-1839.8	-1767.38	-1696.26
Pos 24																								-2479.14	-2383.28
Pos 25																									-1234.01

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Continued)

Table G1.24- Estimates of Component VaR@95% Confidence Level for United Kingdom

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-33629	-10634	-6782.75	-5954.54	-4569.48	-3750.6	-2921.75	-2531.75	-2213.53	-1977.5	-1814.86	-1623.72	-1519.11	-1389.46	-1274.31	-1182.69	-1086.67	-1004.44	-948.776	-900.078	-857.069	-808.089	-763.617	-722.338	-689.63
Pos 2		-23128	-14346	-9775.54	-7500.13	-5859.41	-5148.57	-4421.63	-3761.38	-3287.71	-2894.77	-2603.53	-2353.53	-2184.57	-2012.66	-1859.27	-1738.4	-1617.22	-1511.78	-1420.92	-1341.67	-1283.55	-1268.16	-1203.03	-1141.09
Pos 3			-7331.87	-5219.84	-4156.26	-3516.58	-2894.7	-2456.01	-2207.3	-2018.73	-1791.57	-1635.8	-1502.26	-1379.19	-1289.06	-1209.53	-1134.2	-1075.6	-1027.88	-963.808	-919.653	-876.472	-821.401	-789.625	-759.691
Pos 4				-6141.86	-4700.53	-3901.23	-3022.43	-2645.4	-2324.11	-2101.7	-1932.59	-1728.91	-1622.21	-1475.89	-1355.51	-1264.03	-1161.7	-1071.04	-1009.87	-951.91	-906.031	-852.886	-803.388	-760.137	-727.834
Pos 5					-5856.15	-4823.76	-4011.62	-3522.79	-3087.54	-2772.76	-2512.83	-2374.2	-2165.91	-2071.66	-1953.75	-1818.46	-1695.5	-1642.43	-1543.54	-1458.12	-1380.29	-1314.25	-1251.92	-1205.98	-1151.28
Pos 6						-3086.32	-2368.5	-2065.88	-1930.58	-1765.63	-1593.74	-1444.08	-1363.07	-1239.03	-1147.04	-1085.54	-1043.24	-978.513	-940.756	-889.597	-857.08	-806.945	-750.568	-712.689	-692.583
Pos 7							-4866.61	-4162.58	-3550.98	-3103.52	-2756.64	-2494.18	-2273.89	-2103.03	-1943.87	-1803.66	-1691.1	-1565.95	-1467.65	-1372.38	-1293.41	-1242.75	-1214.41	-1159.47	-1106.14
Pos 8								-2731.42	-2422.53	-2117.8	-2045.69	-1865.15	-1683.26	-1570.45	-1442.11	-1339.05	-1249.62	-1164.77	-1096.92	-1048.79	-993.91	-951.632	-919.47	-874.423	-836.964
Pos 9									-1690.8	-1548.21	-1347.94	-1205.02	-1094.4	-965.86	-872.857	-845.443	-779.273	-731.103	-708.062	-675.476	-648.156	-611.499	-553.899	-527.307	-516.739
Pos 10										-1899.67	-1702.17	-1567.46	-1455.77	-1317.07	-1224.82	-1173.75	-1104.31	-1046.27	-1012.68	-964.496	-924.7	-879.342	-816.141	-777.144	-749.097
Pos 11											-2151.5	-1951.08	-1786.27	-1650.22	-1513.74	-1411.98	-1312.5	-1225.29	-1146.22	-1089.04	-1033.95	-982.422	-946.861	-898.76	-859.871
Pos 12												-2565.82	-2363.32	-2209.3	-2112.77	-1970.97	-1848.32	-1767.47	-1668.68	-1580.75	-1500.96	-1431.14	-1354.62	-1313.59	-1256.53
Pos 13													-1496.52	-1350.95	-1240.94	-1175.17	-1104.01	-1031.28	-987.172	-938.547	-895.571	-841.985	-784.708	-749.437	-724.268
Pos 14														-2073.97	-1945.92	-1796.32	-1697.21	-1613.51	-1515.8	-1431.06	-1355.76	-1292.5	-1247.41	-1195.05	-1144.17
Pos 15															-2240.98	-2084.99	-1957.82	-1861.97	-1754.88	-1660.35	-1575.71	-1507.54	-1439.01	-1396.41	-1334.41
Pos 16																-1013.68	-938.374	-886.629	-854.038	-809.79	-774.587	-737.792	-678.601	-648.795	-634.26
Pos 17																	-1079.15	-1006.98	-947.709	-912.672	-863.367	-819.836	-782.342	-748.595	-717.921
Pos 18																		-1575.69	-1490.4	-1410.59	-1341.63	-1270.98	-1192.48	-1148.57	-1101.68
Pos 19																			-841.008	-802.822	-770.096	-731.94	-683.786	-653.118	-633.827
Pos 20																				-1006.59	-953.128	-910.315	-871.567	-827.359	-789.854
Pos 21																					-712.402	-676.412	-630.748	-602.093	-590.71
Pos 22																						-988.76	-963.707	-921.229	-882.453
Pos 23																							-1225.11	-1169.17	-1106.78
Pos 24																								-1221.61	-1167.96
Pos 25																									-508.411

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G1 - Estimates of Component VaR@95% Confidence Level for Domestic Portfolios

Table G1.25- Estimates of Component VaR@95% Confidence Level for United States

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-37053	-15212	-9688.94	-7050.02	-5841.88	-4679.09	-4064.53	-3541.67	-3185.53	-2779.34	-2519.12	-2312.5	-2122.81	-1957.01	-1843.36	-1732.03	-1619.07	-1524.41	-1449.84	-1379.71	-1322.43	-1254.82	-1203.61	-1158.24	-1109.41
Pos 2		-19783	-12331	-8425.86	-6549.62	-5407.19	-4499.58	-3987.32	-3444.97	-3248.12	-2892.46	-2610.74	-2383.1	-2273.43	-2093.03	-1939.09	-1790.47	-1671	-1564.26	-1515.54	-1439.79	-1357.87	-1290.68	-1216.9	-1155.32
Pos 3			-5529.63	-4045.39	-3048.6	-2048.24	-1749.1	-1493.46	-1336.27	-1124.97	-1046.27	-975.244	-919.865	-780.05	-728.984	-700.591	-661.305	-635.451	-599.668	-536.878	-505.649	-481.28	-462.977	-437.927	-425.507
Pos 4				-6119	-4555.77	-3273.02	-2813.3	-2367.1	-2112.11	-1774.88	-1747.79	-1666.2	-1532.11	-1321.45	-1222	-1155.74	-1139.87	-1080.81	-1007.17	-923.87	-872.675	-865.087	-827.528	-799.266	-784.11
Pos 5					-6461.59	-5148.69	-4449.98	-3881.83	-3539.34	-3137.61	-2833.48	-2575.41	-2374.19	-2181.43	-2054.86	-1924.34	-1798.41	-1688.37	-1650.67	-1553.57	-1486.82	-1408.23	-1358.31	-1298.92	-1239.95
Pos 6						-8002.91	-6594.73	-5686.54	-4895.56	-4358.86	-3855.31	-3461.09	-3130.84	-2939.33	-2731.39	-2520	-2329.37	-2173.35	-2042.76	-1949.5	-1880.48	-1776.57	-1672.47	-1578.35	-1488.13
Pos 7							-3593.31	-3059.8	-2754.85	-2365.46	-2155.67	-1978.44	-1820.75	-1622.61	-1592.34	-1505.96	-1397.79	-1314.21	-1246.27	-1161.38	-1110.98	-1061.18	-1017.06	-980.445	-941.142
Pos 8								-3277.46	-2854.43	-2635.18	-2347.9	-2116.54	-1934.07	-1847.24	-1699.39	-1568.53	-1461.97	-1377.85	-1300.28	-1263.53	-1195.67	-1119.94	-1062.66	-1007.01	-959.437
Pos 9									-2637.66	-2265.15	-2087.46	-1915.37	-1765.12	-1576.92	-1490.74	-1409.55	-1330.12	-1263.94	-1221.83	-1137.98	-1085.63	-1037.11	-1006.28	-967.983	-932.398
Pos 10										-4215.9	-3750.78	-3371.21	-3074.44	-2981.38	-2733.64	-2525.91	-2327.68	-2178.38	-2049.17	-1987.34	-1884.84	-1770.27	-1676.64	-1589.74	-1508.73
Pos 11											-1447.41	-1392.44	-1289.12	-1093.17	-1012.74	-964.892	-974.858	-932.289	-874.037	-797.985	-748.438	-746.179	-714.504	-692.727	-684.784
Pos 12												-1114.82	-1022.87	-870.828	-802.853	-775.326	-771.697	-730.514	-682.306	-624.654	-589.651	-584.475	-562.934	-552.071	-547.732
Pos 13													-1452.43	-1304.44	-1197.14	-1138.38	-1064.43	-1003.91	-947.943	-880.031	-828.32	-790.6	-761.84	-731.712	-701.912
Pos 14														-3216.22	-2957	-2722.22	-2495.3	-2307.67	-2171.96	-2142.6	-2033.47	-1902.67	-1801.02	-1704.23	-1609.7
Pos 15															-1968.8	-1848.6	-1717.21	-1611.02	-1534.84	-1426.07	-1370.86	-1299.76	-1247.18	-1194.23	-1139.45
Pos 16																-728.889	-688.964	-662.259	-626.555	-565.901	-529.491	-515.362	-496.372	-495.14	-481.432
Pos 17																	-1213.67	-1159.7	-1085.79	-992.557	-928.285	-915.742	-875.654	-846.789	-830.75
Pos 18																		-552.06	-521.795	-459.689	-429.312	-419.768	-406.207	-395.319	-383.897
Pos 19																			-1278.19	-1192.45	-1134.24	-1072.8	-1045.65	-1000.78	-955.037
Pos 20																				-2195.82	-2084.4	-1957.43	-1853.07	-1749.41	-1657.75
Pos 21																					-1311	-1238.4	-1174.65	-1111.75	-1055.22
Pos 22																						-815.336	-779.448	-752.532	-736.927
Pos 23																							-667.03	-649.58	-626.006
Pos 24																								-523.903	-512.645
Pos 25																									-672.379

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios

Table G2.01- Estimates of Component VaR@95% Confidence Level for Companies with Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-26742	-6789.08	-3888.88	-2670.66	-1949.88	-1726.6	-1416.01	-1162.65	-1049.69	-888.545	-778.029	-749.962	-676.588	-684.918	-641.64	-593.228	-571.596	-524.044	-489.894	-464.469	-442.656	-423.87	-395.574	-375.397	-354.807
Pos 2		-23372.6	-14615.6	-9887.51	-6755.72	-5294.7	-4177.05	-3581.78	-3039.54	-2662.52	-2279.6	-1996.47	-1915.05	-1718.9	-1560.09	-1455.12	-1294.13	-1200.15	-1075.26	-996.699	-923.395	-863.999	-803.806	-765.757	-757.589
Pos 3			-5637.4	-3946.11	-2937.12	-2375.6	-1960.45	-1651.79	-1400.89	-1243.75	-1122.69	-988.685	-928.75	-852.837	-787.799	-726.222	-670.797	-637.329	-586.192	-546.381	-511.5	-486.671	-462.533	-438.181	-427.634
Pos 4				-4959.21	-3900.45	-3119.9	-2542.25	-2077.5	-1833.95	-1602.93	-1461.08	-1296.14	-1161.16	-1058.19	-947.538	-896.549	-797.713	-768.012	-726.626	-709.445	-648.005	-588.997	-518.283	-549.142	-526.02
Pos 5					-6306.47	-5242.9	-4178.06	-3512.14	-3132.77	-2809.08	-2710.96	-2419.8	-2253.29	-2071.59	-1887.01	-1753.1	-1618.01	-1599.48	-1520.31	-1450.02	-1358.43	-1281.67	-1211.85	-1160.33	-1126.7
Pos 6						-2086.4	-1810.69	-1519.5	-1369.68	-1226.91	-1083.28	-1050.37	-933.789	-893.739	-864.408	-811.728	-788.738	-715.647	-671.26	-628.511	-613.493	-597.148	-569.269	-542.211	-516.173
Pos 7							-2483.64	-2101.26	-1706.74	-1410	-1171.16	-1024.05	-908.835	-837.354	-804.529	-727.818	-686.406	-603.991	-565.454	-527.084	-515.737	-476.576	-431.075	-409.183	-380.985
Pos 8								-1951.75	-1518.08	-1297.27	-1067.08	-960.91	-836.705	-733.373	-683.52	-611.839	-566.524	-503.954	-432.389	-397.263	-384.48	-358.329	-306.381	-281.071	-267.208
Pos 9									-1904.96	-1656.87	-1492.64	-1367.88	-1225.3	-1120.16	-1027.42	-951.837	-871.251	-830.226	-789.924	-757.84	-700.83	-650.739	-610.405	-590.315	-565.483
Pos 10										-1964.85	-1727.64	-1534.76	-1378.52	-1244.76	-1144.75	-1065.55	-962.027	-889.494	-835.864	-788.512	-728.529	-698.108	-658.318	-628.51	-607.266
Pos 11											-1944.55	-1726.52	-1581.03	-1443.29	-1309.02	-1206.14	-1097.22	-1122.4	-1073.49	-1031.61	-955.837	-887.869	-843.542	-809.204	-784.285
Pos 12												-1245.6	-1089.07	-1031.52	-972.68	-898.398	-854.776	-753.675	-710.053	-664.342	-650.614	-627.56	-590.056	-559.505	-526.769
Pos 13													-1609.88	-1461.8	-1330.74	-1233.12	-1134.08	-1093.31	-1000.1	-938.27	-872.244	-816.836	-760.521	-723.031	-711.682
Pos 14														-753.132	-723.767	-663.103	-640.806	-580.242	-545.531	-513.054	-500.843	-488.351	-447.541	-431.162	-402.818
Pos 15															-1165.18	-1081.94	-1050.26	-956.247	-900.939	-837.582	-804.53	-782.242	-740.238	-696.876	-658.889
Pos 16																-1222.65	-1109.03	-1020.89	-954.351	-904.86	-832.878	-792.297	-734.541	-710.63	-685.808
Pos 17																	-1792.11	-1643.14	-1507.31	-1404.23	-1409.51	-1358.92	-1273.41	-1198.88	-1133.01
Pos 18																		-1467.29	-1397.77	-1345.97	-1252.91	-1176.78	-1114.83	-1067.29	-1026.77
Pos 19																			-1319.94	-1268.75	-1175.15	-1097.14	-1015.6	-978.767	-933.081
Pos 20																				-602.397	-554.148	-511.21	-464.531	-457.653	-437.942
Pos 21																					-842.406	-809.807	-761.07	-703.354	-659.721
Pos 22																						-854.179	-817.502	-771.152	-719.869
Pos 23																							-1290.83	-1212.92	-1145.7
Pos 24																								-537.217	-509.699
Pos 25																									-518.881

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.02- Estimates of Component VaR@95% Confidence Level for Companies with Second Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-33144	-6020.4	-3369.27	-2703.32	-2086.46	-1876.92	-1543.98	-1276.47	-1128.25	-989.721	-874.653	-839.84	-761.827	-767.951	-741.437	-702.358	-654.995	-605.146	-544.98	-510.144	-495.414	-469.632	-448.039	-412.662	-394.253
Pos 2		-32236	-19934	-14020.4	-10680.4	-8453.39	-6993.53	-5882.32	-5055.41	-4462.89	-3900.72	-3406.01	-3142.73	-2834.11	-2551.18	-2369.26	-2141.03	-1981.65	-1753.33	-1644.73	-1540.98	-1434.92	-1351.09	-1246.63	-1215.83
Pos 3			-6761.69	-4923.1	-3884.24	-3210.94	-2632.39	-2216.43	-1948.45	-1752.39	-1558.1	-1405.88	-1337.39	-1178.66	-1076.68	-1005.35	-918.733	-866.798	-810.3	-766.205	-729.962	-697.082	-654.416	-621.731	-612.33
Pos 4				-4128.4	-3330.32	-2678.04	-2180.62	-1812.81	-1618.96	-1425.54	-1328.56	-1171.94	-1045.81	-971.04	-886.157	-848.903	-771.052	-738.965	-667.22	-639.086	-595.297	-555.896	-499.246	-479.461	-455.705
Pos 5					-4147.72	-3482.73	-2929.21	-2368.2	-2213.35	-2021.51	-1980.17	-1771.82	-1641.06	-1491.39	-1365.38	-1265.69	-1171.93	-1181.33	-1170.68	-1133.22	-1067.37	-1005.18	-937.156	-920.718	-886.75
Pos 6						-2621.09	-2200.72	-1952.77	-1696.5	-1546.5	-1408.81	-1369.52	-1249.74	-1179.57	-1159.51	-1057.52	-1067.52	-997.155	-928.589	-865.333	-847.442	-832.041	-788.639	-750.375	-716.46
Pos 7							-1410.83	-1069.88	-920.729	-791.356	-698.072	-627.749	-555.595	-472.013	-444.69	-395.962	-339.841	-307.502	-266.718	-257.565	-245.471	-237.487	-210.912	-197.123	-175.288
Pos 8								-2521.74	-2155.7	-1874.02	-1640.91	-1493.54	-1305.96	-1236.48	-1177.43	-1059.11	-995.895	-922.893	-817.206	-772.475	-737.438	-726.816	-663.525	-608.398	-566.818
Pos 9									-1807.83	-1598.53	-1515.92	-1362.69	-1205.49	-1114.7	-1016.48	-930.407	-836.975	-811.404	-737.834	-724.474	-674.182	-634.8	-601.045	-585.045	-554.627
Pos 10										-1235.21	-1121.31	-993.147	-937.838	-863.473	-790.381	-721.86	-688.174	-651.61	-626.398	-588.276	-554.736	-524.77	-498.072	-479.559	-467.679
Pos 11											-1643.34	-1483.39	-1365.94	-1250.3	-1151.91	-1060.18	-986.92	-991.752	-960.944	-940.365	-882.91	-829.229	-772.176	-760.842	-728.195
Pos 12												-1235.09	-1078.04	-1029.32	-1001.14	-914.301	-867.298	-785.155	-713.089	-676.634	-655.898	-633.152	-591.076	-553.969	-519.734
Pos 13													-1505.19	-1352.62	-1225.14	-1137.04	-1022.18	-968.543	-891.406	-837.311	-784.765	-744.011	-688.008	-659.051	-667.311
Pos 14														-1148.38	-1069.72	-1013.76	-926.433	-854.003	-750.266	-703.501	-664.628	-632.521	-586.175	-542.82	-499.627
Pos 15															-1105.84	-1030.15	-977.817	-920.937	-840.129	-790.978	-766.095	-744.145	-715.831	-675.231	-642.907
Pos 16																-622.389	-545.26	-492.053	-410.912	-385.711	-357.419	-335.318	-288.001	-247.142	-226.913
Pos 17																	-1628.59	-1504.89	-1377.64	-1288.55	-1243.78	-1203.15	-1125.53	-1068.38	-1009.05
Pos 18																		-1241.47	-1216.03	-1182.37	-1107.68	-1046.98	-984.609	-973.559	-933.821
Pos 19																			-2372.98	-2257.45	-2113.67	-2007.61	-1875.86	-1872.49	-1801.87
Pos 20																				-387.177	-354.055	-325.081	-287.977	-291.456	-272.728
Pos 21																					-544.102	-526.793	-494.83	-458.218	-435.907
Pos 22																						-679.128	-647.453	-600.7	-571.209
Pos 23																							-1443.83	-1338.65	-1254.34
Pos 24																								-1062.83	-1023.02
Pos 25																									-573.174

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.03- Estimates of Component VaR@95% Confidence Level for Companies with Third Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-47769	-17466	-10690.9	-7131.93	-5522.4	-4695.81	-3448.49	-3049.27	-2748.2	-2376.23	-2095.82	-1929.2	-1781.48	-1672.72	-1570.46	-1449.52	-1398.31	-1296.62	-1220.17	-1142.15	-1102.27	-1036.64	-970.072	-918.929	-872.452
Pos 2		-17124	-10697.1	-7616.16	-6057.74	-4810.05	-3544.43	-2842.3	-2407.32	-2045.82	-1793.31	-1600.8	-1472.19	-1343.79	-1178.64	-1081.77	-970.273	-873.843	-791.91	-719.153	-680.271	-566.044	-512.508	-478.62	-455.029
Pos 3			-5710.38	-4130.55	-3166.45	-2595.97	-1861.81	-1593.38	-1420.11	-1192.06	-1165.27	-1036.94	-975.163	-888.334	-816.493	-782.494	-724.77	-715.211	-673.689	-650.699	-604.657	-554.016	-532.865	-515.349	-503.924
Pos 4				-4763.62	-3816.26	-3050.16	-1793.56	-1472.21	-1329.51	-1212.56	-1277.88	-1138.9	-1053.18	-955.501	-868.18	-803.264	-729.646	-751.565	-729.251	-715.381	-660.783	-618.62	-547.58	-564.862	-555.132
Pos 5					-949.814	-733.583	-326.549	-231.598	-255.838	-222.912	-191.166	-191.197	-161.668	-157.7	-142.17	-126.853	-121.107	-109.191	-102.998	-92.4877	-81.0337	-66.6763	-54.5858	-48.6487	-42.4952
Pos 6						-1309.16	-1002.76	-950.854	-865.595	-755.726	-692.291	-661.444	-604.926	-571.887	-582.201	-549.811	-535.332	-511.831	-489.319	-468.783	-449.147	-450.109	-407.435	-383.21	-364.484
Pos 7							-6022.45	-4955.68	-4236.59	-3567.17	-3123.19	-2799.7	-2541.91	-2303.69	-2138.8	-1943.88	-1791.33	-1636.53	-1503.98	-1393.21	-1321.73	-1230.5	-1133.64	-1058.5	-1003.23
Pos 8								-2465.99	-2175.51	-1873.68	-1591.15	-1426.27	-1328.2	-1263.56	-1234.36	-1136.53	-1031.47	-942.341	-879.42	-797.227	-750.532	-751.573	-673.775	-618.651	-586.308
Pos 9									-1397.46	-1212.93	-1138.99	-1045.07	-931.093	-854.472	-793.954	-749.704	-714.255	-682.313	-656.788	-628.472	-590.994	-563.156	-528.14	-509.385	-489.655
Pos 10										-4875.75	-4013.96	-3544.06	-3223.86	-3061.84	-2711.88	-2410.7	-2164.22	-1882.84	-1762.29	-1593.31	-1465.71	-1363.22	-1202.69	-1166.18	-1094.28
Pos 11											-1865.3	-1670.31	-1537.71	-1401.8	-1277.88	-1217.22	-1122.51	-1180.72	-1156.81	-1146.13	-1076.79	-998.702	-930.829	-916.926	-894.314
Pos 12												-1177	-1034.31	-974.981	-928.414	-863.754	-834.732	-751.016	-700.081	-644.926	-607.921	-558.753	-503.8	-477.91	-447.043
Pos 13													-583.131	-534.566	-483.502	-422.551	-354.2	-339.436	-321.339	-297.135	-273.866	-248.299	-229.633	-215.909	-209.033
Pos 14														-842.489	-799.498	-745.125	-687.469	-622.506	-582.624	-540.417	-507.367	-484.438	-445.75	-423.218	-404.942
Pos 15															-1066.34	-986.958	-922.418	-858.583	-813.592	-756.253	-725.965	-729.733	-684.345	-645.17	-613.605
Pos 16																-974.771	-918.63	-865.5	-817.119	-768.858	-731.216	-687.922	-643.096	-606.659	-582.023
Pos 17																	-1173.3	-1086.98	-1011.06	-950.328	-919.458	-871.677	-830.833	-790.093	-751.228
Pos 18																		-1135.21	-1115.75	-1115.92	-1047.99	-991.382	-936.664	-912.088	-885.622
Pos 19																			-818.65	-811.798	-763.038	-718.236	-672.726	-654.778	-635.985
Pos 20																				-1017.4	-959.549	-899.44	-841.06	-831.155	-803.472
Pos 21																					-654.077	-633.288	-600.196	-562.264	-531.558
Pos 22																						-1160.19	-1110.97	-1044.26	-1000.96
Pos 23																							-1244.26	-1183.82	-1120.01
Pos 24																								-432.351	-427.162
Pos 25																									-192.465

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.04- Estimates of Component VaR@95% Confidence Level for Companies with Fourth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-24900	-5036.7	-2810.12	-2062.38	-1505.23	-1375.93	-1140.59	-957.32	-890.614	-805.489	-717.321	-692.966	-612.358	-607.919	-577.84	-544.423	-523.422	-494.071	-469.205	-446.587	-426.706	-412.098	-386.256	-369.013	-350.977
Pos 2		-26702	-16531.2	-10857.7	-8036.86	-6248.98	-4977.3	-3910.51	-3305.59	-2881.97	-2448.44	-2135.85	-2015.69	-1772.82	-1594.7	-1463.85	-1339.46	-1250.07	-1135.78	-1050.76	-984.626	-920.389	-866.704	-816.491	-792.657
Pos 3			-6365.58	-4634.13	-3470.71	-2835.9	-2303.62	-1887.01	-1655.47	-1487.94	-1333.98	-1185.22	-1146.88	-1012.91	-916.179	-844.464	-774.92	-734.313	-685.572	-644.986	-614.044	-569.77	-538.831	-513.223	-500.972
Pos 4				-5350.02	-4376.45	-3498.91	-2868.57	-2235.01	-2020.95	-1814.31	-1716.99	-1547.88	-1413.44	-1279.62	-1157.66	-1083.63	-980.427	-963.678	-929.04	-899.426	-834.751	-764.793	-715.72	-703.802	-677.416
Pos 5					-3455.66	-2596.85	-2050.92	-1538.69	-1419.94	-1259.75	-1166.66	-989.034	-884.08	-764.058	-698.799	-637.264	-578.942	-580.494	-566.344	-559.574	-516.125	-456.16	-407.095	-406.081	-400.984
Pos 6						-2760.66	-2359.77	-2052.18	-1863.81	-1656.82	-1473.28	-1395.93	-1241.09	-1180.78	-1149.07	-1090.89	-1064	-980.687	-913.863	-863.855	-837.301	-808.494	-775.359	-735.288	-695.074
Pos 7							-2355.6	-1899.52	-1625.64	-1420.49	-1159.73	-1074.06	-897.92	-838.259	-788.799	-718.954	-690.609	-636.114	-582.956	-541.54	-514.067	-491.693	-435.916	-412.466	-393.577
Pos 8								-5111.51	-4352.34	-3728.58	-3102.59	-2772.77	-2422.11	-2222.51	-2077.96	-1907	-1706.35	-1570.23	-1425.24	-1326.16	-1267.24	-1256.42	-1150.17	-1087.97	-1026.23
Pos 9									-1550.83	-1368.7	-1285.62	-1168.22	-1029.32	-951.58	-871.328	-814.371	-758.403	-727.438	-701.224	-677.69	-631.762	-600.043	-561.625	-543.663	-517.104
Pos 10										-1143.51	-1006.63	-910.048	-852.563	-758.121	-694.112	-646.208	-599.723	-563.64	-535.356	-501.153	-462.197	-433.977	-419.681	-398.571	-382.271
Pos 11											-2183.76	-1960.96	-1804.19	-1614.1	-1464.28	-1365.41	-1252.08	-1210.87	-1171.15	-1126.97	-1047.87	-977.445	-919.617	-880.272	-838.184
Pos 12												-1484.43	-1284.77	-1204.21	-1156.91	-1078.64	-1029.78	-944.089	-896.878	-840.948	-811.866	-779.174	-724.854	-678.596	-637.434
Pos 13													-1671.43	-1468.69	-1326.08	-1247.06	-1138.33	-1071.34	-1002.91	-931.704	-868.788	-802.023	-766.072	-733.673	-721.579
Pos 14														-1387.27	-1297.81	-1227.49	-1134.3	-1050.34	-959.706	-903.76	-848.947	-800.362	-731.014	-676.544	-649.477
Pos 15															-1055.08	-976.87	-943.618	-864.962	-815.691	-760.203	-738.889	-723.028	-683.092	-645.484	-621.066
Pos 16																-1206.81	-1124.63	-1052.89	-1003.67	-956.358	-890.667	-843.899	-813.353	-774.853	-730.463
Pos 17																	-1026.23	-948.349	-900.33	-834.529	-811.069	-779.469	-737.171	-694.252	-648.388
Pos 18																		-614.385	-597.157	-586.94	-551.627	-509.434	-472.182	-491.786	-476.169
Pos 19																			-966.35	-942.201	-877.548	-814.842	-749.36	-730.701	-699.85
Pos 20																				-565.989	-528.42	-491.698	-451.77	-447.061	-432.728
Pos 21																					-488.402	-479.682	-452.869	-421.223	-396.942
Pos 22																						-988.45	-949.152	-896.707	-846.084
Pos 23																							-1301.57	-1226.92	-1163.25
Pos 24																								-526.828	-513.908
Pos 25																									-381.735

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.05- Estimates of Component VaR@95% Confidence Level for Companies with Fifth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-25627	-6063.4	-3631.3	-2537.57	-1840.1	-1666.6	-1338.37	-881.22	-807.35	-720.2	-648.58	-626.78	-594.915	-584.48	-561.046	-523.629	-505.422	-471.472	-446.402	-413.6	-397.909	-391.163	-359.315	-348.259	-328.728
Pos 2		-24507	-15210.1	-9849.18	-6710.3	-5198.4	-4122.09	-2756.4	-2427.1	-2189.2	-1959.9	-1741.8	-1706.39	-1568.86	-1452.3	-1346.98	-1228.66	-1149.65	-1076.13	-1006.98	-959.783	-886.919	-829.116	-780.473	-764.238
Pos 3			-5762.74	-4285.87	-3085.6	-2454.4	-2057.93	-1360.3	-1188.52	-1064	-957.23	-847.5	-822.607	-755.786	-703.15	-650.103	-613.583	-589.354	-551.809	-527.473	-505.113	-493.828	-472.892	-455.631	-448.698
Pos 4				-6485.53	-5556.8	-4436.6	-3616.04	-2465.4	-2202.41	-1998.8	-1941.5	-1766.6	-1635.03	-1513.24	-1395.99	-1350.27	-1244.65	-1221.26	-1192.27	-1194.53	-1131.1	-1065.89	-1011.85	-1006.42	-977.536
Pos 5					-6093.6	-4763.3	-3938.93	-2759.6	-2463.69	-2234.7	-2145	-1924.4	-1775.5	-1638.38	-1491.42	-1425.71	-1302.14	-1264.03	-1215.26	-1191.89	-1124.05	-1056.33	-981.432	-963.467	-933.616
Pos 6						-3523.3	-2976.54	-1845.6	-1642.78	-1466.8	-1313.2	-1278.5	-1182.27	-1102.89	-1074.42	-1019.69	-1028.19	-952.885	-906.951	-859.875	-839.907	-823.825	-779.392	-746.087	-710.127
Pos 7							-2224.16	-1322	-1187.81	-1065.3	-920.93	-831.83	-744.351	-697.907	-662.256	-623.675	-580.201	-540.193	-501.273	-456.809	-432.304	-400.326	-363.72	-342.711	-320.43
Pos 8								-8822.2	-7765.49	-6816	-5908.5	-5287.1	-4645.36	-4246	-3847.81	-3427.65	-3084.89	-2852.27	-2611.29	-2371.64	-2219.92	-2029.1	-1808.02	-1666.61	-1554.41
Pos 9									-531.151	-478.54	-440.04	-420.76	-376.412	-359.75	-334.008	-313.399	-292.872	-280.034	-263.115	-241.327	-232.863	-218.313	-200.38	-187.618	-176.328
Pos 10										-768.89	-710.62	-643.96	-607.703	-548.904	-502.825	-488.441	-428.939	-403.632	-389.935	-363.926	-339.995	-321.74	-312.252	-299.331	-285.01
Pos 11											-1549.8	-1394.9	-1292.46	-1191.4	-1084.66	-1023.83	-939.621	-925.719	-893.478	-885.437	-836.408	-779.675	-721.229	-705.887	-683.903
Pos 12												-1210.4	-1082.91	-1026.61	-994.944	-938.98	-906.649	-831.902	-784.322	-726.085	-691.798	-667.357	-624.501	-598.68	-559.078
Pos 13													-1293.88	-1198	-1118.34	-1067.93	-991.681	-937.978	-889.781	-841.902	-793.805	-743.935	-704.219	-674.161	-682.96
Pos 14														-469.967	-447.914	-405.884	-385.226	-357.811	-342.334	-314.587	-298.363	-276.661	-244.272	-234.936	-221.985
Pos 15															-809.975	-744.951	-736.513	-671.538	-623.938	-582.256	-568.576	-562.449	-548.182	-508.143	-480.656
Pos 16																-1158.79	-1084.51	-1023.26	-979.535	-931.144	-889.562	-845.171	-805.342	-788.353	-754.5
Pos 17																	-1478.34	-1371.09	-1300.96	-1203.73	-1160.02	-1121.73	-1054.18	-989.412	-935.09
Pos 18																		-698.45	-667.242	-651.726	-607.656	-572.851	-517.258	-509.15	-494.468
Pos 19																			-862.878	-851.943	-804.234	-755.147	-701.05	-688.083	-661.326
Pos 20																				-1335.66	-1264.59	-1206.4	-1143.21	-1131.29	-1095.87
Pos 21																					-266.112	-257.76	-257.143	-234.554	-219.504
Pos 22																						-1014.19	-962.297	-894.286	-850.703
Pos 23																							-1567.42	-1481.72	-1399.88
Pos 24																								-883.44	-857.841
Pos 25																									-675.317

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.06- Estimates of Component VaR@95% Confidence Level for Companies with Sixth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-31858	-8269.36	-4697.4	-3223.05	-2517.39	-2115.73	-1652.53	-916.141	-708.97	-640.316	-578.44	-523.09	-481.118	-473.445	-454.808	-442.45	-443.117	-410.365	-412.606	-387.931	-379.977	-372.177	-362.797	-346.16	-321.187
Pos 2		-20520.6	-12382	-7467.1	-5396.31	-4400.09	-3499.39	-1694.41	-1372.6	-1217.45	-1076.9	-999.05	-962.643	-889.532	-813.514	-776.495	-726.809	-696.635	-640.929	-579.06	-553.47	-546.577	-524.011	-495.693	-489.292
Pos 3			-4705.3	-3067.86	-2136.66	-1650.43	-1266.21	-514.525	-450.02	-424.021	-378.77	-323.27	-303.208	-276.665	-259.27	-235.607	-210.257	-190.13	-182.381	-175.55	-169.433	-164.867	-148.879	-136.87	-131.645
Pos 4				-8061.15	-6637.49	-5476.95	-4431.04	-2361.14	-1893.9	-1777.65	-1816.2	-1656.4	-1538.85	-1433.51	-1336.63	-1242.34	-1167.07	-1120.7	-1114.5	-1156.84	-1088.98	-1029.2	-974.308	-946.832	-927.266
Pos 5					-4016.14	-3340.4	-2628.35	-1300.13	-1002	-912.573	-915.19	-824.13	-775.316	-721.118	-666.214	-628.449	-592.641	-574.598	-575.329	-577.576	-544.433	-507.236	-483.275	-470.891	-462.16
Pos 6						-934.947	-722.855	-293.634	-261.34	-231.944	-224.4	-222.66	-192.096	-180.539	-174.696	-167.488	-165.878	-154.635	-146.294	-139.861	-134.656	-131.034	-120.829	-119.667	-116.437
Pos 7							-2487.74	-951.885	-849.42	-776.355	-668.8	-595.57	-520.575	-479.131	-439.621	-427.537	-415.348	-383.974	-367.631	-331.653	-310.167	-290.635	-257.358	-244.095	-239.949
Pos 8								-17195	-12406	-10907.9	-9549.9	-8653.3	-7849.91	-7213.13	-6685.12	-6164.37	-5660.96	-5294.17	-4844.48	-4466.66	-4225.02	-3978.58	-3677.61	-3486.71	-3220.19
Pos 9									-4983.7	-4412.33	-3962.2	-3623.1	-3290.02	-3042.91	-2820.4	-2595.19	-2385.97	-2253.68	-2094.07	-1952.3	-1837.72	-1734.61	-1620.29	-1548.72	-1456.81
Pos 10										-1299.74	-1202.6	-1086.6	-1032.2	-940.608	-874.275	-828.73	-798.925	-749.71	-722.276	-676.744	-641.977	-618.673	-608.416	-572.246	-571.897
Pos 11											-1283.1	-1161.9	-1091.92	-1008	-938.272	-877.442	-805.853	-784.732	-765.685	-781.003	-733.633	-693.158	-637.251	-618.421	-592.667
Pos 12												-594.11	-547.167	-514.896	-490.046	-455.984	-426.136	-400.681	-382.477	-361.812	-347.947	-324.098	-300.165	-289.089	-273.325
Pos 13													-803.595	-726.014	-665.213	-616.388	-567.277	-535.016	-507.562	-481.348	-444.84	-415.649	-399.73	-380.352	-400.55
Pos 14														-367.366	-346.682	-322.259	-305.763	-287.614	-273.651	-261.579	-248.746	-245.558	-219.395	-212.815	-193.17
Pos 15															-554.453	-520.413	-506.774	-473.906	-442.469	-409.097	-396.768	-386.639	-360.344	-340.854	-327.325
Pos 16																-738.837	-719.303	-662.783	-643.72	-597.887	-578.822	-555.679	-506.796	-491.117	-457.096
Pos 17																	-946.394	-873.286	-843.151	-775.605	-757.807	-742.707	-712.741	-671.705	-646.527
Pos 18																		-293.154	-281.042	-277.295	-253.619	-236.185	-213.061	-209.539	-203.165
Pos 19																			-856.451	-841.245	-796.383	-753.874	-706.023	-676.688	-660.656
Pos 20																				-866.027	-817.594	-770.874	-710.98	-695.526	-666.845
Pos 21																					-257.976	-256.416	-251.052	-239.497	-223.71
Pos 22																						-498.598	-476.391	-451.736	-433.898
Pos 23																							-1142.37	-1074.69	-1008.41
Pos 24																								-319.255	-295.8
Pos 25																									-839.097

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.07- Estimates of Component VaR@95% Confidence Level for Companies with Seventh Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-29894	-10864.6	-5735.41	-3489.91	-2520.9	-2092.67	-1732.64	-1232	-1068.72	-937.82	-816.967	-785.621	-704.18	-672.558	-635.201	-584.575	-541.609	-504.133	-470.993	-404.883	-377.658	-360.569	-328.89	-309.702	-293.89
Pos 2		-12698.1	-7084.72	-4667.52	-3097.8	-2471.06	-1920.12	-1372.2	-1147.51	-1025.5	-901.76	-796.627	-760.117	-725.021	-653.853	-604.061	-546.814	-509.344	-477.744	-434.031	-404.965	-377.903	-336.926	-312.747	-303.722
Pos 3			-6902.53	-4696.64	-3365.1	-2690.02	-2171.07	-1528.7	-1320.75	-1138	-993.057	-881.55	-844.987	-778.89	-713.575	-661.677	-622.331	-570.092	-539.863	-502.833	-477.048	-462.808	-435.61	-419.186	-407.657
Pos 4				-6815.1	-5450.6	-4462.31	-3675.19	-2735.4	-2444.21	-2142	-2095.67	-1896.69	-1789.23	-1642.44	-1539.38	-1452.02	-1308.11	-1269.45	-1224.72	-1217.4	-1140.26	-1071.02	-967.932	-958.583	-925.381
Pos 5					-3908.8	-3180.39	-2513.25	-1858.2	-1601.56	-1372.7	-1343.96	-1148.12	-1050.4	-958.195	-896.933	-846.87	-761.271	-750.772	-726.974	-715.022	-669.961	-634.265	-568.765	-559.238	-540.619
Pos 6						-882.514	-676.805	-532.88	-429.167	-390.76	-348.154	-311.975	-282.443	-261.656	-257.008	-236.752	-218.62	-203.504	-189.538	-172.423	-161.519	-148.553	-121.735	-111.471	-105.589
Pos 7							-2116.73	-1311.8	-1029.84	-924.55	-782.125	-723.909	-646.382	-597.746	-539.48	-502.962	-465.857	-418.186	-392.748	-341.613	-328.649	-322.494	-289.632	-256.375	-237.367
Pos 8								-6696.1	-5534.77	-4714.3	-3980.98	-3506.87	-3144.56	-2832.12	-2594.17	-2355.4	-2084.48	-1924.9	-1761.04	-1573.21	-1487.52	-1366.77	-1230.37	-1129.99	-1063.21
Pos 9									-1927.62	-1734.3	-1492.16	-1338.35	-1184.3	-1101.41	-996.308	-901.364	-820.308	-782.108	-736.251	-684.08	-643.68	-581.116	-498.452	-479.964	-448.888
Pos 10										-1464.4	-1232.66	-1088.65	-987.798	-894.709	-816.598	-738.729	-628.881	-574.227	-534.152	-451.727	-419.595	-387.673	-340.932	-324.451	-311.562
Pos 11											-1690.54	-1458.42	-1356.64	-1252.66	-1153.97	-1079.14	-978.715	-964.07	-932.28	-938.237	-873.912	-813.893	-747.075	-725.329	-706.684
Pos 12												-1593.55	-1433.3	-1357.38	-1284.75	-1189.69	-1167.17	-1073.64	-1003.78	-919.649	-895.341	-849.265	-773.577	-726.101	-683.669
Pos 13													-902.743	-811.224	-741.856	-699.08	-644.718	-612.95	-581.505	-542.131	-503.655	-460.752	-413.338	-408.371	-414.647
Pos 14														-601.537	-550.361	-507.749	-488.419	-453.676	-430.672	-397.279	-376.105	-359.402	-334.073	-313.364	-297.852
Pos 15															-861.214	-797.602	-784.02	-733.478	-685.223	-633.696	-618.451	-600.156	-566.523	-535.551	-499.392
Pos 16																-1185.52	-1109.59	-1043.65	-994.029	-924.068	-866.232	-811.695	-761.842	-724.773	-696.922
Pos 17																	-1859.42	-1721.26	-1592.25	-1468.54	-1435.49	-1391.89	-1243.21	-1186.76	-1126.79
Pos 18																		-572.004	-555.735	-564.562	-524.353	-485.876	-428.222	-414.604	-405.392
Pos 19																			-728.572	-722.329	-668.529	-620.914	-581.586	-558.627	-536.447
Pos 20																				-1565.5	-1457.48	-1374.94	-1269.69	-1237.26	-1189.28
Pos 21																					-639.601	-616.467	-584.805	-545.673	-513.253
Pos 22																						-1037.8	-981.555	-923.037	-885.116
Pos 23																							-1524.25	-1402.13	-1330.27
Pos 24																								-906.347	-871.524
Pos 25																									-394.008

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.08- Estimates of Component VaR@95% Confidence Level for Companies with Eighth Highest Market Capitalization

Pos/Por	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-23963	-5407.7	-3142.26	-2257.9	-1660.1	-1398.27	-1084.67	-843.574	-788.684	-691.907	-607.685	-567.881	-496.801	-494.278	-471.207	-441.608	-404.359	-378.591	-351.868	-319.373	-298.888	-277.235	-233.01	-228.464	-216.966
Pos 2		-23060	-13877.3	-9717.4	-7024.59	-5606.6	-4337.64	-3395.19	-2917.79	-2594.74	-2260.76	-1997.35	-1937.8	-1731.51	-1533.74	-1392.77	-1255.3	-1173.17	-1074.83	-1007.48	-960.898	-906.696	-818.474	-792.994	-787.003
Pos 3			-5656.52	-3970.2	-2900.72	-2334.36	-1793.74	-1401.03	-1170.47	-1053.94	-906.621	-782.382	-782.653	-692.536	-617.774	-569.439	-496.208	-468.507	-426.055	-404.164	-370.767	-350.834	-303.107	-291.285	-283.108
Pos 4				-2295.7	-1580.45	-1230	-940.758	-683.315	-641.985	-546.073	-426.006	-357.345	-294.141	-286.705	-228.674	-199.608	-146.614	-154.9	-136.278	-118.52	-101.208	-101.559	-50.597	-46.198	-33.974
Pos 5					-4901.46	-3938.27	-3017.96	-2290.73	-2007.11	-1782.48	-1804.89	-1578.32	-1418.5	-1302.4	-1168.22	-1111.68	-1026.31	-1007.72	-991.538	-974.275	-887.445	-827.34	-730.593	-718.037	-704.154
Pos 6						-1423.74	-1037.48	-842.279	-700.884	-626.717	-555.39	-528.458	-459.732	-420.212	-443.112	-411.15	-394.503	-359.903	-326.549	-306.709	-295.478	-279.196	-252.642	-246.434	-235.171
Pos 7							-3107.01	-2337.16	-1965.63	-1627.18	-1377.3	-1232.17	-1054.07	-994.005	-878.811	-820.228	-745.307	-682.185	-618.584	-575.408	-552.168	-526.436	-433.782	-414.637	-396.733
Pos 8								-3362.16	-2953.99	-2511.76	-2006.42	-1833.15	-1586.22	-1464.92	-1358.8	-1236.72	-1124.63	-1021.18	-882.866	-789.153	-745.398	-702.932	-568.565	-523.175	-474.105
Pos 9									-1222.49	-1046.56	-922.533	-793.45	-687.795	-642.313	-587.947	-523.115	-451.91	-444.401	-407.815	-378.989	-357.678	-342.96	-288.399	-276.336	-260.45
Pos 10										-1542.01	-1378.85	-1225.75	-1119.63	-1012.97	-897.601	-836.168	-754.518	-698.384	-653.796	-603.278	-559.018	-531.165	-467.478	-448.835	-434.607
Pos 11											-1813.39	-1623.11	-1478.66	-1349.25	-1206.44	-1117.27	-1022.24	-999.309	-954.451	-918.658	-860.476	-811.78	-728.216	-703.411	-682.254
Pos 12												-1226.34	-1061.97	-988.354	-957.974	-872.654	-826.828	-764.606	-712.816	-655.092	-631.352	-602.857	-551.71	-525.091	-496.775
Pos 13													-1292.31	-1153.37	-996.952	-934.079	-825.78	-775.278	-752.581	-705.836	-674.098	-634.411	-561.613	-538.13	-536.996
Pos 14														-833.507	-763.414	-708.018	-650.653	-604.792	-561.439	-527.941	-500.857	-475.061	-427.653	-410.888	-391.791
Pos 15															-1608.95	-1487.8	-1433.54	-1305.73	-1236.21	-1167.76	-1127.49	-1074.16	-980.099	-937.308	-883.155
Pos 16																-1341.68	-1234.5	-1159.47	-1095.62	-1055.07	-988.922	-941.959	-882.911	-850.635	-806.04
Pos 17																	-1611.34	-1452.28	-1322.34	-1222.58	-1176.83	-1105.52	-1031	-972.612	-920.961
Pos 18																		-623.854	-594.936	-565.129	-513.152	-482.274	-417.093	-398.551	-387.208
Pos 19																			-984.808	-965.615	-904.876	-862.449	-785.075	-756.813	-735.809
Pos 20																				-941.803	-870.147	-824.159	-722.377	-711.63	-683.366
Pos 21																					-536.121	-508.119	-481.306	-456.817	-432.207
Pos 22																						-298.436	-257.213	-233.033	-208.336
Pos 23																							-1983.9	-1849.76	-1736.13
Pos 24																								-757.54	-731.057
Pos 25																									-499.342

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2 - Estimates of Component VaR@95% Confidence Level for Foreign Portfolios (Continued)

Table G2.09- Estimates of Component VaR@95% Confidence Level for Companies with Ninth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-29429	-6656.8	-4153.68	-2370.68	-1804.16	-1532.83	-1317.3	-763.762	-680.665	-590.887	-546.154	-520.22	-469.839	-457.887	-438.725	-416.723	-371.444	-357.726	-336.635	-309.855	-294.082	-301.395	-280.266	-263.41	-252.8
Pos 2		-29545	-19168.2	-11885	-8816.5	-6771.09	-5522.6	-2941.16	-2562.32	-2265.05	-2067.01	-1857.45	-1715.62	-1566.31	-1409.87	-1302.45	-1131.01	-1063.74	-993.879	-924.118	-882.377	-796.463	-716.516	-686.641	-671.469
Pos 3			-2054.85	-1214.7	-944.062	-765.312	-632.81	-345.728	-311.051	-290.445	-273.478	-256.314	-240.668	-217.712	-209.239	-200.908	-193.904	-183.446	-173.888	-161.995	-153.8	-154.203	-151.001	-146.196	-140.227
Pos 4				-9471.52	-7418.09	-5971.92	-4924.2	-2868.97	-2546.45	-2286.42	-2164.48	-1950.82	-1806.32	-1665.05	-1528.67	-1448.45	-1313.13	-1242.95	-1220.9	-1214.11	-1124.75	-1049.99	-966	-923.561	-903.184
Pos 5					-4415.69	-3583.66	-3012.3	-1806.38	-1626.58	-1435.29	-1422.47	-1254.59	-1161.27	-1080.11	-995.66	-957.001	-872.552	-851.853	-835.991	-802.119	-751.71	-711.642	-669.286	-641.89	-632.272
Pos 6						-2948.99	-2530.7	-1566.06	-1388.97	-1225.16	-1133.73	-1106.47	-1013.71	-948.021	-966.17	-918.695	-905.469	-831.682	-794.235	-760.518	-745.794	-736.828	-674.933	-636.527	-604.182
Pos 7							-1706	-939.384	-825.117	-683.346	-614.983	-575.913	-528.611	-497.912	-470.29	-441.476	-406.763	-374.896	-348.169	-316.046	-307.638	-285.331	-255.234	-241.038	-226.803
Pos 8								-13170	-11488.3	-10048.7	-8718.35	-7768.27	-7150.33	-6594.4	-5998.59	-5473.06	-4960.7	-4646.98	-4246.51	-3864.8	-3633.64	-3317.29	-3004.94	-2873.42	-2718.2
Pos 9									-797.005	-680.417	-640.214	-574.308	-524.875	-489.761	-451.438	-417.282	-363.549	-356.123	-316.839	-302.95	-276.203	-262.218	-245.562	-236.991	-223.457
Pos 10										-1681.77	-1470.34	-1354.56	-1244.96	-1149.33	-1078.59	-999.018	-930.719	-861.043	-805.36	-751.319	-681.023	-658.831	-627.028	-603.023	-574.133
Pos 11											-1533.35	-1371.76	-1267.39	-1182.81	-1112.03	-1062.91	-972.384	-936.98	-908.065	-887.499	-828.939	-777.99	-726.455	-695.621	-686.021
Pos 12												-1188.74	-1087.68	-1032.34	-1031.78	-974.913	-967.359	-894.6	-841.014	-802.602	-788.586	-778.979	-723.338	-684.493	-646.755
Pos 13													-181.974	-164.28	-141.883	-127.748	-100.398	-93.164	-87.7559	-76.842	-77.4357	-72.7181	-69.4451	-67.7004	-68.4186
Pos 14														-327.089	-301.955	-288.484	-269.455	-262.113	-258.171	-249.491	-234.566	-233.444	-237.166	-227.644	-216.523
Pos 15															-1098.89	-1038.58	-1011.06	-943.547	-903.046	-860.554	-823.53	-808.212	-778.417	-738.585	-706.301
Pos 16																-1029.91	-963.225	-912.489	-896.03	-879.558	-811.041	-787.835	-750.287	-730.167	-706.13
Pos 17																	-1267.99	-1170.1	-1101.15	-1030.72	-980.714	-924.566	-859.783	-804.976	-751.854
Pos 18																		-317.845	-304.883	-282.845	-248.793	-232.3	-202.838	-214.858	-212.146
Pos 19																			-947.476	-949.483	-880.687	-830.212	-784.59	-755.933	-736.507
Pos 20																				-1269.28	-1189.71	-1127.61	-1056.43	-1010.28	-978.667
Pos 21																					-587.379	-555.892	-511.918	-479.779	-453.516
Pos 22																						-854.441	-815.203	-775.025	-732.303
Pos 23																							-1447.99	-1371.03	-1300.83
Pos 24																								-171.207	-168.495
Pos 25																									-382.648

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G2- Estimates of Component VaR@95% Confidence Level for Foreign Portfolios

Table G2.10- Estimates of Component VaR@95% Confidence Level for Companies with Tenth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-31375.2	-8162.2	-4710.26	-3272.31	-2403.68	-1948.7	-1550.7	-1348.62	-1217.34	-1074.19	-970.231	-891.393	-813.355	-798.215	-758.766	-708.843	-675.476	-640.45	-601.947	-554.821	-528.144	-503.75	-458.504	-439.711	-414.75
Pos 2		-24337	-14237.9	-9804.61	-6997.54	-5277.5	-4019.2	-3231.46	-2807.56	-2407.35	-2160.12	-1887.87	-1731.23	-1567.24	-1393.18	-1225.74	-1120.3	-1026.85	-939.721	-849.757	-792.111	-728.598	-673.015	-629.643	-632.999
Pos 3			-6332.84	-4374.3	-2929.27	-2093.1	-1493.5	-1259.57	-1068.27	-917.107	-773.003	-686.516	-597.231	-528.791	-486.472	-406.084	-370.155	-344.189	-320.013	-293.299	-279.268	-273.365	-260.059	-243.631	-232.413
Pos 4				-3054.88	-2737.68	-1851.3	-1474.8	-1082.78	-950.565	-801.02	-759.386	-704.986	-631.552	-561.918	-503.984	-455.327	-382.02	-373.335	-377.478	-395.829	-348.662	-315.202	-274.582	-302.208	-281.179
Pos 5					-3740.7	-2763.6	-2047.9	-1575.76	-1396.74	-1203.21	-1144.91	-1015.32	-902.296	-819.435	-736.407	-652.374	-562.958	-558.44	-548.306	-530.312	-474.017	-442.093	-403.79	-418.24	-403.606
Pos 6						-4676.3	-3411.3	-2839.54	-2527.67	-2124.88	-1920.62	-1728.51	-1513.56	-1433.89	-1358.99	-1193.05	-1215.69	-1134.84	-1071.06	-1008.93	-977.833	-921.065	-838.38	-788.865	-729.09
Pos 7							-3445.3	-2823.18	-2463.4	-2164.75	-1907.18	-1737.1	-1543.65	-1396.87	-1262.88	-1128.9	-983.712	-918.517	-849.418	-756.58	-690.149	-648.61	-570.334	-548.208	-528.496
Pos 8								-4659.7	-4045.51	-3502.05	-3023.09	-2799.27	-2477.86	-2282.36	-2161.07	-1932.36	-1765.49	-1630.85	-1530.61	-1384.41	-1294.7	-1260.07	-1172.94	-1113.58	-1037.27
Pos 9									-961.531	-811.275	-775.179	-709.685	-631.356	-599.562	-558.743	-542.133	-501.002	-487.969	-456.799	-452.286	-412.826	-387.91	-379.805	-357.102	-323.367
Pos 10										-1682.85	-1450.45	-1330.6	-1229.21	-1137.49	-1057.76	-944.629	-862.278	-793.978	-760.549	-696.273	-631.936	-588.756	-528.692	-503.668	-486.056
Pos 11											-950.776	-851.547	-762.013	-697.771	-620.915	-568.093	-538.961	-527.794	-504.21	-505.174	-461.616	-430.575	-399.384	-388.344	-364.838
Pos 12												-532.211	-439.67	-415.595	-377.981	-349.893	-314.959	-298.452	-269.565	-265.165	-230.2	-220.055	-202.591	-197.671	-182.383
Pos 13													-1080.53	-981.577	-896.344	-767.575	-679.098	-620.982	-571.113	-520.586	-457.01	-432.236	-385.371	-362.947	-339.97
Pos 14														-625.095	-590.028	-574.56	-543.606	-513.46	-485.298	-443.878	-415.789	-392.211	-369.464	-349.671	-320.614
Pos 15															-809.409	-743.824	-707.887	-667.817	-633.23	-566.949	-522.799	-501.183	-482.415	-461.364	-446.122
Pos 16																-994.707	-851.906	-808.524	-713.205	-650.495	-586.893	-550.674	-433.633	-388.755	-321.074
Pos 17																	-1613.01	-1521.06	-1434	-1321.62	-1312.23	-1260.09	-1182.09	-1108.99	-1063.66
Pos 18																		-463.831	-462.021	-441.657	-414.487	-386.145	-362.358	-352.874	-331.25
Pos 19																			-824.688	-827.741	-768.905	-721.778	-689.899	-685.186	-673.491
Pos 20																				-832.614	-746.36	-706.964	-637.719	-617.472	-581.679
Pos 21																					-970.402	-935.116	-875.792	-810.217	-766.243
Pos 22																						-528.493	-485.733	-447.472	-423.187
Pos 23																							-1290.23	-1238.34	-1154.55
Pos 24																								-412.42	-383.643
Pos 25																									-746.91

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix G3 - Estimates of Component VaR@95% Confidence Level for Frechet Random Walk Model

Table G3.01- Estimates of Component VaR@95% Confidence Level for Frechet Random Walk Model

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-8697.1	-2118.51	-1157.44	-781.179	-598.459	-437.52	-313.218	-177.512	-149.265	-122.635	-67.7305	-71.0273	-72.2401	-61.4375	-39.7243	-23.3576	-29.3526	-32.7366	-33.2677	-30.7936	-21.6449	-23.9965	-31.6977	-19.3724	-11.6817
Pos 2		-6402.56	-3654.54	-2450.43	-1660.35	-1251.7	-1000.16	-726.759	-643.217	-545.902	-397.821	-320.309	-213.095	-176.488	-153.63	-139.681	-85.6364	-64.5709	-47.1687	-45.9821	-56.9355	-51.7799	-51.8252	-50.9977	-40.5092
Pos 3			-1329.55	-965.015	-686.955	-442.7	-337.66	-281.338	-212.072	-167.042	-108.064	-116.025	-134.985	-137.903	-100.845	-84.8792	-83.5452	-82.7339	-70.7583	-64.6076	-41.7042	-42.6958	-36.5188	-36.4135	-36.4784
Pos 4				-968.806	-612.014	-475.59	-408.68	-309.134	-265.988	-221.608	-148.094	-130.592	-125.497	-125.367	-114.518	-97.8361	-91.9847	-80.6828	-75.3262	-74.8134	-63.0442	-57.7167	-45.1566	-38.3047	-32.293
Pos 5					-826.707	-647.41	-511.466	-363.487	-321.172	-269.19	-217.315	-157.213	-131.025	-113.508	-87.3669	-67.0869	-67.6146	-59.8286	-60.8348	-42.9008	-41.623	-37.6501	-38.0549	-30.1135	-30.0803
Pos 6						-871.22	-703.539	-484.102	-411.984	-380.898	-343.459	-298.954	-235.352	-212.24	-196.548	-168.884	-157.092	-131.823	-105.407	-92.904	-79.6916	-79.8025	-81.4003	-83.3132	-79.823
Pos 7							-502.04	-427.208	-342.467	-307.539	-210.914	-161.576	-166.307	-143.845	-134.622	-107.776	-96.1354	-104.119	-108.271	-101.224	-88.6118	-77.2559	-71.8773	-66.1014	-65.1907
Pos 8								-1103.96	-953.5	-832.94	-612.393	-563.804	-502.619	-458.674	-433.27	-402.178	-348.583	-335.433	-302.909	-284.136	-263.2	-229.934	-204.679	-203.822	-182.152
Pos 9									-348.479	-291.81	-244.249	-194.613	-155.221	-122.481	-114.467	-94.4006	-85.9836	-90.1499	-94.1674	-95.6	-90.7571	-86.9999	-75.666	-69.8807	-67.0073
Pos 10										-261.332	-197.477	-149.205	-140.547	-137.117	-123.168	-132.467	-120.126	-114.55	-102.308	-98.523	-99.2558	-91.9781	-93.6161	-90.2341	-92.1484
Pos 11											-1201.87	-978.217	-688.455	-630.019	-559.72	-567.317	-535.869	-490.241	-455.881	-398.418	-361.423	-360.917	-324.632	-294.062	-256.66
Pos 12												-688.302	-562.135	-499.687	-412.528	-344.618	-348.026	-273.088	-263.399	-229.157	-216.352	-194.678	-180.054	-147.482	-134.054
Pos 13													-923.128	-813.55	-730.348	-623.086	-500.012	-454.212	-404.115	-363.862	-335.164	-313.737	-300.526	-290.972	-274.884
Pos 14														-470.504	-396.993	-368.351	-332.836	-302.268	-268.763	-241.216	-233.175	-210.294	-176.261	-151.118	-137.149
Pos 15															-579.323	-485.722	-403.842	-376.545	-334.677	-344.006	-363.876	-312.203	-269.074	-244.329	-223.847
Pos 16																-579.025	-537.866	-462.551	-406.289	-439.673	-369.208	-349.432	-323.738	-314.682	-296.592
Pos 17																	-408.008	-338.514	-319.225	-256.262	-259.186	-260.439	-241.842	-230.83	-227.526
Pos 18																		-278.979	-281.389	-266.57	-186.049	-169.538	-147.336	-161.702	-164.594
Pos 19																			-227.197	-179.833	-157.68	-131.211	-115.414	-95.6764	-98.4249
Pos 20																				-246.932	-213.41	-191.534	-199.139	-185.148	-171.123
Pos 21																					-313.675	-298.696	-252.907	-211.335	-191.017
Pos 22																						-268.059	-269.545	-254.677	-243.606
Pos 23																							-332.176	-317.128	-296.756
Pos 24																								-176.064	-180.7
Pos 25																									-145.038

* Pos 1,...,Pos 25 represents position

** Port 1,...,Port 25 represents portfolio

Appendix G3 - Estimates of Component VaR@95% Confidence Level for Geometric Brownian Motion Model

Table G3.02- Estimates of Component VaR@95% Confidence Level for Geometric Brownian Motion Model

Pos/Por	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	-11612	-3832	-2093.91	-1513.01	-1074.48	-807.059	-643.238	-546.8	-506.208	-446.369	-401.501	-352.195	-312.215	-265.888	-234.521	-237.871	-223.35	-206.457	-188.395	-171.834	-161.145	-148.936	-141.515	-131.778	-136.26
Pos 2		-4375.8	-2423.1	-1465.66	-1055.09	-782.296	-645.166	-510.663	-405.245	-338.513	-302.516	-302.634	-262.808	-247.48	-205.677	-188.633	-173.742	-171.617	-165.254	-169.828	-169.117	-155.752	-139.046	-131.088	-130.582
Pos 3			-2021.28	-1301.27	-979.023	-722.519	-606.761	-540.724	-447.714	-396.019	-338.16	-305.162	-251.847	-216.41	-200.71	-186.257	-160.988	-147.414	-147.666	-126.406	-117.756	-118.369	-106.447	-86.5909	-73.4466
Pos 4				-1223.68	-856.573	-672.882	-501.234	-425.018	-348.092	-285.284	-256.594	-206.763	-190.288	-159.816	-149.288	-115.244	-114.62	-100.875	-81.6451	-77.3618	-65.1324	-64.7809	-61.987	-60.1248	-49.4003
Pos 5					-1068.24	-815.796	-611.95	-481.341	-410.59	-366.285	-311.9	-275.415	-263.403	-213.204	-215.357	-181.72	-166.694	-154.239	-131.005	-126.876	-111.336	-99.6123	-97.6818	-92.1319	-87.7155
Pos 6						-1005.07	-810.32	-628.354	-514.057	-459.179	-390.308	-352.896	-319.47	-287.382	-264.575	-243.983	-219.002	-204.779	-176.825	-163.732	-150.022	-146.032	-136.852	-129.629	-117.596
Pos 7							-414.56	-370.693	-320.508	-252.584	-194.924	-154.885	-127.744	-114.592	-106.022	-84.2347	-66.5218	-59.139	-54.2284	-50.09	-49.209	-53.0025	-55.0593	-44.2921	-40.2268
Pos 8								-442.69	-362.312	-313.792	-257.394	-230.594	-218.569	-199.018	-155.435	-139.709	-140.773	-133.585	-122.58	-103.162	-97.6633	-90.4748	-86.377	-79.5703	-73.992
Pos 9									-486.475	-434.139	-379.38	-332.482	-303.188	-277.761	-270.173	-258.705	-232.629	-203.169	-177.968	-162.866	-135.616	-113.094	-112.557	-111.942	-96.9187
Pos 10										-301.323	-291.684	-269.329	-214.336	-203.563	-175.608	-173.142	-149.506	-129.045	-120.211	-100.665	-93.2746	-89.8284	-81.2784	-90.0268	-85.343
Pos 11											-394.499	-336.213	-296.817	-264.555	-238.938	-226.843	-195.81	-171.862	-166.401	-154.196	-144.539	-133.01	-118.069	-106.394	-97.1791
Pos 12												-173.625	-167.566	-158.353	-136.309	-113.39	-114.058	-99.4916	-97.9806	-95.2908	-92.7823	-88.3839	-74.6654	-79.6903	-70.1187
Pos 13													-287.577	-267.56	-247.557	-215.994	-213.02	-205.031	-196.266	-177.395	-169.158	-142.271	-130.693	-121.705	-111.935
Pos 14														-227.883	-187.773	-161.903	-149.332	-141.37	-138.748	-137.115	-131.448	-125.796	-111.351	-105.028	-94.5555
Pos 15															-202.574	-170.39	-151.778	-145.151	-132.513	-118.883	-101.512	-89.7109	-86.0878	-87.8259	-86.1037
Pos 16																-202.742	-184.218	-172.071	-161.97	-139.6	-128.814	-119.584	-121.183	-107.02	-102.67
Pos 17																	-152.508	-140.721	-128.057	-117.588	-100.592	-85.4718	-81.8318	-75.0047	-68.052
Pos 18																		-134.513	-121.797	-112.892	-110.859	-104.356	-93.7587	-89.4922	-82.1469
Pos 19																			-128.696	-134.041	-130.05	-120.281	-112.8	-114.153	-115.749
Pos 20																				-173.886	-173.068	-156.217	-150.443	-146.613	-138.642
Pos 21																					-140.131	-132.53	-123.72	-110.316	-118.543
Pos 22																						-142.521	-134.484	-124.898	-111.659
Pos 23																							-63.7899	-54.2077	-47.2271
Pos 24																								-144.508	-143.624
Pos 25																									-41.3309

* Pos 1,…,Pos 25 represents position

** Port 1,…,Port 25 represents portfolio

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios

Table H1.01- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Australia

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6459	0.5252	0.3629	0.2802	0.242	0.2064	0.1801	0.1612	0.1452	0.133	0.1213	0.114	0.1056	0.0966	0.0906	0.0852	0.08124	0.078	0.0747	0.0716	0.0688	0.0658	0.0633	0.0611
Pos 2		0.5875	0.4861	0.3797	0.3163	0.2427	0.2158	0.1919	0.1675	0.1535	0.1395	0.1293	0.1213	0.1137	0.108	0.1019	0.0974	0.09241	0.0846	0.0807	0.0776	0.0737	0.0704	0.0678	0.0653
Pos 3			0.3964	0.3146	0.2683	0.235	0.209	0.1889	0.1732	0.1589	0.1473	0.1375	0.1225	0.1158	0.1103	0.1047	0.1007	0.09562	0.0918	0.089	0.0853	0.0826	0.0801	0.0769	0.0745
Pos 4				0.366	0.2714	0.2371	0.2038	0.1777	0.1587	0.1439	0.1324	0.1208	0.1132	0.1046	0.0988	0.0924	0.0867	0.08188	0.0785	0.075	0.0716	0.0687	0.0659	0.0637	0.0612
Pos 5					0.2759	0.2426	0.2082	0.1819	0.1617	0.1453	0.133	0.1205	0.1134	0.1047	0.0986	0.0923	0.0869	0.08256	0.0788	0.0749	0.0715	0.0683	0.0655	0.0629	0.0603
Pos 6						0.239	0.2107	0.1881	0.1663	0.1539	0.1392	0.1291	0.1209	0.1138	0.1087	0.1027	0.0978	0.09306	0.0848	0.0819	0.0788	0.0753	0.0718	0.069	0.0668
Pos 7							0.2491	0.2165	0.1973	0.1796	0.1641	0.1508	0.1419	0.1312	0.1251	0.1171	0.1101	0.1046	0.0997	0.0953	0.0907	0.0869	0.0835	0.08	0.0768
Pos 8								0.2243	0.2007	0.1804	0.1631	0.1502	0.1402	0.1296	0.1218	0.114	0.1065	0.10122	0.0966	0.0922	0.0877	0.0835	0.0799	0.0763	0.0731
Pos 9									0.212	0.1895	0.1712	0.158	0.1482	0.1371	0.1292	0.1208	0.1141	0.10829	0.1011	0.0953	0.0909	0.085	0.0817	0.0785	0.0754
Pos 10										0.172	0.1572	0.1444	0.1332	0.1232	0.116	0.1085	0.1017	0.09645	0.0922	0.0884	0.084	0.0805	0.0769	0.0739	0.071
Pos 11											0.1508	0.139	0.1295	0.1199	0.1137	0.1062	0.1001	0.09587	0.0899	0.0847	0.0813	0.0773	0.0734	0.07	0.067
Pos 12												0.1376	0.1272	0.1169	0.1096	0.1027	0.0967	0.09108	0.0873	0.0829	0.0796	0.076	0.0728	0.0699	0.0672
Pos 13													0.1303	0.1217	0.1147	0.1082	0.1026	0.09731	0.0938	0.091	0.0872	0.0843	0.0811	0.0786	0.0751
Pos 14														0.1186	0.1127	0.102	0.0951	0.09071	0.087	0.0818	0.0781	0.0743	0.071	0.068	0.0649
Pos 15															0.1191	0.1123	0.1059	0.10152	0.0981	0.0935	0.0898	0.0862	0.0826	0.0794	0.0774
Pos 16																0.1028	0.0958	0.09175	0.0874	0.0824	0.0782	0.0743	0.0711	0.0684	0.0654
Pos 17																	0.1126	0.10797	0.1044	0.0983	0.0937	0.0892	0.0853	0.0822	0.078
Pos 18																		0.09983	0.0963	0.0925	0.0878	0.0848	0.0814	0.0783	0.0762
Pos 19																			0.0913	0.0879	0.0846	0.0798	0.0759	0.0731	0.0705
Pos 20																				0.1022	0.0982	0.0939	0.0902	0.0858	0.0827
Pos 21																					0.0876	0.0844	0.0809	0.0784	0.0751
Pos 22																						0.0837	0.0803	0.0768	0.0733
Pos 23																							0.0841	0.0808	0.0775
Pos 24																								0.0838	0.0801
Pos 25																									0.0762

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.02- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Brazil																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6765	0.4847	0.3581	0.285	0.2375	0.2039	0.1775	0.158	0.1437	0.1309	0.1206	0.1116	0.1026	0.1044	0.0978	0.0922	0.0865	0.082	0.0778	0.0743	0.0712	0.0687	0.0655	0.0626
Pos 2		0.5383	0.3893	0.3003	0.2489	0.2135	0.1848	0.165	0.1525	0.1381	0.1262	0.1179	0.1093	0.1012	0.1082	0.1017	0.0961	0.0901	0.0854	0.081	0.0772	0.0744	0.0713	0.0679	0.0653
Pos 3			0.6006	0.5123	0.4329	0.3758	0.3218	0.2951	0.2806	0.2585	0.2464	0.2255	0.2133	0.2073	0.2107	0.1985	0.1869	0.1808	0.1662	0.1599	0.158	0.1517	0.1448	0.1382	0.1334
Pos 4				0.3343	0.2664	0.2222	0.1908	0.1678	0.1493	0.1344	0.1223	0.1128	0.1046	0.0975	0.1002	0.0942	0.0886	0.0823	0.078	0.0742	0.0707	0.068	0.0653	0.0626	0.0608
Pos 5					0.2676	0.2295	0.1953	0.1663	0.1495	0.1349	0.1222	0.1127	0.1044	0.0967	0.1004	0.094	0.0882	0.083	0.0785	0.0743	0.0707	0.0682	0.0652	0.0621	0.0603
Pos 6						0.2441	0.2102	0.185	0.1679	0.1517	0.1387	0.129	0.1194	0.1111	0.117	0.1095	0.1032	0.0965	0.0912	0.0864	0.0822	0.0786	0.0756	0.0722	0.0697
Pos 7							0.2599	0.228	0.2021	0.1817	0.1635	0.1486	0.1372	0.1273	0.1309	0.1218	0.1137	0.1057	0.0993	0.0941	0.0888	0.0846	0.0804	0.0771	0.0745
Pos 8								0.1635	0.145	0.1301	0.118	0.1091	0.1009	0.0935	0.0983	0.0923	0.0866	0.0809	0.0767	0.0726	0.069	0.0664	0.0633	0.0604	0.0582
Pos 9									0.1969	0.1782	0.168	0.1564	0.1468	0.1423	0.1579	0.1468	0.1364	0.1261	0.1193	0.1127	0.1076	0.1027	0.0981	0.0932	0.0918
Pos 10										0.1483	0.1359	0.1251	0.1163	0.1086	0.1126	0.1058	0.0993	0.0925	0.0875	0.0827	0.0789	0.0758	0.0721	0.0689	0.0671
Pos 11											0.1319	0.1221	0.112	0.1032	0.1063	0.0999	0.0937	0.0875	0.083	0.0783	0.0746	0.0715	0.0688	0.0657	0.063
Pos 12												0.1937	0.1818	0.1762	0.1942	0.1784	0.1686	0.1585	0.1485	0.1412	0.1334	0.1272	0.1211	0.1166	0.1118
Pos 13													0.1394	0.1299	0.1336	0.1253	0.1161	0.1086	0.1029	0.0972	0.0925	0.0888	0.0855	0.0815	0.079
Pos 14														0.0941	0.0985	0.0924	0.0875	0.0814	0.0774	0.0733	0.07	0.0672	0.0649	0.0618	0.0596
Pos 15															0.126	0.1196	0.1162	0.1149	0.1101	0.1058	0.1043	0.1018	0.0998	0.0959	0.0948
Pos 16																0.1612	0.1524	0.1453	0.1373	0.1303	0.1239	0.1165	0.1112	0.1055	0.1005
Pos 17																	0.1358	0.1287	0.1215	0.1146	0.1075	0.1042	0.0996	0.0953	0.0913
Pos 18																		0.0858	0.0813	0.0771	0.0734	0.0707	0.0675	0.0646	0.0622
Pos 19																			0.3054	0.2718	0.2721	0.2551	0.2428	0.2442	0.2295
Pos 20																				0.1016	0.0968	0.0925	0.0888	0.0848	0.0814
Pos 21																					0.1227	0.1165	0.117	0.1126	0.1083
Pos 22																						0.1949	0.1909	0.1864	0.1788
Pos 23																							0.1207	0.1159	0.111
Pos 24																								0.0906	0.0871
Pos 25																									0.1084

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.03- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Chile

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6627	0.4635	0.359	0.2824	0.2374	0.2084	0.1825	0.1615	0.1487	0.135	0.1238	0.1146	0.1138	0.106	0.1011	0.0948	0.0902	0.0851	0.0808	0.0776	0.0746	0.0713	0.06771	0.0647
Pos 2		0.5514	0.3908	0.295	0.2427	0.2086	0.1829	0.1613	0.1446	0.1336	0.1224	0.1134	0.1056	0.1065	0.0997	0.0955	0.0907	0.0855	0.082	0.0781	0.0751	0.0721	0.0699	0.06647	0.0643
Pos 3			0.401	0.3103	0.2528	0.2164	0.1879	0.1652	0.1482	0.1363	0.1245	0.1153	0.1068	0.1065	0.0996	0.0944	0.0891	0.0843	0.0804	0.0767	0.0734	0.0704	0.0673	0.06421	0.0617
Pos 4				0.3018	0.2468	0.2106	0.1852	0.163	0.146	0.1342	0.1222	0.1139	0.1061	0.1052	0.0986	0.0941	0.0891	0.0838	0.0795	0.0755	0.0723	0.0692	0.0666	0.06287	0.0608
Pos 5					0.3142	0.2704	0.237	0.2069	0.1813	0.163	0.1485	0.1359	0.1259	0.1241	0.1149	0.1096	0.1029	0.0969	0.092	0.0858	0.0822	0.0789	0.0755	0.07239	0.0692
Pos 6						0.3829	0.3399	0.313	0.2785	0.2529	0.2335	0.2109	0.1965	0.1922	0.1788	0.1689	0.1577	0.1506	0.1414	0.1364	0.1301	0.1235	0.12	0.11925	0.1155
Pos 7							0.2638	0.2397	0.2136	0.1931	0.1787	0.1643	0.1524	0.152	0.1428	0.1348	0.1261	0.1165	0.11	0.1055	0.1005	0.0953	0.0904	0.08757	0.0846
Pos 8								0.2459	0.2187	0.1984	0.1844	0.1695	0.1563	0.1605	0.1489	0.1398	0.132	0.1258	0.1198	0.1139	0.1076	0.1028	0.0995	0.09394	0.0902
Pos 9									0.2841	0.2526	0.2283	0.2065	0.1906	0.1805	0.1602	0.1498	0.14	0.1313	0.1231	0.1152	0.1102	0.1044	0.1	0.09675	0.092
Pos 10										0.2501	0.2362	0.2187	0.2029	0.1998	0.186	0.176	0.1669	0.1598	0.1525	0.1469	0.1385	0.1326	0.1277	0.12546	0.121
Pos 11											0.1595	0.1473	0.1359	0.1342	0.1253	0.119	0.1116	0.1054	0.1	0.0951	0.0905	0.0862	0.082	0.07935	0.0758
Pos 12												0.192	0.1787	0.1788	0.1649	0.1649	0.1538	0.1441	0.1352	0.1275	0.1218	0.1143	0.1075	0.10311	0.0982
Pos 13													0.1879	0.1853	0.1719	0.1628	0.1532	0.1439	0.1376	0.1307	0.1246	0.1175	0.112	0.10912	0.1048
Pos 14														0.1566	0.1466	0.1389	0.1329	0.136	0.1334	0.1285	0.1243	0.1199	0.1192	0.12048	0.1163
Pos 15															0.186	0.1756	0.164	0.1543	0.1445	0.1357	0.1293	0.122	0.1159	0.11265	0.1072
Pos 16																0.126	0.121	0.1155	0.1083	0.1049	0.0992	0.0927	0.0921	0.09122	0.0887
Pos 17																	0.1576	0.1495	0.14	0.1346	0.1292	0.1237	0.1173	0.11265	0.1091
Pos 18																		0.1255	0.1187	0.1145	0.109	0.1043	0.1003	0.0968	0.093
Pos 19																			0.1503	0.142	0.1351	0.1273	0.1209	0.11875	0.1145
Pos 20																				0.1183	0.112	0.1069	0.1019	0.0974	0.0939
Pos 21																					0.184	0.1764	0.1692	0.16622	0.1624
Pos 22																						0.1107	0.1057	0.1033	0.0983
Pos 23																							0.091	0.08731	0.0833
Pos 24																								0.08654	0.0845
Pos 25																									0.0828

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Ratios (Continued)

Table H1.04- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for France

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5971	0.4214	0.3325	0.2782	0.2429	0.2161	0.1908	0.1797	0.1626	0.1518	0.1398	0.1324	0.1243	0.1257	0.1198	0.1134	0.1079	0.1059	0.1004	0.0967	0.092	0.0893	0.0874	0.0866
Pos 2		0.563	0.4525	0.3941	0.351	0.3226	0.2905	0.2548	0.251	0.2315	0.2221	0.2073	0.196	0.1838	0.1904	0.1775	0.1677	0.16107	0.1585	0.1504	0.1446	0.1384	0.1341	0.132	0.1288
Pos 3			0.5104	0.3872	0.318	0.2754	0.2488	0.2167	0.2049	0.1814	0.1645	0.1497	0.1401	0.1318	0.1374	0.1305	0.1224	0.11692	0.1148	0.1082	0.1043	0.0994	0.0941	0.0937	0.0912
Pos 4				0.3922	0.3097	0.2588	0.2231	0.1968	0.1808	0.1624	0.1477	0.1372	0.1279	0.1209	0.1171	0.111	0.1062	0.09914	0.0954	0.0908	0.0865	0.0832	0.0785	0.0763	0.074
Pos 5					0.2993	0.2444	0.2099	0.185	0.1677	0.1507	0.1373	0.1258	0.1161	0.1075	0.1015	0.0946	0.0902	0.08511	0.0824	0.0778	0.074	0.0704	0.0675	0.0657	0.0646
Pos 6						0.2264	0.194	0.1718	0.157	0.1404	0.1283	0.1177	0.109	0.1015	0.0971	0.0917	0.0866	0.08134	0.0786	0.0742	0.0707	0.0676	0.0646	0.0628	0.0617
Pos 7							0.2156	0.1913	0.1704	0.1549	0.1434	0.1323	0.1217	0.1133	0.1044	0.0982	0.0935	0.08696	0.0828	0.0787	0.0708	0.0681	0.0656	0.0631	0.0608
Pos 8								-0.19	-0.053	-0.119	-0.099	0.1367	0.1645	0.2084	-0.7637	-0.6369	-0.615	-0.5408	-0.4641	-0.4989	-0.387	-0.371	-0.391	-0.316	-0.2935
Pos 9									0.17	0.158	0.1432	0.1355	0.1274	0.1208	0.1103	0.1058	0.1018	0.09556	0.0879	0.0839	0.0802	0.0772	0.0745	0.0696	0.0654
Pos 10										0.2176	0.1952	0.1736	0.1583	0.1452	0.1522	0.1417	0.1325	0.12639	0.1273	0.1192	0.1144	0.1085	0.1036	0.104	0.1059
Pos 11											0.1507	0.1391	0.1286	0.1205	0.1217	0.1162	0.1105	0.1042	0.1002	0.0943	0.0914	0.0878	0.0832	0.0812	0.0789
Pos 12												0.1387	0.1265	0.1161	0.1121	0.1044	0.0976	0.09292	0.09	0.0852	0.0817	0.0777	0.0743	0.073	0.0717
Pos 13													0.1349	0.1235	0.1179	0.1087	0.0995	0.09474	0.0913	0.0865	0.083	0.079	0.0753	0.0738	0.0721
Pos 14														0.1164	0.1153	0.1068	0.0995	0.09368	0.0898	0.0849	0.0807	0.0768	0.0738	0.0722	0.0703
Pos 15															0.1047	0.0996	0.0957	0.0898	0.0824	0.079	0.0755	0.0728	0.0698	0.0655	0.062
Pos 16																0.1197	0.1119	0.10654	0.1017	0.0969	0.0927	0.0881	0.0843	0.0817	0.0797
Pos 17																	0.1077	0.10339	0.0996	0.0945	0.0916	0.0864	0.0822	0.0813	0.081
Pos 18																		0.08945	0.0841	0.0802	0.076	0.073	0.0699	0.0669	0.0641
Pos 19																			0.0975	0.0936	0.0893	0.0863	0.0826	0.0762	0.0722
Pos 20																				0.0996	0.0956	0.0907	0.0857	0.0851	0.084
Pos 21																					0.0739	0.0712	0.0685	0.0659	0.0633
Pos 22																						0.0799	0.0772	0.0746	0.0723
Pos 23																							0.1037	0.1018	0.1003
Pos 24																								0.0915	0.0879
Pos 25																									0.0672

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.05- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Germany

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5617	0.3914	0.3217	0.2719	0.2332	0.2043	0.1842	0.168	0.1563	0.1428	0.1325	0.1242	0.1172	0.1098	0.1029	0.099	0.0944	0.0899	0.087	0.0836	0.0805	0.078	0.0747	0.0722
Pos 2		0.5999	0.4109	0.3242	0.2598	0.2206	0.1957	0.1718	0.1564	0.144	0.1316	0.1215	0.1139	0.1066	0.1008	0.0924	0.0888	0.0849	0.0809	0.0777	0.0745	0.0717	0.069	0.0658	0.0638
Pos 3			1.3885	1.2147	1.4367	1.2834	1.1843	1.4108	1.6711	1.6732	2.1816	1.1814	0.9461	0.8951	0.7988	0.8218	0.5945	0.4902	0.4108	0.4042	0.3795	0.3311	0.311	0.323	0.2833
Pos 4				0.3961	0.3359	0.2841	0.2518	0.2235	0.202	0.1683	0.1573	0.143	0.133	0.1232	0.1151	0.11	0.1056	0.0996	0.0947	0.0909	0.0874	0.0838	0.0806	0.0778	0.0754
Pos 5					0.2607	0.2224	0.1967	0.1767	0.1614	0.1479	0.1367	0.1258	0.1182	0.1111	0.1051	0.0959	0.0903	0.0857	0.0815	0.08	0.0768	0.074	0.072	0.0693	0.0675
Pos 6						0.2466	0.2119	0.1824	0.153	0.1401	0.127	0.1164	0.1086	0.1012	0.0957	0.0904	0.0872	0.0823	0.0789	0.0742	0.0702	0.067	0.0639	0.0607	0.0589
Pos 7							0.2611	0.2351	0.2129	0.1947	0.1829	0.1668	0.1552	0.1431	0.1344	0.1281	0.1213	0.1147	0.109	0.106	0.1023	0.0982	0.0949	0.0907	0.0872
Pos 8								0.1919	0.1706	0.156	0.1359	0.1252	0.1166	0.1087	0.1035	0.0969	0.0925	0.0876	0.084	0.0795	0.0752	0.0726	0.0694	0.0661	0.0641
Pos 9									0.1609	0.146	0.1337	0.1226	0.1138	0.1063	0.1004	0.0952	0.0916	0.0866	0.0827	0.0777	0.0732	0.07	0.0667	0.0641	0.0621
Pos 10										0.165	0.1554	0.1415	0.1307	0.121	0.1119	0.1074	0.1015	0.0962	0.0909	0.0877	0.0839	0.0803	0.077	0.0753	0.0728
Pos 11											0.1325	0.1226	0.1143	0.1076	0.1026	0.096	0.0919	0.0875	0.0837	0.0791	0.075	0.0723	0.069	0.0658	0.0636
Pos 12												2.7793	0.4696	0.3586	0.3523	0.7549	0.0784	-0.499	-10.4	-1.074	-43.524	0.8323	0.7214	1.8753	0.5892
Pos 13													0.2196	0.203	0.1899	0.1858	0.1726	0.1625	0.1548	0.1486	0.1409	0.1323	0.1282	0.126	0.1212
Pos 14														0.1367	0.1277	0.1207	0.1145	0.1086	0.1042	0.1005	0.0969	0.0927	0.0894	0.0867	0.0834
Pos 15															0.174	0.168	0.1583	0.1501	0.1428	0.1405	0.1354	0.1286	0.1244	0.1217	0.1161
Pos 16																0.0971	0.0928	0.0881	0.0839	0.0799	0.0764	0.073	0.0698	0.0667	0.0645
Pos 17																	0.1572	0.1479	0.1392	0.1358	0.1322	0.1266	0.1239	0.1221	0.117
Pos 18																		-2.599	2.2729	-2.431	1.5194	0.6143	0.7483	0.9171	0.5664
Pos 19																			0.2837	0.27	0.2506	0.2316	0.2231	0.2238	0.206
Pos 20																				0.0812	0.0773	0.0739	0.0698	0.067	0.0644
Pos 21																					0.1156	0.1104	0.1044	0.0999	0.0958
Pos 22																						0.3552	0.3351	0.3401	0.2991
Pos 23																							0.0725	0.0696	0.0669
Pos 24																								0.0696	0.0673
Pos 25																									0.1632

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.06- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Hong Kong																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.601	0.4006	0.3189	0.264	0.221	0.1921	0.1701	0.1531	0.1407	0.1281	0.118	0.109	0.1007	0.094	0.0885	0.08311	0.0789	0.0748	0.0713	0.0679	0.06528	0.0624	0.0607	0.0596
Pos 2		0.537	0.3782	0.274	0.2237	0.1888	0.1642	0.1466	0.132	0.1201	0.111	0.1027	0.0944	0.0881	0.0831	0.0784	0.07408	0.0703	0.0667	0.064	0.061	0.05853	0.0562	0.0545	0.0533
Pos 3			0.4137	0.339	0.2769	0.2281	0.1961	0.1717	0.1553	0.1432	0.1288	0.1183	0.1104	0.102	0.0952	0.0899	0.08466	0.0803	0.0761	0.072	0.0693	0.06639	0.0639	0.0618	0.0605
Pos 4				0.275	0.2214	0.1864	0.1619	0.145	0.1296	0.1188	0.1093	0.1014	0.0934	0.0867	0.0815	0.0768	0.07263	0.0691	0.0655	0.0628	0.0597	0.05717	0.0549	0.0533	0.0522
Pos 5					0.2309	0.1949	0.1698	0.151	0.1307	0.1204	0.1104	0.1014	0.0943	0.0873	0.0814	0.0767	0.07261	0.0686	0.0651	0.0623	0.0596	0.057	0.0547	0.0529	0.052
Pos 6						0.5494	0.4021	0.3153	0.3121	0.2918	0.2711	0.2539	0.2402	0.2295	0.2248	0.2069	0.19853	0.1924	0.182	0.173	0.1708	0.16428	0.1591	0.1553	0.1515
Pos 7							0.5095	0.4056	0.412	0.4822	0.4708	0.4984	0.4508	0.4677	0.5092	0.4495	0.39252	0.3895	0.3776	0.3593	0.4115	0.38627	0.3902	0.3443	0.365
Pos 8								0.2667	0.2562	0.2466	0.2287	0.212	0.204	0.194	0.1848	0.1674	0.16381	0.1568	0.1488	0.1441	0.1446	0.13861	0.1354	0.1333	0.1303
Pos 9									0.1409	0.1293	0.1174	0.1076	0.1002	0.0928	0.0868	0.082	0.07721	0.073	0.0692	0.0658	0.0629	0.06032	0.0579	0.056	0.0551
Pos 10										0.182	0.1675	0.1559	0.1473	0.1402	0.1328	0.129	0.1194	0.1149	0.1089	0.1043	0.1	0.09452	0.0909	0.0853	0.0836
Pos 11											0.1259	0.1155	0.1068	0.099	0.0921	0.0865	0.08148	0.0772	0.0732	0.0675	0.0646	0.06175	0.0592	0.057	0.0555
Pos 12												0.1216	0.1138	0.1064	0.0996	0.0951	0.08997	0.0802	0.076	0.0728	0.0702	0.06693	0.0642	0.0623	0.0611
Pos 13													0.1268	0.1189	0.1124	0.1077	0.10175	0.0968	0.0919	0.0874	0.0819	0.07876	0.075	0.073	0.0716
Pos 14														0.1049	0.0978	0.092	0.08664	0.0824	0.0781	0.0743	0.0703	0.06765	0.0649	0.0629	0.0621
Pos 15															0.1198	0.1119	0.10642	0.101	0.096	0.091	0.0863	0.08267	0.0792	0.0769	0.0752
Pos 16																0.1117	0.10604	0.1017	0.0966	0.091	0.0877	0.08426	0.0808	0.0784	0.0765
Pos 17																	0.20576	0.1946	0.1852	0.1779	0.1689	0.16049	0.1554	0.1498	0.1419
Pos 18																		0.0816	0.0771	0.0738	0.0712	0.06785	0.0649	0.0631	0.0619
Pos 19																			0.1592	0.1513	0.1447	0.13888	0.1324	0.1286	0.1263
Pos 20																				0.0647	0.0618	0.05889	0.0565	0.0546	0.0535
Pos 21																					0.0818	0.07837	0.0748	0.0721	0.0705
Pos 22																						0.40024	0.4051	0.373	0.3584
Pos 23																							0.1297	0.1252	0.1263
Pos 24																								0.3246	0.2412
Pos 25																									0.2866

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.07- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for India

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5959	0.5033	0.3653	0.29402	0.2454	0.213	0.192	0.1719	0.1523	0.1366	0.1256	0.117	0.109	0.1024	0.0965	0.0915	0.087	0.0833	0.0796	0.0765	0.0733	0.0706	0.0682	0.066
Pos 2		0.6408	0.622	0.4708	0.37153	0.3159	0.2739	0.2451	0.219	0.1987	0.1857	0.1738	0.1621	0.1481	0.1373	0.1289	0.1231	0.1167	0.1104	0.106	0.101	0.0965	0.0922	0.0883	0.0858
Pos 3			0.394	0.3167	0.26555	0.2276	0.2001	0.1806	0.1635	0.1535	0.1435	0.1339	0.1249	0.1183	0.1122	0.1068	0.1024	0.0975	0.0935	0.0902	0.0866	0.083	0.0799	0.0775	0.0748
Pos 4				0.4039	0.32791	0.2778	0.2409	0.2151	0.1918	0.1683	0.1493	0.1352	0.1257	0.1167	0.1092	0.1038	0.0973	0.0916	0.0868	0.0823	0.0785	0.0748	0.0716	0.0685	0.0658
Pos 5					0.39635	0.3275	0.2843	0.2497	0.2237	0.2029	0.1858	0.1701	0.1575	0.1439	0.1345	0.1282	0.1208	0.1136	0.1078	0.1023	0.0976	0.0933	0.0889	0.0852	0.0834
Pos 6						0.3253	0.2803	0.2298	0.2076	0.191	0.1785	0.1632	0.1478	0.1367	0.1261	0.1169	0.1112	0.1075	0.1034	0.0994	0.0947	0.0899	0.0861	0.083	0.0808
Pos 7							0.4337	0.392	0.3511	0.3152	0.2898	0.2729	0.2567	0.2406	0.2298	0.2158	0.2054	0.19	0.1815	0.1734	0.1641	0.1561	0.1502	0.142	0.1382
Pos 8								0.2245	0.1998	0.188	0.177	0.1656	0.1531	0.1418	0.1344	0.1223	0.1172	0.1123	0.1069	0.1029	0.0983	0.0945	0.0906	0.0869	0.084
Pos 9									0.2614	0.2383	0.2201	0.2035	0.1899	0.174	0.1694	0.1604	0.1482	0.142	0.1337	0.1283	0.121	0.1154	0.1105	0.1061	0.1019
Pos 10										0.172	0.151	0.1372	0.1267	0.1185	0.1118	0.1063	0.0995	0.0934	0.0884	0.0837	0.0808	0.0771	0.0739	0.0705	0.067
Pos 11											0.1406	0.1283	0.1193	0.1111	0.1051	0.0998	0.0938	0.0881	0.0832	0.0773	0.074	0.0708	0.0679	0.0649	0.0623
Pos 12												0.1254	0.1161	0.1081	0.1021	0.0966	0.0892	0.0841	0.0784	0.0746	0.0715	0.0683	0.0653	0.0627	0.0601
Pos 13													0.1726	0.1614	0.1488	0.1404	0.1324	0.1262	0.1192	0.1135	0.1083	0.1036	0.1001	0.096	0.0916
Pos 14														0.2407	0.2189	0.2057	0.1931	0.1777	0.172	0.1643	0.1553	0.1487	0.1398	0.1318	0.1301
Pos 15															0.1581	0.1501	0.1422	0.1363	0.1294	0.1256	0.1198	0.1141	0.11	0.1062	0.1013
Pos 16																0.1378	0.1304	0.1252	0.119	0.1148	0.1087	0.1035	0.0997	0.0958	0.0931
Pos 17																	0.1149	0.1073	0.1	0.0957	0.092	0.0874	0.0832	0.0796	0.0778
Pos 18																		0.1264	0.1196	0.1099	0.1053	0.1004	0.097	0.0931	0.0895
Pos 19																			0.091	0.0868	0.0833	0.0799	0.0762	0.0731	0.0706
Pos 20																				0.0908	0.0868	0.0831	0.0799	0.0762	0.0733
Pos 21																					0.1047	0.0993	0.0948	0.09	0.0863
Pos 22																						0.1269	0.1216	0.1156	0.1118
Pos 23																							0.1113	0.105	0.1019
Pos 24																								0.0996	0.0957
Pos 25																									0.0661

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.08- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Indonesia																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.667	0.513	0.4125	0.3897	0.3899	0.3261	0.2754	0.2667	0.2321	0.2075	0.1893	0.1729	0.159	0.1472	0.1373	0.1274	0.1192	0.1118	0.1049	0.09901	0.09391	0.0893	0.0854	0.0806
Pos 2		0.5655	0.3872	0.3064	0.2937	0.3192	0.2616	0.2183	0.204	0.1783	0.1566	0.1442	0.1329	0.1219	0.1117	0.1055	0.0979	0.0915	0.0855	0.0802	0.07613	0.07373	0.0699	0.0666	0.0641
Pos 3			0.3866	0.3005	0.2926	0.3334	0.2751	0.2309	0.2145	0.1855	0.1628	0.1486	0.1364	0.1252	0.1149	0.1084	0.1012	0.0946	0.0884	0.0834	0.07917	0.07703	0.0737	0.0699	0.0672
Pos 4				0.3049	0.2874	0.3233	0.2648	0.2216	0.1997	0.1717	0.1511	0.1376	0.1269	0.1166	0.1064	0.1001	0.0932	0.0873	0.0809	0.0768	0.07301	0.07012	0.0668	0.064	0.0616
Pos 5					0.2784	0.3112	0.2689	0.2377	0.2211	0.2008	0.1876	0.177	0.1624	0.1536	0.1456	0.1389	0.1315	0.1253	0.12	0.1153	0.10993	0.10685	0.1017	0.098	0.097
Pos 6						0.2262	0.2048	0.1863	0.1825	0.1684	0.159	0.1498	0.1396	0.1306	0.1244	0.1183	0.113	0.1083	0.1043	0.1012	0.09717	0.09356	0.0904	0.088	0.0872
Pos 7							0.2912	0.2513	0.2207	0.1936	0.1767	0.1609	0.1484	0.1376	0.1268	0.1183	0.1109	0.1045	0.0982	0.0932	0.08868	0.08466	0.0813	0.0776	0.0752
Pos 8								0.2382	0.2314	0.2031	0.1815	0.1666	0.1537	0.1421	0.1308	0.123	0.1144	0.1071	0.1006	0.0953	0.09047	0.08775	0.0834	0.0795	0.0771
Pos 9									0.1933	0.1771	0.165	0.1536	0.1431	0.1344	0.1273	0.1212	0.1156	0.1111	0.1062	0.1015	0.097	0.09289	0.0897	0.087	0.085
Pos 10										0.176	0.1551	0.1422	0.1305	0.1195	0.1088	0.1019	0.0942	0.0866	0.0807	0.0765	0.07261	0.06985	0.0665	0.0632	0.0607
Pos 11											0.1981	0.1851	0.1704	0.1578	0.1471	0.1362	0.1275	0.1198	0.1133	0.107	0.10162	0.10014	0.095	0.0911	0.0864
Pos 12												0.1711	0.1588	0.147	0.1372	0.1296	0.123	0.1163	0.1105	0.1047	0.10006	0.09691	0.0926	0.0893	0.0866
Pos 13													0.2386	0.2198	0.2023	0.1886	0.1724	0.1627	0.1567	0.1499	0.14059	0.1379	0.1321	0.1316	0.1228
Pos 14														0.2018	0.1912	0.1781	0.1673	0.1555	0.1485	0.1414	0.13376	0.13133	0.1272	0.1218	0.1164
Pos 15															0.1231	0.1172	0.109	0.1012	0.0941	0.089	0.08461	0.08171	0.0779	0.074	0.0709
Pos 16																0.1728	0.1625	0.1547	0.1482	0.1411	0.13428	0.13376	0.1275	0.1234	0.1194
Pos 17																	0.1188	0.1111	0.1048	0.0989	0.0936	0.09198	0.087	0.0828	0.0791
Pos 18																		0.1009	0.0944	0.0899	0.08548	0.08293	0.0792	0.0753	0.0727
Pos 19																			0.0833	0.0788	0.07476	0.07221	0.0688	0.0653	0.0624
Pos 20																				0.1727	0.16225	0.16285	0.1523	0.1418	0.1314
Pos 21																					0.08109	0.07821	0.0739	0.0706	0.0672
Pos 22																						0.10876	0.1055	0.1027	0.0996
Pos 23																							0.0934	0.0902	0.0861
Pos 24																								0.1001	0.096
Pos 25																									0.1046

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.09- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Ireland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5796	0.4219	0.3268	0.2672	1.265	0.9774	0.829	0.6825	0.5763	0.5195	0.4528	0.4002	0.3341	0.29795	0.2709	0.2454	0.2257	0.2066	0.196	0.2061	0.1917	0.1762	0.168	0.1632
Pos 2		0.5723	0.4159	0.3226	0.2637	0.3875	0.3401	0.3016	0.2675	0.2418	0.2251	0.2049	0.1899	0.1762	0.16619	0.1576	0.1486	0.1408	0.1339	0.1313	0.144	0.135	0.1276	0.1228	0.1188
Pos 3			0.4915	0.3883	0.3121	0.4928	0.4342	0.3846	0.3447	0.3155	0.2957	0.2702	0.2488	0.2249	0.21035	0.1997	0.1863	0.1757	0.1672	0.1594	0.1721	0.168	0.1583	0.1512	0.1497
Pos 4				0.392	0.3206	0.4893	0.4232	0.3679	0.3234	0.286	0.2629	0.2371	0.2158	0.1979	0.18419	0.17	0.1577	0.1486	0.1387	0.1348	0.1454	0.1383	0.1324	0.1291	0.1259
Pos 5					0.4185	-0.5227	-0.43	-0.438	-0.467	-0.475	-0.556	-0.7561	-1.0374	-1.494	-2.3046	-49.25	2.6228	1.5092	0.7568	0.6544	0.4348	0.3998	0.2827	0.2455	0.2259
Pos 6						0.2786	0.2589	0.2347	0.2179	0.2048	0.1987	0.1952	0.1861	0.1808	0.18048	0.1777	0.1742	0.1664	0.1582	0.1571	0.193	0.1864	0.1831	0.1833	0.1861
Pos 7							0.4173	0.3678	0.3286	0.2957	0.2725	0.2468	0.2263	0.2119	0.19867	0.1868	0.1744	0.1674	0.1604	0.1558	0.1684	0.1587	0.1497	0.1458	0.1415
Pos 8								2.8734	1.922	1.5722	1.2066	0.8626	0.7031	0.609	0.54497	0.4658	0.409	0.369	0.3518	0.314	0.2449	0.2378	0.2219	0.2035	0.1946
Pos 9									1.7885	1.4339	1.2454	1.1024	0.8653	0.8912	0.78166	0.5279	0.4477	0.4364	0.4044	0.3935	0.3761	0.3657	0.327	0.3055	0.3354
Pos 10										0.3331	0.3023	0.275	0.2507	0.2296	0.20973	0.1934	0.1776	0.1662	0.1577	0.1529	0.1652	0.1573	0.1493	0.142	0.1383
Pos 11											0.3605	0.3285	0.3034	0.2973	0.27769	0.2628	0.242	0.2305	0.2163	0.2093	0.2294	0.2133	0.2057	0.1996	0.1966
Pos 12												0.2939	0.2734	0.2514	0.23034	0.213	0.1984	0.1877	0.1744	0.1673	0.1713	0.1612	0.1527	0.1477	0.1439
Pos 13													0.3722	0.3238	0.28993	0.2608	0.2341	0.2152	0.2026	0.1934	0.2053	0.2003	0.179	0.1722	0.1671
Pos 14														0.1873	0.17426	0.1632	0.1527	0.1457	0.1369	0.1366	0.1445	0.1369	0.1315	0.1303	0.1259
Pos 15															0.32311	0.2903	0.267	0.2494	0.2249	0.2171	0.1999	0.1922	0.1782	0.1717	0.161
Pos 16																0.3138	0.2837	0.2684	0.2462	0.2316	0.236	0.2309	0.2266	0.2139	0.1955
Pos 17																	0.2413	0.23	0.2166	0.1987	0.2027	0.1978	0.1806	0.1701	0.1664
Pos 18																		0.2968	0.2772	0.277	0.2657	0.2571	0.2364	0.2283	0.2279
Pos 19																			0.2421	0.2341	0.286	0.2594	0.2522	0.2537	0.248
Pos 20																				0.2361	0.2392	0.2316	0.2175	0.2039	0.2045
Pos 21																					0.1073	0.1047	0.1004	0.0978	0.0949
Pos 22																						0.1811	0.1776	0.166	0.1642
Pos 23																							0.16	0.1508	0.1462
Pos 24																								0.2105	0.2012
Pos 25																									0.2235

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.10- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Israel

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5798	0.4651	0.3415	0.2749	0.2229	0.1962	0.176	0.1625	0.1457	0.134	0.1274	0.1172	0.1087	0.1032	0.0955	0.0903	0.0851	0.0808	0.0767	0.0736	0.0713	0.0688	0.0663	0.0636
Pos 2		0.5794	0.4774	0.3685	0.301	0.2436	0.2165	0.1934	0.1679	0.153	0.1398	0.1299	0.1201	0.1113	0.1061	0.0991	0.0939	0.0891	0.0847	0.0815	0.0777	0.075	0.0723	0.0691	0.0667
Pos 3			0.5446	0.4721	0.4082	0.3972	0.3646	0.3344	0.3179	0.3005	0.2933	0.2803	0.268	0.2482	0.2363	0.2404	0.2247	0.212	0.2002	0.1918	0.1829	0.1761	0.1676	0.1597	0.1573
Pos 4				0.372	0.2996	0.2476	0.2133	0.1883	0.1719	0.1548	0.1388	0.1338	0.1226	0.114	0.1071	0.0992	0.0937	0.0883	0.0843	0.0801	0.0764	0.0733	0.0701	0.0676	0.065
Pos 5					0.3568	0.2971	0.2649	0.2411	0.219	0.1972	0.1776	0.1713	0.1565	0.1448	0.1392	0.1299	0.1233	0.1164	0.1102	0.1055	0.1005	0.0951	0.091	0.0871	0.0845
Pos 6						0.2094	0.1843	0.1612	0.1453	0.1308	0.119	0.1134	0.1038	0.0969	0.0913	0.084	0.0793	0.0749	0.071	0.0673	0.0641	0.0619	0.0593	0.057	0.055
Pos 7							0.3337	0.2894	0.2765	0.254	0.2319	0.2462	0.2285	0.2115	0.1972	0.1887	0.1754	0.1658	0.1593	0.15	0.1437	0.14	0.1332	0.1294	0.1225
Pos 8								0.2971	0.2736	0.2469	0.2343	0.2369	0.2196	0.2049	0.1899	0.1718	0.164	0.1551	0.1473	0.1362	0.1266	0.1215	0.1161	0.1108	0.1066
Pos 9									0.2265	0.2108	0.1969	0.1728	0.1608	0.15	0.1446	0.1382	0.1325	0.1263	0.1204	0.1162	0.1101	0.1081	0.1051	0.1005	0.0978
Pos 10										0.1667	0.1536	0.1467	0.1357	0.1264	0.116	0.1092	0.1028	0.0973	0.0921	0.0875	0.0839	0.0808	0.0786	0.0752	0.0722
Pos 11											0.1506	0.1458	0.1344	0.125	0.1188	0.1115	0.1064	0.1	0.0958	0.0905	0.0865	0.082	0.0782	0.0754	0.0723
Pos 12												0.1613	0.1552	0.1461	0.141	0.1359	0.131	0.1257	0.1213	0.1183	0.1146	0.111	0.1087	0.1045	0.1021
Pos 13													0.1487	0.1389	0.1301	0.1201	0.1135	0.107	0.1021	0.0977	0.0934	0.0899	0.086	0.0826	0.0781
Pos 14														0.2875	0.2749	0.2776	0.2576	0.2418	0.2287	0.2231	0.2147	0.2014	0.195	0.1868	0.1796
Pos 15															0.149	0.1416	0.1347	0.1274	0.1194	0.1129	0.1088	0.109	0.1059	0.1033	0.0999
Pos 16																0.096	0.0908	0.0858	0.0818	0.0781	0.0746	0.0719	0.0689	0.0663	0.0639
Pos 17																	0.1422	0.1357	0.1286	0.1214	0.1175	0.1128	0.109	0.104	0.1003
Pos 18																		0.1725	0.1622	0.1571	0.151	0.1419	0.1328	0.1267	0.1212
Pos 19																			0.3485	0.3585	0.3597	0.3435	0.3663	0.3481	0.357
Pos 20																				0.1486	0.1414	0.1362	0.1313	0.1263	0.122
Pos 21																					0.1275	0.1239	0.1193	0.1148	0.1109
Pos 22																						0.1764	0.1693	0.1603	0.1538
Pos 23																							0.1759	0.1695	0.162
Pos 24																								0.1385	0.132
Pos 25																									0.0992

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.11- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Italy

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5838	0.4389	0.3137	0.2585	0.2247	0.1986	0.1782	0.1646	0.1503	0.139	0.1304	0.1216	0.1128	0.1046	0.0983	0.0925	0.0869	0.0808	0.0759	0.0727	0.0697	0.0673	0.0644	0.0621
Pos 2		0.6374	0.4229	0.3654	0.2894	0.2391	0.2034	0.1808	0.1573	0.1416	0.1309	0.119	0.11	0.102	0.0962	0.0896	0.0849	0.0803	0.0775	0.0761	0.0725	0.0694	0.066	0.0634	0.0607
Pos 3			0.4096	0.355	0.2821	0.2328	0.1993	0.1779	0.1573	0.1436	0.1332	0.1224	0.1139	0.1064	0.1003	0.0945	0.0896	0.0854	0.0811	0.0785	0.0753	0.0715	0.0683	0.0653	0.0628
Pos 4				0.3105	0.2607	0.2287	0.2029	0.182	0.1673	0.1526	0.1399	0.1309	0.1231	0.1145	0.1054	0.0999	0.0947	0.0884	0.0828	0.0779	0.0742	0.0711	0.0684	0.0656	0.0633
Pos 5					0.3109	0.2434	0.208	0.1851	0.1659	0.1504	0.141	0.1286	0.1182	0.1089	0.1024	0.0962	0.091	0.087	0.083	0.0814	0.0778	0.0744	0.0718	0.0691	0.0665
Pos 6						0.2343	0.1955	0.1727	0.1546	0.1398	0.1313	0.1201	0.1108	0.1025	0.0973	0.0916	0.0861	0.0819	0.0792	0.0779	0.0744	0.0703	0.0675	0.065	0.0623
Pos 7							0.2025	0.177	0.1569	0.142	0.1311	0.1208	0.111	0.1035	0.0984	0.0926	0.0873	0.0836	0.0802	0.0776	0.0737	0.07	0.0669	0.0644	0.0619
Pos 8								0.201	0.1797	0.163	0.1422	0.1319	0.1217	0.1134	0.1089	0.1026	0.0961	0.0908	0.0878	0.0861	0.0811	0.0778	0.0746	0.0713	0.0683
Pos 9									0.1615	0.1462	0.1361	0.1251	0.1161	0.1085	0.1027	0.0966	0.0916	0.0869	0.0834	0.0816	0.0779	0.0743	0.0715	0.0686	0.0661
Pos 10										0.2594	0.2428	0.2265	0.2108	0.1958	0.1883	0.1756	0.166	0.1576	0.1513	0.1476	0.1385	0.1323	0.1262	0.1208	0.1144
Pos 11											0.1426	0.1314	0.1218	0.1134	0.1071	0.1003	0.0951	0.0906	0.0864	0.0835	0.0795	0.0765	0.0735	0.0706	0.0681
Pos 12												0.1834	0.1689	0.1574	0.1532	0.1433	0.1352	0.1284	0.1283	0.132	0.1237	0.1174	0.1118	0.1068	0.1025
Pos 13													0.1755	0.1614	0.1553	0.1449	0.1354	0.1283	0.125	0.1224	0.1162	0.1113	0.1057	0.1007	0.0961
Pos 14														0.3197	0.33	0.2629	0.2379	0.2272	0.2141	0.2119	0.1835	0.1742	0.1559	0.1424	0.1323
Pos 15															0.1108	0.1045	0.0999	0.0952	0.0891	0.0822	0.0788	0.0751	0.0723	0.0693	0.0669
Pos 16																0.142	0.1329	0.1261	0.1206	0.1182	0.1121	0.1084	0.1037	0.0995	0.0933
Pos 17																	0.1263	0.1186	0.113	0.1089	0.1031	0.0992	0.0947	0.0903	0.0862
Pos 18																		0.0881	0.083	0.0795	0.0759	0.0726	0.0696	0.0669	0.0643
Pos 19																			0.0978	0.0878	0.0847	0.0813	0.0779	0.0749	0.0726
Pos 20																				0.088	0.0847	0.0807	0.0771	0.074	0.0717
Pos 21																					0.115	0.1098	0.1055	0.1006	0.096
Pos 22																						0.0805	0.0775	0.0743	0.0713
Pos 23																							0.1336	0.1265	0.1211
Pos 24																								0.1341	0.1264
Pos 25																									0.0932

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.12- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Japan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6257	0.4276	0.33	0.2588	0.2189	0.19	0.1672	0.1518	0.1365	0.1255	0.1163	0.1076	0.0985	0.0925	0.0867	0.0826	0.0781	0.0743	0.0712	0.0680	0.0647	0.0624	0.0597	0.0577
Pos 2		0.5736	0.4331	0.3418	0.2929	0.2504	0.2107	0.1849	0.1604	0.1443	0.1312	0.1201	0.1128	0.1059	0.0987	0.093	0.0873	0.0827	0.0788	0.0748	0.0715	0.0683	0.0658	0.0636	0.0609
Pos 3			0.5114	0.4087	0.3432	0.2954	0.2827	0.2551	0.2402	0.2254	0.2296	0.2196	0.1981	0.1845	0.1854	0.1717	0.1744	0.1615	0.1588	0.1522	0.1424	0.1296	0.1200	0.1132	0.1129
Pos 4				0.3277	0.2677	0.2267	0.1935	0.1691	0.1528	0.1386	0.131	0.1198	0.1104	0.1034	0.0958	0.0907	0.0853	0.081	0.0768	0.073	0.0687	0.0661	0.0643	0.0614	0.0589
Pos 5					0.2684	0.2259	0.2006	0.1802	0.1667	0.1507	0.1431	0.1338	0.1215	0.1115	0.1054	0.0989	0.0964	0.0909	0.0873	0.0837	0.0794	0.0756	0.0736	0.0691	0.0675
Pos 6						0.2898	0.2664	0.2385	0.2189	0.1918	0.1784	0.1691	0.1541	0.1418	0.1355	0.1247	0.1252	0.1171	0.1129	0.1079	0.1025	0.0976	0.0946	0.0891	0.0874
Pos 7							0.1906	0.1661	0.1469	0.1348	0.1247	0.1129	0.1049	0.0989	0.0911	0.0866	0.0799	0.0762	0.0719	0.0679	0.0648	0.0624	0.0605	0.0584	0.0556
Pos 8								0.1742	0.155	0.1398	0.1302	0.1179	0.1096	0.1019	0.0944	0.0889	0.0834	0.0792	0.0754	0.0714	0.0681	0.0651	0.0631	0.0607	0.0581
Pos 9									0.1478	0.135	0.1242	0.1128	0.1051	0.099	0.0919	0.087	0.0816	0.0778	0.0739	0.0697	0.0665	0.0635	0.0611	0.0588	0.0562
Pos 10										0.2808	0.2425	0.229	0.2133	0.1941	0.1881	0.1621	0.1626	0.1451	0.1424	0.1396	0.1339	0.1267	0.1183	0.1136	0.1124
Pos 11											0.1445	0.1346	0.1257	0.1167	0.1098	0.1024	0.0975	0.0917	0.0869	0.0831	0.0795	0.0758	0.0698	0.0676	0.0651
Pos 12												0.1145	0.1063	0.0998	0.0913	0.0863	0.0805	0.0764	0.0725	0.068	0.0647	0.0620	0.0600	0.0579	0.0552
Pos 13													0.1374	0.1254	0.1209	0.1131	0.1093	0.1029	0.0993	0.0953	0.0909	0.0853	0.0826	0.0774	0.0754
Pos 14														0.1076	0.1021	0.0948	0.0906	0.0851	0.0811	0.0778	0.0744	0.0703	0.0679	0.0645	0.0626
Pos 15															0.0943	0.0895	0.0833	0.0791	0.0744	0.0701	0.0666	0.0639	0.0621	0.0599	0.0568
Pos 16																0.1464	0.1446	0.1292	0.1253	0.123	0.1177	0.1115	0.1053	0.1006	0.0989
Pos 17																	0.0956	0.0916	0.0857	0.0809	0.0772	0.0749	0.0727	0.0706	0.0667
Pos 18																		0.1548	0.1542	0.1523	0.1446	0.1349	0.1276	0.1207	0.1195
Pos 19																			0.0762	0.0725	0.0695	0.0668	0.0639	0.0619	0.0586
Pos 20																				0.0717	0.0685	0.0658	0.0638	0.0617	0.0590
Pos 21																					0.0757	0.0720	0.0696	0.0664	0.0640
Pos 22																						0.0767	0.0733	0.0697	0.0677
Pos 23																							0.0742	0.0715	0.0693
Pos 24																								0.0876	0.0874
Pos 25																									0.0544

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.13- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Mexico

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5931	0.4434	0.3504	0.2824	0.2409	0.2107	0.1885	0.1683	0.1578	0.1447	0.134	0.1243	0.119	0.1227	0.1153	0.1085	0.1033	0.0979	0.0931	0.0888	0.0904	0.0865	0.0832	0.0782
Pos 2		0.5899	0.4387	0.3254	0.2595	0.2192	0.1896	0.1662	0.1491	0.1381	0.1268	0.1183	0.1104	0.1063	0.1116	0.104	0.0978	0.0928	0.088	0.0842	0.0802	0.08	0.0768	0.0738	0.069
Pos 3			0.5721	0.4858	0.433	0.3876	0.3454	0.325	0.2821	0.2568	0.2317	0.2191	0.2004	0.1932	0.1868	0.1772	0.1664	0.1644	0.1547	0.1457	0.1381	0.1356	0.1297	0.1265	0.1369
Pos 4				0.3097	0.25	0.2126	0.1823	0.1602	0.1435	0.1329	0.122	0.1117	0.1039	0.0987	0.1075	0.1004	0.0942	0.0888	0.084	0.0798	0.0759	0.076	0.0728	0.0691	0.0654
Pos 5					0.2499	0.2115	0.1817	0.1601	0.1438	0.1347	0.1239	0.1138	0.1061	0.1019	0.1102	0.1035	0.0976	0.0914	0.0868	0.0827	0.0789	0.0785	0.0752	0.0718	0.0678
Pos 6						0.2623	0.2281	0.2005	0.1787	0.1644	0.1507	0.1411	0.1315	0.1249	0.1457	0.1354	0.1266	0.1204	0.1137	0.1083	0.103	0.1036	0.0995	0.094	0.091
Pos 7							0.2056	0.1816	0.1619	0.1508	0.1376	0.126	0.1165	0.1098	0.1149	0.1083	0.1014	0.0954	0.0902	0.0856	0.0814	0.0813	0.0776	0.0738	0.0696
Pos 8								0.187	0.1664	0.1535	0.1406	0.1306	0.1218	0.1161	0.1219	0.1151	0.1078	0.1028	0.0971	0.0922	0.0876	0.086	0.0827	0.079	0.0754
Pos 9									0.2511	0.2245	0.1996	0.1846	0.1662	0.1547	0.1504	0.1391	0.1282	0.1195	0.1111	0.1041	0.0976	0.094	0.0886	0.085	0.083
Pos 10										0.2331	0.2157	0.2078	0.1897	0.1702	0.1891	0.1722	0.162	0.1526	0.1444	0.1384	0.1318	0.1295	0.1238	0.1175	0.115
Pos 11											0.2595	0.2513	0.2255	0.2134	0.2056	0.192	0.1801	0.181	0.1695	0.1592	0.1502	0.1467	0.1397	0.1391	0.1439
Pos 12												0.175	0.1625	0.152	0.1702	0.1597	0.1506	0.1414	0.134	0.1266	0.1207	0.12	0.1142	0.109	0.1034
Pos 13													0.2045	0.191	0.2417	0.211	0.1956	0.1875	0.174	0.1617	0.1513	0.1452	0.1369	0.1298	0.1265
Pos 14														0.1671	0.1858	0.1709	0.1613	0.1526	0.1446	0.1368	0.1304	0.1328	0.1259	0.1181	0.1196
Pos 15															0.1257	0.1197	0.113	0.1079	0.1025	0.098	0.0936	0.0918	0.0879	0.0843	0.0802
Pos 16																0.1829	0.1721	0.1632	0.154	0.1457	0.1384	0.1347	0.1283	0.123	0.1203
Pos 17																	0.0975	0.0933	0.0868	0.081	0.076	0.0738	0.0698	0.0664	0.0649
Pos 18																		0.1315	0.1247	0.1198	0.1143	0.1109	0.1056	0.1009	0.0975
Pos 19																			0.0791	0.0737	0.0688	0.0668	0.0631	0.0597	0.0585
Pos 20																				0.15	0.141	0.1377	0.1302	0.1226	0.1233
Pos 21																					0.0688	0.0668	0.0631	0.0597	0.0585
Pos 22																						0.1638	0.1578	0.1566	0.1572
Pos 23																							0.1051	0.1001	0.0951
Pos 24																								0.0997	0.096
Pos 25																									0.079

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.14- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for New Zealand

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6189	0.4366	0.3628	0.2928	0.246	0.2133	0.1888	0.1691	0.1527	0.1406	0.1289	0.1206	0.1119	0.105	0.1008	0.0958	0.0916	0.0882	0.0843	0.0818	0.0789	0.0759	0.0733	0.0707
Pos 2		0.5804	0.4215	0.3467	0.2836	0.2437	0.2124	0.1874	0.1684	0.1535	0.1423	0.1313	0.1245	0.1166	0.1101	0.1056	0.0993	0.0961	0.0935	0.0892	0.0868	0.0828	0.0796	0.0768	0.0736
Pos 3			0.4844	0.4105	0.3254	0.2756	0.2378	0.2111	0.1889	0.172	0.1581	0.1461	0.1372	0.128	0.1201	0.1161	0.1107	0.1071	0.1041	0.0991	0.0952	0.0913	0.0874	0.0853	0.082
Pos 4				0.3524	0.2948	0.2541	0.2233	0.1998	0.1815	0.1665	0.1536	0.1431	0.1368	0.1298	0.1224	0.1188	0.111	0.1074	0.1021	0.0976	0.0948	0.0913	0.0877	0.0842	0.0813
Pos 5					0.3851	0.3232	0.2766	0.2467	0.2184	0.2016	0.1833	0.1694	0.1602	0.1483	0.136	0.1278	0.1202	0.1146	0.1101	0.1034	0.0976	0.0937	0.0899	0.0873	0.0835
Pos 6						0.3461	0.2947	0.2636	0.2332	0.2079	0.189	0.1761	0.1632	0.151	0.1415	0.1361	0.1279	0.123	0.1192	0.113	0.1074	0.1022	0.0981	0.0935	0.0901
Pos 7							0.2601	0.2294	0.2028	0.1814	0.1645	0.1502	0.1412	0.1315	0.1232	0.1161	0.1099	0.1063	0.1015	0.0963	0.0915	0.0873	0.0835	0.0796	0.0762
Pos 8								0.209	0.1851	0.1656	0.1517	0.1395	0.1314	0.122	0.1146	0.1115	0.1049	0.0987	0.0963	0.0915	0.0874	0.0837	0.0804	0.077	0.074
Pos 9									0.1953	0.1756	0.1592	0.1465	0.1385	0.1284	0.1201	0.1151	0.109	0.103	0.0989	0.0948	0.0899	0.0855	0.0819	0.0796	0.0758
Pos 10										0.1708	0.1543	0.1412	0.1326	0.1239	0.1157	0.1109	0.1051	0.1001	0.0952	0.0905	0.0864	0.0818	0.0781	0.0742	0.0712
Pos 11											0.1621	0.1486	0.1387	0.1281	0.1193	0.1146	0.1089	0.1046	0.1025	0.0968	0.0922	0.0878	0.0843	0.0808	0.0775
Pos 12												0.1516	0.1451	0.1349	0.1264	0.1225	0.1143	0.1102	0.1071	0.1016	0.0984	0.0938	0.0892	0.0863	0.0825
Pos 13													0.1709	0.1612	0.1539	0.1442	0.1406	0.1346	0.1286	0.1227	0.1201	0.116	0.1128	0.1081	0.1046
Pos 14														0.176	0.1621	0.1588	0.1502	0.145	0.1372	0.1303	0.1217	0.1179	0.1132	0.11	0.1056
Pos 15															0.1469	0.1383	0.1315	0.1279	0.1249	0.1189	0.1128	0.1067	0.1028	0.0989	0.0947
Pos 16																0.1709	0.168	0.1616	0.1527	0.1466	0.1413	0.1387	0.1337	0.1323	0.128
Pos 17																	0.1225	0.1159	0.1105	0.1054	0.101	0.0964	0.0916	0.0899	0.086
Pos 18																		0.1345	0.1322	0.1265	0.1249	0.122	0.1169	0.1142	0.1105
Pos 19																			0.1438	0.137	0.1338	0.1303	0.1251	0.1218	0.1186
Pos 20																				0.1109	0.108	0.1034	0.0994	0.0963	0.0923
Pos 21																					0.1304	0.1251	0.119	0.1173	0.1124
Pos 22																						0.1351	0.1303	0.1241	0.1194
Pos 23																							0.1005	0.0964	0.0926
Pos 24																								0.1503	0.1456
Pos 25																									0.0887

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.15- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Singapore

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5659	0.3903	0.3064	0.2539	0.2183	0.1899	0.1681	0.153	0.14	0.1288	0.1184	0.11	0.1028	0.0966	0.0917	0.0864	0.0819	0.0777	0.0745	0.0712	0.0684	0.0653	0.0633	0.061
Pos 2		0.5553	0.392	0.3039	0.2519	0.2142	0.1865	0.1655	0.1499	0.1373	0.1261	0.1159	0.1081	0.1006	0.0945	0.0897	0.0851	0.0815	0.0778	0.0746	0.0721	0.0695	0.0668	0.0648	0.0626
Pos 3			0.3975	0.3117	0.2562	0.2173	0.1878	0.1654	0.1492	0.1357	0.1263	0.116	0.1078	0.1006	0.0943	0.089	0.0841	0.0796	0.0754	0.0727	0.0698	0.0671	0.064	0.062	0.0596
Pos 4				0.379	0.3125	0.2597	0.2239	0.2007	0.1831	0.1642	0.1497	0.1375	0.1275	0.1187	0.112	0.1052	0.0996	0.0946	0.0903	0.0862	0.0826	0.0801	0.077	0.0748	0.0719
Pos 5					0.2939	0.251	0.2216	0.201	0.1845	0.1665	0.1535	0.14	0.1309	0.1218	0.1135	0.1073	0.1017	0.0975	0.0932	0.0894	0.0857	0.0828	0.0794	0.0761	0.0733
Pos 6						0.3247	0.2841	0.2653	0.2466	0.2256	0.2091	0.1913	0.1775	0.1632	0.1518	0.1417	0.1337	0.1263	0.1197	0.1134	0.1087	0.1053	0.1006	0.0981	0.0943
Pos 7							0.2531	0.2223	0.1978	0.1771	0.1613	0.1486	0.1373	0.1276	0.1196	0.1113	0.1046	0.0989	0.0933	0.0886	0.0848	0.0803	0.0766	0.0727	0.0697
Pos 8								0.1731	0.1492	0.1355	0.1249	0.115	0.1085	0.1012	0.095	0.0894	0.084	0.0798	0.0761	0.0726	0.0696	0.0659	0.063	0.0612	0.0589
Pos 9									0.1575	0.1427	0.1303	0.1204	0.1126	0.1054	0.099	0.094	0.0878	0.0829	0.079	0.075	0.0716	0.0667	0.0638	0.0618	0.0597
Pos 10										0.1932	0.1788	0.1648	0.1528	0.1413	0.1318	0.1236	0.1167	0.11	0.1044	0.0985	0.0939	0.0913	0.0875	0.0843	0.0808
Pos 11											0.1649	0.152	0.1406	0.1302	0.1231	0.1162	0.109	0.1023	0.097	0.0927	0.0881	0.0842	0.0811	0.0778	0.0747
Pos 12												0.9255	0.7047	0.6299	0.5766	0.5478	0.5577	0.5403	0.5428	0.5638	0.5636	0.6171	0.6197	0.7352	0.729
Pos 13													0.1828	0.1708	0.1586	0.1484	0.1392	0.131	0.1248	0.1211	0.1162	0.1115	0.1068	0.1023	0.0991
Pos 14														0.1691	0.1575	0.1485	0.1421	0.1335	0.1269	0.1207	0.1151	0.1114	0.1064	0.1004	0.096
Pos 15															0.2253	0.2136	0.2035	0.1916	0.1866	0.1838	0.1776	0.1713	0.1658	0.1661	0.161
Pos 16																0.1767	0.1686	0.1607	0.1527	0.1462	0.1393	0.1362	0.1314	0.1295	0.1246
Pos 17																	0.1166	0.1093	0.1032	0.0987	0.0927	0.0875	0.0836	0.0797	0.0764
Pos 18																		0.1025	0.0949	0.091	0.0848	0.0809	0.0775	0.0749	0.0712
Pos 19																			0.0987	0.0947	0.0905	0.0869	0.0835	0.0802	0.0764
Pos 20																				0.0994	0.0948	0.0925	0.0892	0.0855	0.082
Pos 21																					0.0935	0.0894	0.0857	0.0832	0.0791
Pos 22																						0.0695	0.0665	0.0642	0.0619
Pos 23																							0.0924	0.0889	0.0855
Pos 24																								0.0841	0.0811
Pos 25																									0.0934

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.16- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for South Africa

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7037	0.5211	0.3863	0.3205	0.2756	0.2424	0.2167	0.1889	0.1785	0.1643	0.1509	0.139	0.1296	0.1212	0.1138	0.107	0.1021	0.0977	0.0916	0.0877	0.0839	0.0811	0.0777	0.0747
Pos 2		0.6351	0.4995	0.4334	0.4209	0.3667	0.3432	0.3387	0.3092	0.2007	0.1907	0.1825	0.1748	0.1708	0.1649	0.1585	0.1504	0.1485	0.1444	0.1387	0.1344	0.1285	0.1083	0.1051	0.1023
Pos 3			0.4611	0.3668	0.3149	0.2387	0.2177	0.2014	0.1797	0.1642	0.1519	0.1407	0.1313	0.1233	0.1171	0.1108	0.1057	0.1007	0.0964	0.0917	0.0885	0.0847	0.0808	0.078	0.0754
Pos 4				0.4087	0.2901	0.2603	0.2057	0.1742	0.1587	0.1553	0.1377	0.1243	0.1142	0.1049	0.0976	0.091	0.0856	0.0809	0.0767	0.0735	0.0696	0.0666	0.065	0.0621	0.0598
Pos 5					0.2782	0.2506	0.2014	0.1699	0.1526	0.1479	0.1314	0.1185	0.1085	0.0995	0.0924	0.0863	0.0813	0.0765	0.0723	0.0692	0.0659	0.063	0.0614	0.0588	0.0564
Pos 6						0.2507	0.2312	0.2178	0.1926	0.1742	0.1615	0.1502	0.1412	0.1329	0.1264	0.1194	0.1141	0.1097	0.1053	0.0997	0.0957	0.0914	0.0868	0.0837	0.0806
Pos 7							0.201	0.1705	0.1555	0.1504	0.133	0.1197	0.1096	0.1006	0.0934	0.0876	0.0824	0.0775	0.0736	0.0704	0.0669	0.0639	0.0623	0.0596	0.0573
Pos 8								0.1854	0.1669	0.1646	0.1465	0.1328	0.1211	0.111	0.1028	0.0958	0.09	0.0851	0.0806	0.0777	0.0739	0.0705	0.069	0.0661	0.0635
Pos 9									0.1815	0.1709	0.1581	0.1462	0.1356	0.1265	0.1184	0.111	0.1052	0.1001	0.0949	0.0882	0.0851	0.0817	0.0788	0.0756	0.0729
Pos 10										0.248	0.2448	0.2431	0.2363	0.2367	0.2358	0.2305	0.2217	0.223	0.2198	0.2108	0.2079	0.2002	0.1599	0.1566	0.1534
Pos 11											0.1418	0.1292	0.1178	0.1089	0.1014	0.0959	0.0905	0.0855	0.081	0.0777	0.0701	0.0669	0.0652	0.0625	0.0599
Pos 12												0.1264	0.115	0.1053	0.0971	0.0908	0.0851	0.0799	0.0757	0.0722	0.069	0.0659	0.0641	0.0614	0.0588
Pos 13													0.1224	0.1132	0.1049	0.0982	0.0922	0.0862	0.0819	0.0785	0.0744	0.0709	0.0689	0.0661	0.0634
Pos 14														0.1018	0.094	0.0878	0.0826	0.0776	0.0737	0.0705	0.0671	0.064	0.0622	0.0595	0.0571
Pos 15															0.1017	0.0949	0.0885	0.0827	0.0777	0.0739	0.0705	0.0672	0.0653	0.0624	0.0597
Pos 16																0.0885	0.0833	0.0787	0.0743	0.0707	0.0678	0.0649	0.0626	0.0599	0.0575
Pos 17																	0.1099	0.1035	0.098	0.0941	0.09	0.0857	0.0819	0.0781	0.0745
Pos 18																		0.0893	0.0845	0.081	0.0778	0.0741	0.0722	0.0694	0.0664
Pos 19																			0.0966	0.0918	0.0878	0.0836	0.0811	0.0777	0.0749
Pos 20																				0.1063	0.1024	0.098	0.0947	0.0912	0.0877
Pos 21																					0.0734	0.07	0.0678	0.0649	0.0623
Pos 22																						0.1088	0.1043	0.0993	0.0948
Pos 23																							0.1153	0.1115	0.1077
Pos 24																								0.0817	0.0782
Pos 25																									0.0723

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.17- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for South Korea

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5879	0.4009	0.3115	0.25	0.2054	0.1673	0.1505	0.1399	0.1249	0.1151	0.1066	0.1011	0.096	0.0899	0.0855	0.082	0.0774	0.0748	0.0712	0.0684	0.0674	0.0645	0.0618	0.0594
Pos 2		0.5589	0.4041	0.3139	0.2666	0.2269	0.1987	0.177	0.1635	0.1474	0.135	0.1248	0.1195	0.1132	0.1053	0.1	0.0964	0.0897	0.0863	0.0822	0.0792	0.0785	0.0752	0.0717	0.0687
Pos 3			0.4356	0.3309	0.2675	0.2296	0.2036	0.1789	0.1644	0.1505	0.1372	0.1257	0.1184	0.1109	0.1034	0.0985	0.0947	0.0887	0.0849	0.0804	0.0764	0.0743	0.0713	0.0684	0.0655
Pos 4				0.3365	0.2772	0.2383	0.2135	0.1853	0.171	0.1565	0.1427	0.1311	0.1243	0.1166	0.1079	0.1022	0.0982	0.0927	0.0885	0.0837	0.0797	0.0783	0.0751	0.0716	0.0684
Pos 5					0.2739	0.2301	0.2014	0.1758	0.1566	0.1413	0.1285	0.1176	0.1093	0.1024	0.0959	0.0899	0.0852	0.0803	0.0765	0.0726	0.0692	0.0672	0.0644	0.0618	0.0595
Pos 6						0.2231	0.1918	0.1692	0.1537	0.1354	0.1226	0.1123	0.1057	0.0997	0.0934	0.0881	0.0839	0.079	0.0755	0.072	0.0686	0.0669	0.0639	0.061	0.0587
Pos 7							0.1746	0.1572	0.1482	0.1314	0.1205	0.1112	0.1054	0.1001	0.0945	0.0892	0.0851	0.0802	0.0774	0.0739	0.0706	0.0689	0.0658	0.0631	0.0607
Pos 8								0.1967	0.1765	0.1612	0.1435	0.1315	0.1163	0.1033	0.0965	0.0893	0.0837	0.0794	0.0734	0.0699	0.0668	0.0649	0.0624	0.0598	0.0574
Pos 9									0.1872	0.1746	0.1597	0.1467	0.136	0.129	0.12	0.1138	0.1089	0.1044	0.1007	0.0959	0.0916	0.0905	0.0864	0.083	0.0796
Pos 10										0.1292	0.1186	0.109	0.1028	0.0972	0.0912	0.086	0.0819	0.077	0.074	0.0706	0.0675	0.0667	0.0637	0.0611	0.0588
Pos 11											0.1295	0.1184	0.1103	0.1017	0.0953	0.0883	0.0831	0.0785	0.0744	0.0711	0.0677	0.0655	0.0628	0.0602	0.058
Pos 12												0.1436	0.134	0.1248	0.1169	0.1099	0.1047	0.0986	0.0937	0.0881	0.0832	0.0814	0.0779	0.0734	0.0702
Pos 13													0.1352	0.1212	0.1148	0.1066	0.0984	0.0939	0.0873	0.083	0.0794	0.0753	0.0723	0.0695	0.067
Pos 14														0.1065	0.1	0.0926	0.0864	0.0816	0.0753	0.0718	0.0688	0.066	0.0634	0.0609	0.0587
Pos 15															0.2146	0.2157	0.2182	0.2003	0.1933	0.1825	0.1675	0.1955	0.1917	0.1841	0.1681
Pos 16																0.0796	0.0726	0.0691	0.0652	0.0622	0.0595	0.0569	0.0543	0.0523	0.0504
Pos 17																	0.0741	0.0704	0.0666	0.0636	0.0608	0.0575	0.0549	0.0528	0.0508
Pos 18																		0.0842	0.0802	0.0763	0.0726	0.0719	0.0683	0.0651	0.0627
Pos 19																			0.0752	0.0713	0.068	0.0657	0.0631	0.0605	0.0582
Pos 20																				0.1204	0.1148	0.1121	0.1075	0.1013	0.0961
Pos 21																					0.0759	0.0745	0.0712	0.0682	0.0654
Pos 22																						0.0708	0.0677	0.0653	0.0629
Pos 23																							0.0576	0.0551	0.053
Pos 24																								0.069	0.066
Pos 25																									0.0844

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.18- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Spain

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5494	0.3893	0.3055	0.2523	0.2198	0.1946	0.1767	0.1624	0.148	0.136	0.1274	0.1203	0.1133	0.1049	0.1002	0.0947	0.0865	0.0826	0.0788	0.0759	0.0715	0.0661	0.0639	0.062
Pos 2		0.5926	0.3895	0.2988	0.2396	0.2048	0.1776	0.1589	0.1433	0.1299	0.1189	0.1088	0.1012	0.0946	0.0886	0.0838	0.0787	0.0752	0.0717	0.0684	0.0659	0.0631	0.0609	0.0586	0.0567
Pos 3			0.3855	0.2983	0.2439	0.2072	0.1796	0.1625	0.1496	0.1362	0.125	0.116	0.1089	0.1025	0.0962	0.0915	0.086	0.0814	0.0773	0.0743	0.072	0.0686	0.0652	0.0626	0.0603
Pos 4				0.4014	0.3243	0.2721	0.2317	0.2038	0.1841	0.1646	0.1512	0.1409	0.1313	0.1241	0.1192	0.1125	0.1066	0.1035	0.0986	0.0933	0.0892	0.0856	0.0842	0.0807	0.0777
Pos 5					0.3147	0.2455	0.2119	0.184	0.163	0.1478	0.1353	0.1262	0.1149	0.107	0.1008	0.0949	0.0896	0.0856	0.0822	0.0778	0.0743	0.0715	0.0691	0.0664	0.0641
Pos 6						0.349	0.2957	0.2521	0.2183	0.1966	0.1785	0.1649	0.1483	0.1378	0.1302	0.1215	0.1144	0.1098	0.1053	0.0997	0.0954	0.0917	0.0899	0.0857	0.082
Pos 7							0.2464	0.2173	0.1932	0.1727	0.1561	0.1439	0.1337	0.1251	0.1164	0.1095	0.1025	0.0972	0.0911	0.0869	0.0829	0.0795	0.0774	0.0742	0.071
Pos 8								0.2165	0.1896	0.1718	0.1576	0.1453	0.1341	0.125	0.1168	0.1092	0.1042	0.0994	0.0944	0.0892	0.0851	0.0813	0.0792	0.076	0.0732
Pos 9									0.286	0.261	0.238	0.2221	0.209	0.1922	0.1782	0.1633	0.1592	0.1538	0.1478	0.1392	0.1317	0.1281	0.1277	0.1211	0.1158
Pos 10										0.2301	0.2088	0.1922	0.1796	0.1661	0.1576	0.1461	0.1385	0.1324	0.1247	0.1181	0.1108	0.1075	0.1027	0.0976	0.0923
Pos 11											0.2755	0.2458	0.2271	0.213	0.1987	0.1779	0.1695	0.1625	0.1512	0.1419	0.1338	0.1299	0.1263	0.118	0.1103
Pos 12												0.1528	0.1432	0.1334	0.1236	0.1161	0.1102	0.1058	0.1002	0.0959	0.0919	0.0864	0.0839	0.0804	0.0771
Pos 13													0.139	0.1295	0.1214	0.1135	0.1084	0.1037	0.0997	0.0945	0.0899	0.0869	0.0849	0.0813	0.0782
Pos 14														0.1494	0.1387	0.1296	0.1213	0.1148	0.1094	0.1049	0.1005	0.0971	0.0943	0.0902	0.087
Pos 15															0.129	0.1215	0.1158	0.1092	0.1044	0.0999	0.0959	0.0907	0.0854	0.0815	0.0784
Pos 16																0.1872	0.1787	0.1739	0.1601	0.149	0.1381	0.1358	0.1333	0.1246	0.1174
Pos 17																	0.1199	0.1147	0.1094	0.1054	0.1013	0.0971	0.0933	0.0897	0.0864
Pos 18																		0.0896	0.0855	0.0827	0.0796	0.0755	0.0714	0.0686	0.0662
Pos 19																			0.1183	0.113	0.1071	0.1025	0.0987	0.0944	0.0901
Pos 20																				0.1025	0.0976	0.0938	0.0904	0.0865	0.0825
Pos 21																					0.1514	0.1495	0.1468	0.1394	0.1316
Pos 22																						0.0756	0.0722	0.0694	0.0666
Pos 23																							0.0883	0.0849	0.0817
Pos 24																								0.1687	0.1556
Pos 25																									0.1318

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates Pos of the VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.19- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Sweden

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6979	0.463	0.3534	0.2868	0.244	0.2114	0.1858	0.1704	0.1545	0.1416	0.132	0.1223	0.1144	0.1091	0.1032	0.0976	0.0933	0.0891	0.0848	0.0801	0.0767	0.0733	0.0699	0.0673
Pos 2		0.5816	0.4054	0.3128	0.2591	0.2264	0.1991	0.1778	0.1637	0.1442	0.1303	0.122	0.1137	0.1024	0.0984	0.0933	0.0877	0.0841	0.0802	0.0764	0.0718	0.0691	0.0658	0.0634	0.0615
Pos 3			0.6456	0.4713	0.3571	0.2922	0.2478	0.2197	0.1948	0.1738	0.1601	0.1479	0.135	0.1267	0.1183	0.1107	0.1036	0.0981	0.093	0.0885	0.0852	0.0812	0.0779	0.0751	0.0726
Pos 4				0.3969	0.315	0.2605	0.2261	0.1987	0.1788	0.1617	0.1491	0.1372	0.127	0.1191	0.1125	0.1059	0.1001	0.0936	0.0891	0.0848	0.0806	0.0767	0.0731	0.0703	0.0674
Pos 5					0.3328	0.264	0.2197	0.1963	0.1638	0.148	0.1373	0.1221	0.1122	0.1055	0.0955	0.0891	0.0842	0.0791	0.0754	0.0718	0.0695	0.0663	0.0644	0.0621	0.0601
Pos 6						0.2577	0.2194	0.1936	0.1684	0.1527	0.1432	0.1301	0.1192	0.1126	0.1038	0.0969	0.0916	0.0864	0.0821	0.0781	0.0748	0.0713	0.069	0.0666	0.0644
Pos 7							0.2368	0.2138	0.1861	0.1667	0.1568	0.1418	0.1303	0.1213	0.1126	0.1026	0.096	0.0901	0.086	0.0815	0.0789	0.075	0.0735	0.0705	0.0682
Pos 8								0.218	0.1995	0.1817	0.1646	0.1554	0.145	0.1358	0.13	0.1245	0.118	0.1113	0.1059	0.101	0.0951	0.0914	0.0868	0.0827	0.0805
Pos 9									0.1613	0.1462	0.1365	0.1225	0.113	0.1064	0.0926	0.0868	0.0823	0.0773	0.0734	0.0698	0.0674	0.0643	0.0624	0.0602	0.0583
Pos 10										0.137	0.1241	0.1144	0.1056	0.0969	0.0915	0.0856	0.0803	0.0765	0.0724	0.0687	0.0653	0.0624	0.0597	0.0573	0.055
Pos 11											0.1196	0.1108	0.1028	0.0953	0.0903	0.0856	0.0812	0.0773	0.0738	0.0703	0.0664	0.0637	0.0608	0.0586	0.0566
Pos 12												0.1273	0.1174	0.1101	0.1013	0.0949	0.0897	0.0839	0.0793	0.0755	0.0724	0.069	0.0667	0.0642	0.0619
Pos 13													0.1294	0.1212	0.1133	0.1054	0.0994	0.0936	0.0884	0.0836	0.0804	0.0763	0.0741	0.0707	0.0679
Pos 14														0.0953	0.0908	0.0854	0.0802	0.0764	0.0724	0.0687	0.0651	0.0624	0.0596	0.0571	0.055
Pos 15															0.0931	0.0872	0.0827	0.0778	0.0738	0.0703	0.0678	0.0647	0.0628	0.0606	0.0586
Pos 16																0.1068	0.1	0.0944	0.0897	0.0844	0.0809	0.0772	0.0752	0.072	0.0694
Pos 17																	0.1261	0.1187	0.1129	0.1068	0.1015	0.0968	0.0946	0.0903	0.0864
Pos 18																		0.0916	0.0863	0.0821	0.0789	0.075	0.0721	0.0689	0.0662
Pos 19																			0.1415	0.135	0.1284	0.122	0.1161	0.1107	0.1069
Pos 20																				0.1018	0.0972	0.0925	0.0888	0.0841	0.0799
Pos 21																					0.0719	0.0688	0.0654	0.0628	0.0602
Pos 22																						0.0768	0.074	0.0707	0.0671
Pos 23																							0.0731	0.0702	0.0672
Pos 24																								0.1228	0.1163
Pos 25																									0.1609

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.20- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Switzerland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5612	0.4055	0.3077	0.2664	0.2234	0.1984	0.1756	0.1633	0.1499	0.1382	0.1321	0.1215	0.1168	0.1092	0.1017	0.0963	0.0911	0.086	0.0832	0.0795	0.0757	0.0736	0.0708	0.0679
Pos 2		0.5722	0.4276	0.3289	0.2909	0.244	0.2192	0.1963	0.1829	0.1663	0.1554	0.1464	0.1344	0.1256	0.1177	0.1095	0.1029	0.097	0.0914	0.0906	0.0858	0.0815	0.0808	0.0779	0.0743
Pos 3			0.4057	0.3165	0.241	0.2056	0.1801	0.1592	0.1409	0.129	0.1188	0.1095	0.1019	0.0962	0.0896	0.0838	0.0792	0.0746	0.0708	0.0673	0.0644	0.0616	0.0584	0.0559	0.0539
Pos 4				0.3131	0.2653	0.2258	0.199	0.1748	0.1599	0.1459	0.1334	0.1251	0.1159	0.1116	0.1039	0.097	0.091	0.0855	0.0807	0.0775	0.0739	0.0702	0.0681	0.0651	0.0624
Pos 5					0.2398	0.2041	0.1783	0.1568	0.1391	0.1269	0.1174	0.1081	0.1005	0.0966	0.0898	0.0839	0.0796	0.075	0.0713	0.0678	0.0651	0.0625	0.0591	0.0566	0.0546
Pos 6						0.2077	0.1786	0.16	0.1448	0.1317	0.1217	0.1141	0.1054	0.0995	0.0935	0.0864	0.0819	0.0775	0.0733	0.0712	0.0679	0.0649	0.063	0.0605	0.0581
Pos 7							0.1742	0.1545	0.1411	0.1294	0.1197	0.1118	0.1042	0.0999	0.0936	0.0871	0.0828	0.0778	0.0738	0.0722	0.0691	0.0659	0.0635	0.061	0.0585
Pos 8								0.2167	0.1968	0.1829	0.1653	0.1558	0.1432	0.1396	0.13	0.1223	0.1168	0.1106	0.1047	0.0989	0.0953	0.0912	0.0865	0.0825	0.0794
Pos 9									0.1716	0.1574	0.1444	0.1335	0.1235	0.1158	0.1076	0.1016	0.0957	0.0912	0.0865	0.0813	0.0771	0.0738	0.0703	0.0676	0.0656
Pos 10										0.206	0.1898	0.1797	0.1654	0.156	0.1475	0.1381	0.1301	0.1282	0.1221	0.1171	0.1103	0.1047	0.1018	0.098	0.0942
Pos 11											0.1814	0.1709	0.1581	0.1515	0.1399	0.1327	0.1263	0.1199	0.114	0.106	0.1009	0.0966	0.0921	0.0888	0.0854
Pos 12												0.1286	0.1202	0.1132	0.1068	0.101	0.0952	0.0903	0.086	0.0826	0.0791	0.0758	0.0719	0.0691	0.0667
Pos 13													0.1723	0.1625	0.1519	0.1438	0.1346	0.1285	0.1206	0.1132	0.1067	0.1012	0.0973	0.0933	0.0889
Pos 14														0.1416	0.1336	0.1274	0.1208	0.116	0.1108	0.1052	0.1002	0.0968	0.0938	0.0907	0.0872
Pos 15															0.1105	0.1038	0.0971	0.0922	0.0875	0.0828	0.0793	0.0759	0.0724	0.0692	0.0663
Pos 16																0.0905	0.0851	0.0795	0.0749	0.0727	0.0692	0.0659	0.0635	0.0609	0.0583
Pos 17																	0.3599	0.3372	0.3082	0.311	0.2924	0.2666	0.2625	0.2596	0.2382
Pos 18																		0.0894	0.0842	0.0818	0.0784	0.0745	0.0718	0.0685	0.0657
Pos 19																			0.1253	0.122	0.1127	0.1058	0.1023	0.0977	0.0922
Pos 20																				0.1008	0.0973	0.0935	0.0885	0.0849	0.0823
Pos 21																					0.1403	0.1329	0.1283	0.1219	0.1154
Pos 22																						0.1313	0.1301	0.1224	0.1149
Pos 23																							0.0777	0.0746	0.0719
Pos 24																								0.0787	0.0753
Pos 25																									0.2544

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.21- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Taiwan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5717	0.3897	0.3001	0.2503	0.2164	0.189	0.1699	0.1572	0.1352	0.1251	0.1176	0.1069	0.1004	0.096	0.0907	0.0868	0.0828	0.0787	0.0739	0.0713	0.0687	0.0663	0.0641	0.0606
Pos 2		0.6128	0.4563	0.3456	0.2765	0.2345	0.1958	0.1698	0.149	0.137	0.1244	0.1146	0.1077	0.1012	0.0939	0.0885	0.084	0.0795	0.0757	0.0723	0.0684	0.0657	0.0627	0.0605	0.0584
Pos 3			0.4239	0.3336	0.2786	0.2433	0.2116	0.1913	0.1771	0.1553	0.1418	0.132	0.1169	0.1087	0.1041	0.0994	0.0945	0.0909	0.087	0.0826	0.0802	0.0777	0.0753	0.073	0.0689
Pos 4				0.3163	0.2513	0.1987	0.1733	0.1524	0.1388	0.1254	0.1145	0.1055	0.0981	0.0913	0.086	0.0805	0.0758	0.0714	0.0674	0.0638	0.0612	0.0583	0.0558	0.0536	0.0514
Pos 5					0.3133	0.2614	0.2257	0.1978	0.1793	0.168	0.15	0.1366	0.1277	0.1187	0.112	0.104	0.098	0.0919	0.0871	0.0835	0.0799	0.0758	0.0723	0.069	0.0673
Pos 6						0.2106	0.185	0.1643	0.1494	0.1371	0.1243	0.1141	0.1066	0.099	0.0934	0.0869	0.0816	0.0768	0.0729	0.0694	0.0667	0.0636	0.0607	0.0583	0.0561
Pos 7							0.1836	0.1576	0.1373	0.1254	0.1144	0.1057	0.0985	0.0917	0.0844	0.0798	0.0757	0.0716	0.0679	0.0645	0.0609	0.0584	0.056	0.054	0.052
Pos 8								0.1713	0.1479	0.1373	0.1252	0.1154	0.1088	0.1014	0.0926	0.0872	0.0824	0.078	0.074	0.0707	0.0664	0.0635	0.0609	0.0586	0.0567
Pos 9									0.1455	0.1357	0.1231	0.1125	0.1063	0.0993	0.0882	0.0829	0.0783	0.0742	0.0707	0.0678	0.0634	0.0608	0.0581	0.0559	0.0543
Pos 10										0.1317	0.1219	0.1145	0.1045	0.0977	0.0929	0.088	0.084	0.0804	0.0764	0.0719	0.0692	0.0668	0.0645	0.0626	0.0589
Pos 11											0.1465	0.126	0.1184	0.1089	0.102	0.0945	0.0876	0.0824	0.0788	0.0757	0.0723	0.0691	0.0658	0.063	0.0612
Pos 12												0.1198	0.1125	0.1036	0.0969	0.0902	0.0837	0.0785	0.0744	0.0712	0.0679	0.0647	0.0617	0.059	0.0571
Pos 13													0.1112	0.1031	0.0989	0.0945	0.0898	0.0858	0.082	0.0778	0.0752	0.0727	0.0703	0.0681	0.0641
Pos 14														0.0975	0.0916	0.086	0.0795	0.0751	0.0713	0.068	0.065	0.0621	0.0594	0.0571	0.0548
Pos 15															0.0876	0.0824	0.0778	0.0735	0.0698	0.0669	0.0623	0.0597	0.0571	0.0549	0.0532
Pos 16																0.0961	0.0898	0.0842	0.0796	0.0761	0.0728	0.0693	0.0661	0.0633	0.0615
Pos 17																	0.0868	0.0812	0.077	0.0736	0.0704	0.067	0.0639	0.0612	0.0591
Pos 18																		0.0805	0.0754	0.0718	0.0688	0.0649	0.0617	0.0585	0.0567
Pos 19																			0.0702	0.0662	0.0632	0.0596	0.0569	0.0542	0.0519
Pos 20																				0.0683	0.0654	0.0624	0.0598	0.0575	0.0547
Pos 21																					0.0642	0.0615	0.0589	0.0568	0.0549
Pos 22																						0.0614	0.0585	0.0549	0.0529
Pos 23																							0.067	0.0636	0.0618
Pos 24																								0.0588	0.0569
Pos 25																									0.0611

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.22- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Thailand

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6217	0.4768	0.3726	0.3044	0.2492	0.2224	0.1992	0.1838	0.1655	0.1546	0.146	0.14	0.1338	0.1243	0.1179	0.1138	0.109	0.1026	0.0975	0.0927	0.0886	0.0859	0.0822	0.079
Pos 2		0.6134	0.4639	0.3702	0.3111	0.2619	0.2336	0.2083	0.1914	0.1732	0.1613	0.1511	0.1444	0.1371	0.1263	0.1198	0.1154	0.1103	0.1042	0.1008	0.0961	0.0917	0.0893	0.0854	0.0821
Pos 3			0.4014	0.3019	0.2476	0.2109	0.1792	0.1586	0.1391	0.1258	0.1137	0.1039	0.0955	0.0884	0.0828	0.0778	0.0735	0.0693	0.0658	0.0629	0.06	0.0573	0.055	0.0529	0.0508
Pos 4				0.2971	0.2404	0.2031	0.1705	0.1499	0.1332	0.1204	0.1086	0.0995	0.0929	0.0865	0.0809	0.0761	0.072	0.0682	0.0649	0.0621	0.0593	0.0567	0.0547	0.0524	0.0504
Pos 5					0.2676	0.2265	0.1969	0.1754	0.1574	0.1416	0.1292	0.1197	0.1149	0.1077	0.0996	0.0927	0.0876	0.0829	0.0786	0.0741	0.0707	0.0676	0.0649	0.0622	0.0598
Pos 6						0.2581	0.2306	0.2053	0.1887	0.1705	0.1583	0.1486	0.1393	0.1327	0.1236	0.1169	0.1121	0.1075	0.1017	0.0982	0.0939	0.0894	0.0859	0.0819	0.0785
Pos 7							0.172	0.1524	0.1351	0.1218	0.11	0.1	0.0929	0.0861	0.0809	0.0757	0.0715	0.0674	0.064	0.061	0.0582	0.0556	0.0534	0.0512	0.0493
Pos 8								0.4586	0.4352	0.4001	0.3787	0.3591	0.3478	0.3292	0.3149	0.3101	0.2898	0.2803	0.2706	0.2637	0.2504	0.2393	0.2301	0.2209	0.2116
Pos 9									0.1415	0.1287	0.1168	0.106	0.0993	0.0915	0.0862	0.0809	0.0765	0.0711	0.0679	0.065	0.062	0.0593	0.0568	0.0546	0.0524
Pos 10										0.1984	0.1819	0.1701	0.1615	0.1509	0.1394	0.1311	0.1252	0.1194	0.1122	0.1063	0.1013	0.0966	0.0924	0.0886	0.0849
Pos 11											0.1111	0.1014	0.0939	0.0869	0.0815	0.0752	0.0713	0.0674	0.0639	0.0608	0.058	0.0554	0.0533	0.0512	0.0492
Pos 12												0.1036	0.0965	0.0878	0.0823	0.0773	0.0731	0.0687	0.0652	0.0623	0.0594	0.0567	0.0545	0.0523	0.0503
Pos 13													0.1473	0.1386	0.1299	0.1238	0.1163	0.1109	0.1057	0.1016	0.0964	0.0918	0.0874	0.0837	0.0801
Pos 14														0.0903	0.0851	0.0799	0.0754	0.0709	0.0675	0.0645	0.0616	0.0589	0.0564	0.0542	0.052
Pos 15															0.1189	0.1109	0.1053	0.1004	0.0946	0.09	0.0854	0.0815	0.0779	0.0743	0.0716
Pos 16																0.082	0.0774	0.0733	0.0694	0.0657	0.0628	0.0597	0.0575	0.0553	0.0532
Pos 17																	0.1852	0.1766	0.1684	0.1637	0.1555	0.1473	0.1412	0.1351	0.1293
Pos 18																		0.0697	0.0664	0.0632	0.0604	0.0578	0.0556	0.0533	0.0513
Pos 19																			0.1034	0.0977	0.0931	0.0892	0.0859	0.0823	0.0792
Pos 20																				0.0726	0.0693	0.0664	0.0639	0.0613	0.0591
Pos 21																					0.2491	0.2461	0.2302	0.22	0.2135
Pos 22																						0.1413	0.135	0.1286	0.1233
Pos 23																							0.1535	0.1466	0.1395
Pos 24																								0.1215	0.1166
Pos 25																									0.1888

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.23- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Turkey																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5377	0.3685	0.279	0.2222	0.189	0.1633	0.1418	0.1268	0.114	0.1036	0.095	0.0878	0.0815	0.0761	0.0716	0.0674	0.0637	0.0603	0.0574	0.0546	0.0522	0.05	0.048	0.0461
Pos 2		0.5257	0.3617	0.2751	0.2213	0.1899	0.1644	0.1434	0.1285	0.1158	0.1053	0.0965	0.0892	0.0828	0.0774	0.0729	0.0687	0.0649	0.0613	0.0584	0.0557	0.0533	0.051	0.0489	0.0471
Pos 3			0.3793	0.287	0.2351	0.1985	0.1689	0.1501	0.133	0.1194	0.1085	0.0998	0.0926	0.086	0.0803	0.0754	0.0711	0.0671	0.0637	0.0605	0.0577	0.0553	0.053	0.0509	0.0488
Pos 4				0.3016	0.245	0.2077	0.1783	0.157	0.14	0.1256	0.1136	0.104	0.0962	0.0891	0.083	0.0776	0.0728	0.0688	0.0654	0.0621	0.0591	0.0565	0.0539	0.0517	0.0497
Pos 5					0.2239	0.1937	0.1679	0.1453	0.1307	0.1179	0.1072	0.0985	0.0911	0.0846	0.0788	0.0741	0.0697	0.0659	0.0622	0.0592	0.0563	0.0538	0.0515	0.0494	0.0475
Pos 6						0.2136	0.1862	0.1667	0.1482	0.1344	0.1232	0.1138	0.1049	0.0976	0.0919	0.0867	0.0819	0.0776	0.0745	0.071	0.0679	0.0647	0.0621	0.0597	0.0576
Pos 7							0.1696	0.1504	0.1323	0.1189	0.1087	0.1001	0.0931	0.0865	0.081	0.076	0.0716	0.0677	0.0644	0.0612	0.0584	0.0557	0.0534	0.0513	0.0494
Pos 8								0.1467	0.1324	0.1196	0.1086	0.0999	0.0925	0.0862	0.0806	0.0759	0.0716	0.0678	0.0641	0.061	0.0582	0.0556	0.0532	0.0511	0.0492
Pos 9									0.1332	0.1199	0.1095	0.1007	0.0934	0.0867	0.0811	0.076	0.0717	0.0677	0.0644	0.0613	0.0585	0.056	0.0536	0.0515	0.0496
Pos 10										0.1185	0.1081	0.0989	0.0915	0.0849	0.0793	0.0742	0.0698	0.0659	0.0625	0.0593	0.0565	0.054	0.0517	0.0496	0.0476
Pos 11											0.1107	0.1015	0.0941	0.0874	0.0815	0.0764	0.0717	0.0678	0.0643	0.0611	0.0581	0.0556	0.0531	0.0509	0.0488
Pos 12												0.1029	0.0953	0.0886	0.0827	0.0775	0.073	0.0689	0.0653	0.062	0.059	0.0563	0.054	0.0517	0.0497
Pos 13													0.1395	0.13	0.121	0.1132	0.1065	0.1002	0.0946	0.0899	0.0856	0.0816	0.0779	0.0744	0.0715
Pos 14														0.0956	0.089	0.0831	0.078	0.0737	0.0698	0.0663	0.0631	0.0603	0.0576	0.0552	0.0531
Pos 15															0.0808	0.0756	0.0711	0.0672	0.0636	0.0605	0.0576	0.0551	0.0528	0.0505	0.0486
Pos 16																0.0803	0.0754	0.0711	0.0673	0.0638	0.0606	0.058	0.0554	0.0528	0.0503
Pos 17																	0.0689	0.0652	0.0618	0.0586	0.0557	0.0532	0.0509	0.0487	0.0469
Pos 18																		0.0737	0.0699	0.0663	0.063	0.0601	0.0575	0.0551	0.0529
Pos 19																			0.0638	0.0606	0.0578	0.0553	0.0529	0.0507	0.0487
Pos 20																				0.0656	0.0624	0.0597	0.057	0.0545	0.0523
Pos 21																					0.0595	0.0568	0.0543	0.052	0.0497
Pos 22																						0.0645	0.0617	0.0592	0.0567
Pos 23																							0.0718	0.0685	0.0659
Pos 24																								0.0513	0.0491
Pos 25																									0.077

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios (Continued)

Table H1.24- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for United Kingdom

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8395	0.5788	0.3613	0.3019	0.2551	0.2454	0.2173	0.1971	0.1794	0.1606	0.1513	0.1382	0.1304	0.1239	0.118	0.1155	0.1121	0.1069	0.1013	0.0968	0.0942	0.0916	0.0897	0.0873
Pos 2		0.5534	0.3966	0.328	0.2756	0.2474	0.2064	0.1844	0.1727	0.1621	0.1566	0.1478	0.1407	0.1312	0.1243	0.1189	0.1126	0.1103	0.1068	0.1019	0.0985	0.0943	0.0854	0.0831	0.0817
Pos 3			0.5916	0.4557	0.3661	0.2913	0.2679	0.2433	0.2086	0.1817	0.1702	0.156	0.1448	0.1363	0.1266	0.1182	0.112	0.1052	0.0986	0.0952	0.0902	0.0863	0.0852	0.0811	0.0775
Pos 4				0.3608	0.3038	0.2531	0.246	0.215	0.1929	0.1727	0.1543	0.1449	0.1315	0.1251	0.1187	0.1121	0.1093	0.1065	0.1016	0.0976	0.0933	0.0908	0.089	0.087	0.0841
Pos 5					0.2989	0.251	0.2234	0.1943	0.1756	0.158	0.1442	0.1278	0.1193	0.1068	0.0987	0.0933	0.0887	0.0813	0.0778	0.0743	0.0713	0.0682	0.0656	0.0626	0.0604
Pos 6						0.3304	0.327	0.2882	0.2387	0.2083	0.1919	0.1776	0.159	0.1526	0.1433	0.1325	0.1215	0.1154	0.1071	0.1022	0.0961	0.0936	0.0933	0.09	0.0848
Pos 7							0.211	0.1894	0.1761	0.1635	0.1531	0.1424	0.1334	0.1246	0.1174	0.1116	0.1054	0.1024	0.098	0.0953	0.0919	0.0869	0.0806	0.0775	0.0749
Pos 8								0.2527	0.2246	0.2111	0.1792	0.1649	0.1571	0.1443	0.1377	0.1312	0.1258	0.1209	0.1154	0.1091	0.1041	0.1001	0.096	0.0927	0.089
Pos 9									0.3137	0.2735	0.2628	0.2477	0.2311	0.2275	0.2212	0.1989	0.1912	0.1802	0.1663	0.158	0.1482	0.1433	0.147	0.1432	0.1342
Pos 10										0.1965	0.1811	0.1638	0.1485	0.1428	0.1331	0.1214	0.1145	0.1074	0.0988	0.0937	0.0882	0.085	0.0854	0.0825	0.0783
Pos 11											0.152	0.1409	0.1308	0.1224	0.1165	0.1096	0.1049	0.1004	0.0966	0.0919	0.0877	0.0844	0.0802	0.0776	0.0748
Pos 12												0.1298	0.1194	0.1099	0.1	0.094	0.0887	0.0824	0.0782	0.0744	0.071	0.0679	0.0659	0.0624	0.06
Pos 13													0.1528	0.1468	0.1391	0.1288	0.1216	0.1162	0.1087	0.1032	0.0981	0.0954	0.0942	0.0906	0.0863
Pos 14														0.1118	0.1035	0.0985	0.0924	0.0867	0.0828	0.0793	0.0759	0.0725	0.0685	0.0656	0.0632
Pos 15															0.0966	0.0913	0.0859	0.0807	0.0768	0.0731	0.0699	0.0665	0.0639	0.0605	0.0584
Pos 16																0.1464	0.1397	0.1321	0.1226	0.1168	0.1105	0.1064	0.1066	0.1022	0.0962
Pos 17																	0.1384	0.1321	0.1264	0.1179	0.1129	0.1082	0.1046	0.1003	0.0964
Pos 18																		0.0846	0.0802	0.0765	0.0729	0.0702	0.0686	0.0654	0.0628
Pos 19																			0.1165	0.1101	0.1036	0.1003	0.1025	0.0976	0.0916
Pos 20																				0.1107	0.1062	0.101	0.0967	0.0934	0.0902
Pos 21																					0.115	0.1102	0.1089	0.1043	0.0975
Pos 22																						0.0896	0.0837	0.0804	0.0774
Pos 23																							0.0856	0.0824	0.0805
Pos 24																								0.0636	0.0613
Pos 25																									0.1003

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H1 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Domestic Portfolios

Table H1.25- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for United States

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6241	0.4368	0.335	0.2573	0.2232	0.1879	0.1651	0.1448	0.1345	0.1226	0.1122	0.1042	0.0974	0.09	0.0841	0.0798	0.0757	0.0714	0.0677	0.064	0.0616	0.0587	0.056	0.0539
Pos 2		0.566	0.4032	0.3319	0.2735	0.2302	0.2043	0.1768	0.1626	0.1393	0.1299	0.1211	0.1135	0.102	0.0968	0.0921	0.0887	0.0851	0.0822	0.0764	0.0729	0.0708	0.0686	0.0678	0.0659
Pos 3			0.6314	0.4838	0.4267	0.5025	0.4449	0.4085	0.3557	0.383	0.3267	0.2921	0.2632	0.4457	0.3693	0.2998	0.2583	0.2221	0.2147	0.2922	0.2908	0.2657	0.2437	0.2225	0.1979
Pos 4				0.3774	0.3315	0.3376	0.2924	0.2737	0.2433	0.2644	0.1996	0.1708	0.1577	0.1936	0.1894	0.1733	0.1406	0.1268	0.1244	0.1377	0.1357	0.1176	0.1109	0.1043	0.0936
Pos 5					0.2668	0.2334	0.1972	0.1729	0.1491	0.1363	0.1248	0.1154	0.1066	0.1002	0.0923	0.0866	0.0822	0.0779	0.0713	0.0684	0.0648	0.0624	0.0591	0.0567	0.0548
Pos 6						0.2245	0.2012	0.1785	0.1639	0.1486	0.1393	0.1308	0.1235	0.1128	0.1059	0.1011	0.0975	0.0934	0.0891	0.0839	0.0788	0.0761	0.0741	0.0724	0.0711
Pos 7							0.2195	0.1973	0.1728	0.1641	0.149	0.1364	0.1261	0.1234	0.1085	0.1006	0.0959	0.091	0.0861	0.0837	0.0793	0.0756	0.0722	0.0688	0.0661
Pos 8								0.204	0.1852	0.1611	0.1502	0.1409	0.1329	0.1193	0.1142	0.1096	0.1045	0.0978	0.0931	0.0859	0.0823	0.0811	0.0786	0.077	0.0746
Pos 9									0.1782	0.1728	0.1534	0.1399	0.1292	0.1292	0.1176	0.1082	0.1014	0.0948	0.0878	0.0857	0.0818	0.0777	0.0729	0.0694	0.0661
Pos 10										0.1415	0.1316	0.1232	0.1151	0.1021	0.0972	0.0927	0.0892	0.0852	0.0814	0.0753	0.072	0.0701	0.0679	0.066	0.0641
Pos 11											0.2378	0.1994	0.1818	0.2414	0.2356	0.2054	0.1581	0.1399	0.1362	0.1531	0.154	0.1288	0.1211	0.1125	0.0996
Pos 12												0.2565	0.2427	0.7899	1.3083	0.5909	0.2782	0.2382	0.2488	0.3732	0.5801	0.3069	0.2478	0.1998	0.1519
Pos 13													0.1635	0.1583	0.1504	0.1382	0.1319	0.1247	0.1185	0.1164	0.1125	0.1074	0.1016	0.097	0.0933
Pos 14														0.1002	0.095	0.0908	0.088	0.0849	0.0811	0.0738	0.0704	0.069	0.0668	0.0652	0.0637
Pos 15															0.106	0.0992	0.0946	0.09	0.0847	0.0825	0.0777	0.0747	0.0712	0.0683	0.066
Pos 16																0.1888	0.1744	0.1595	0.1511	0.1535	0.1505	0.1395	0.1316	0.1198	0.1131
Pos 17																	0.1408	0.127	0.1233	0.1313	0.1324	0.1161	0.1091	0.1025	0.0934
Pos 18																		0.2544	0.2454	0.3274	0.3173	0.261	0.2385	0.2101	0.1908
Pos 19																			0.0834	0.0808	0.077	0.0742	0.0696	0.0668	0.0645
Pos 20																				0.0813	0.0775	0.0753	0.073	0.0712	0.0693
Pos 21																					0.0865	0.0837	0.0805	0.0785	0.0763
Pos 22																						0.1308	0.1207	0.1126	0.1028
Pos 23																							0.1322	0.1203	0.1116
Pos 24																								0.2665	0.2172
Pos 25																									0.0949

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios

Table H2.01- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.011	0.8056	0.6568	0.57163	0.4461	0.3969	0.3681	0.3232	0.3145	0.2978	0.2621	0.2486	0.2085	0.1944	0.1865	0.1722	0.1675	0.1612	0.1517	0.1468	0.1402	0.13739	0.13253	0.1299
Pos 2		0.5721	0.4114	0.34229	0.32941	0.2952	0.2731	0.2464	0.2277	0.2119	0.2083	0.1965	0.1745	0.1704	0.1628	0.1522	0.1533	0.1494	0.1494	0.1442	0.1441	0.1396	0.13907	0.13338	0.1241
Pos 3			0.5889	0.48207	0.42818	0.3694	0.3393	0.3027	0.2799	0.2484	0.2292	0.2209	0.2017	0.1853	0.1717	0.1646	0.1594	0.1481	0.1445	0.1394	0.1361	0.1298	0.12477	0.12155	0.1147
Pos 4				0.43257	0.35966	0.3145	0.2865	0.2692	0.2436	0.2302	0.2105	0.2	0.1947	0.1849	0.1841	0.1689	0.1722	0.159	0.1522	0.1393	0.137	0.1397	0.15394	0.12914	0.1256
Pos 5					0.29787	0.248	0.2293	0.2103	0.1839	0.165	0.1417	0.1332	0.1226	0.1149	0.1099	0.1035	0.099	0.0895	0.0847	0.08	0.0775	0.0747	0.07248	0.06958	0.0664
Pos 6						0.3635	0.3085	0.2806	0.2481	0.2224	0.2085	0.1812	0.1735	0.1557	0.1403	0.1323	0.1204	0.1184	0.1142	0.1102	0.1018	0.0951	0.09089	0.08762	0.0848
Pos 7							0.3625	0.3279	0.3238	0.3155	0.3178	0.3135	0.3034	0.2858	0.2522	0.2443	0.2324	0.2343	0.2233	0.2168	0.2003	0.2027	0.2046	0.19924	0.1968
Pos 8								0.5017	0.4984	0.4969	0.5169	0.4851	0.4645	0.447	0.44	0.4329	0.3994	0.4247	0.4664	0.4924	0.4588	0.4189	0.47437	0.49827	0.5534
Pos 9									0.2252	0.2102	0.1921	0.1764	0.1678	0.1582	0.1506	0.1435	0.1396	0.13	0.1228	0.1154	0.1128	0.1112	0.10873	0.10335	0.0992
Pos 10										0.211	0.1979	0.1887	0.1788	0.17	0.161	0.1522	0.149	0.1434	0.1366	0.1305	0.1279	0.1215	0.11796	0.1134	0.1084
Pos 11											0.1598	0.1511	0.1404	0.1326	0.1274	0.1213	0.1184	0.1033	0.0969	0.091	0.0892	0.0876	0.08437	0.08059	0.0766
Pos 12												0.2431	0.2338	0.2148	0.1997	0.1952	0.1752	0.1838	0.173	0.1686	0.1524	0.142	0.14271	0.14013	0.1378
Pos 13													0.1447	0.1369	0.1309	0.1242	0.1197	0.1108	0.1079	0.1038	0.1014	0.0985	0.09656	0.09307	0.087
Pos 14														0.2258	0.2078	0.1978	0.1813	0.1789	0.1704	0.1655	0.1561	0.1464	0.1463	0.13937	0.1378
Pos 15															0.1488	0.1407	0.128	0.1256	0.12	0.1163	0.1096	0.1027	0.09925	0.09679	0.0943
Pos 16																0.1476	0.1482	0.1434	0.1368	0.1297	0.1297	0.125	0.12623	0.11966	0.1137
Pos 17																	0.1193	0.1154	0.1133	0.1097	0.0991	0.0935	0.09147	0.08928	0.0871
Pos 18																		0.0874	0.0823	0.0771	0.0751	0.0729	0.07037	0.06756	0.0647
Pos 19																			0.0994	0.0932	0.0913	0.0891	0.08798	0.08382	0.081
Pos 20																				0.1201	0.12	0.1184	0.12483	0.11537	0.1102
Pos 21																					0.1837	0.1703	0.17495	0.18016	0.1733
Pos 22																						0.1413	0.13595	0.13303	0.1326
Pos 23																							0.1174	0.11547	0.1135
Pos 24																								0.1649	0.1601
Pos 25																									0.1247

* Pos1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.02- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Second Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	2.026	1.6086	0.9837	0.77848	0.56045	0.5053	0.5143	0.4593	0.418	0.39052	0.3626	0.3352	0.2779	0.2631	0.2346	0.2083	0.1988	0.1919	0.1842	0.1701	0.163	0.1558	0.1545	0.1469
Pos 2		0.5458	0.3939	0.3192	0.27124	0.24052	0.2211	0.2051	0.1895	0.1748	0.16552	0.1621	0.1479	0.1438	0.1406	0.1338	0.1351	0.1275	0.1311	0.1248	0.1197	0.1204	0.1196	0.1215	0.1097
Pos 3			0.6205	0.4867	0.3887	0.32246	0.2919	0.27	0.2423	0.2165	0.19933	0.1842	0.1645	0.1627	0.1542	0.1447	0.1399	0.1312	0.1261	0.1201	0.1133	0.1079	0.105	0.1016	0.0949
Pos 4				0.664	0.5193	0.44025	0.3958	0.3679	0.3252	0.3014	0.26674	0.2579	0.2507	0.233	0.2269	0.2072	0.2061	0.1911	0.1993	0.1866	0.1814	0.181	0.1966	0.1857	0.1817
Pos 5					0.39871	0.33083	0.2882	0.2767	0.2341	0.2082	0.17733	0.1677	0.1549	0.1491	0.1434	0.1343	0.1285	0.1145	0.105	0.0975	0.0932	0.0912	0.0897	0.0844	0.0825
Pos 6						0.40718	0.349	0.3005	0.272	0.2416	0.21926	0.1894	0.1769	0.1616	0.1432	0.138	0.1209	0.1155	0.1115	0.108	0.1	0.0928	0.0897	0.0868	0.0837
Pos 7							0.5911	0.547	0.5006	0.4685	0.43701	0.4015	0.3902	0.399	0.3688	0.3652	0.3987	0.3967	0.3923	0.3635	0.3475	0.3251	0.3642	0.3671	0.4242
Pos 8								0.3484	0.3175	0.2981	0.28292	0.2639	0.253	0.2313	0.212	0.2062	0.194	0.1889	0.1965	0.1873	0.1786	0.1665	0.1698	0.1712	0.1706
Pos 9									0.2622	0.24	0.20803	0.1958	0.1887	0.1757	0.169	0.1616	0.1591	0.1458	0.1454	0.1336	0.1307	0.1268	0.1245	0.1176	0.1149
Pos 10										0.3593	0.32643	0.3134	0.2894	0.2712	0.2628	0.2565	0.2394	0.2251	0.2054	0.1978	0.1883	0.1799	0.1728	0.1669	0.1593
Pos 11											0.19458	0.1833	0.1697	0.1582	0.1499	0.1414	0.1355	0.1197	0.1114	0.1026	0.0998	0.097	0.0965	0.0896	0.0869
Pos 12												0.2536	0.2497	0.2235	0.1999	0.1919	0.179	0.1766	0.1778	0.1687	0.1581	0.1499	0.1515	0.149	0.1462
Pos 13													0.1688	0.162	0.1559	0.1478	0.1459	0.1374	0.1342	0.129	0.1257	0.1208	0.1198	0.1145	0.104
Pos 14														0.1959	0.183	0.1686	0.1623	0.1568	0.1661	0.1597	0.1539	0.1465	0.1436	0.1427	0.1429
Pos 15															0.1619	0.1529	0.1426	0.1346	0.1321	0.1267	0.1186	0.1113	0.1059	0.1032	0.0999
Pos 16																0.3326	0.3332	0.3409	0.3947	0.3898	0.3762	0.3726	0.4279	0.527	0.5664
Pos 17																	0.1364	0.132	0.1295	0.1246	0.117	0.1103	0.1097	0.1063	0.1036
Pos 18																		0.1078	0.1	0.0927	0.0901	0.0875	0.0856	0.0795	0.0765
Pos 19																			0.0952	0.0899	0.0866	0.083	0.0814	0.0738	0.0709
Pos 20																				0.2825	0.3982	0.5688	-0.199	-0.1158	-0.07
Pos 21																					0.2052	0.1917	0.1858	0.1855	0.1761
Pos 22																						0.1529	0.1476	0.1465	0.1421
Pos 23																							0.1119	0.1123	0.1108
Pos 24																								0.0846	0.081
Pos 25																									0.1307

* Pos1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.03- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Third Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8688	0.5785	0.4793	0.3948	0.3146	0.3033	0.25723	0.223	0.2072	0.1926	0.1762	0.1625	0.149	0.13835	0.1315	0.1207	0.1159	0.1104	0.1067	0.1008	0.0983	0.0962	0.093	0.09
Pos 2		0.7818	0.5813	0.4688	0.3758	0.3311	0.392	0.37245	0.3579	0.3436	0.3119	0.2947	0.2706	0.25	0.25194	0.2363	0.2318	0.2187	0.2218	0.2181	0.2159	0.2179	0.231	0.2282	0.2144
Pos 3			0.7279	0.566	0.4724	0.392	0.3839	0.34461	0.3049	0.3056	0.2548	0.238	0.2142	0.2034	0.19074	0.1745	0.1661	0.1495	0.1426	0.1329	0.1298	0.1285	0.1233	0.1172	0.1109
Pos 4				0.567	0.4512	0.393	0.5839	0.5711	0.4796	0.4345	0.3306	0.3075	0.2833	0.2718	0.26195	0.2506	0.2398	0.2046	0.1911	0.1733	0.1746	0.1654	0.1935	0.1626	0.151
Pos 5					1.0699	0.9089	1.3194	1.59581	1.1877	1.2089	1.6347	1.3392	1.6942	1.4238	1.29863	1.3378	1.3825	-0.653	0.0473	0.3462	0.383	0.4831	0.6516	0.9913	1.362
Pos 6						0.6946	0.6108	0.45407	0.388	0.3561	0.32	0.2812	0.2616	0.2383	0.20411	0.1909	0.1746	0.164	0.1538	0.1449	0.1369	0.126	0.1289	0.1261	0.122
Pos 7							1.0844	0.78259	0.6253	0.4254	0.4228	0.3268	0.3172	0.3154	0.26365	0.255	0.2353	0.2641	0.2825	0.3019	0.2991	0.2926	0.2867	0.2455	0.2493
Pos 8								0.36787	0.3328	0.3191	0.3131	0.2981	0.2719	0.2473	0.22167	0.2176	0.2118	0.207	0.2005	0.1987	0.1944	0.18	0.193	0.1918	0.188
Pos 9									0.3279	0.3069	0.2669	0.2427	0.2317	0.2167	0.20333	0.1876	0.1724	0.1606	0.15	0.1409	0.1362	0.1299	0.1268	0.1206	0.1153
Pos 10										0.4564	0.4655	0.4716	0.4212	0.398	0.37049	0.3652	0.3569	0.3426	0.3159	0.3082	0.2799	0.2763	0.2606	0.249	0.2438
Pos 11											0.2114	0.1989	0.1827	0.1734	0.16852	0.1555	0.1464	0.1267	0.1166	0.1058	0.1016	0.0987	0.1007	0.0941	0.0883
Pos 12												0.3475	0.3327	0.3091	0.28059	0.2586	0.2344	0.2384	0.2322	0.2327	0.2414	0.2543	0.2971	0.2853	0.3033
Pos 13													0.5496	0.5154	0.54401	0.4663	0.4406	0.4048	0.3938	0.3843	0.4213	0.405	0.6448	0.753	0.8619
Pos 14														0.2229	0.20117	0.1891	0.18	0.1758	0.1687	0.1636	0.1583	0.1513	0.15	0.1448	0.1391
Pos 15															0.16139	0.1539	0.1471	0.1407	0.1329	0.1292	0.1216	0.1105	0.1083	0.1056	0.1026
Pos 16																0.2054	0.1896	0.1768	0.1646	0.1571	0.1479	0.1437	0.1429	0.1403	0.1346
Pos 17																	0.1498	0.1442	0.1392	0.1336	0.1257	0.1209	0.1164	0.1122	0.1089
Pos 18																		0.1287	0.1189	0.1063	0.1027	0.0986	0.1003	0.0956	0.0922
Pos 19																			0.1286	0.1161	0.1114	0.1087	0.1087	0.103	0.0975
Pos 20																				0.0971	0.0937	0.0932	0.0953	0.0884	0.0842
Pos 21																					0.2274	0.2028	0.2041	0.2226	0.2262
Pos 22																						0.1195	0.1148	0.1129	0.109
Pos 23																							0.1132	0.1092	0.1067
Pos 24																								0.2696	0.2352
Pos 25																									0.4264

* Pos1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95%Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.04- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Fourth Highest Market Capitalization																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.295	1.0664	0.7899	0.6938	0.5093	0.4472	0.4087	0.3467	0.3107	0.2878	0.2529	0.2439	0.2123	0.1957	0.1826	0.1682	0.1581	0.149	0.1411	0.1341	0.1264	0.1238	0.1189	0.1154
Pos 2		0.54	0.3894	0.3417	0.2974	0.2643	0.2504	0.2508	0.2345	0.2187	0.2146	0.2038	0.1813	0.1793	0.1746	0.1653	0.1615	0.1535	0.1534	0.1495	0.1462	0.1436	0.1394	0.1347	0.1283
Pos 3			0.5611	0.4344	0.3753	0.3155	0.2854	0.2695	0.2431	0.2195	0.1997	0.1876	0.1653	0.1624	0.1562	0.1483	0.1438	0.1355	0.1307	0.1251	0.1186	0.1163	0.113	0.1091	0.103
Pos 4				0.4618	0.358	0.3078	0.2785	0.2762	0.2392	0.2156	0.1883	0.1753	0.1624	0.1557	0.1492	0.1399	0.1374	0.125	0.117	0.1094	0.1071	0.1068	0.1049	0.0989	0.0952
Pos 5					0.4375	0.405	0.3818	0.4007	0.3326	0.3062	0.2726	0.2737	0.2663	0.2713	0.2566	0.2553	0.2531	0.2243	0.204	0.1824	0.1801	0.1934	0.2164	0.195	0.1785
Pos 6						0.3744	0.316	0.2773	0.2412	0.2205	0.2062	0.1815	0.174	0.1569	0.1406	0.1299	0.1178	0.1139	0.1098	0.1048	0.0981	0.0929	0.0885	0.0857	0.0836
Pos 7							0.3926	0.3617	0.3334	0.3082	0.3121	0.2843	0.2879	0.2684	0.2485	0.2389	0.2192	0.2126	0.2097	0.2036	0.193	0.1828	0.1906	0.1849	0.1795
Pos 8								0.2532	0.2367	0.2258	0.2321	0.2203	0.2133	0.2008	0.1863	0.1777	0.1742	0.1747	0.1734	0.1689	0.1617	0.1495	0.1522	0.1504	0.1471
Pos 9									0.2753	0.2542	0.2255	0.2114	0.206	0.19	0.1841	0.1753	0.1685	0.1567	0.1458	0.1362	0.1319	0.1319	0.1283	0.1229	0.122
Pos 10										0.2993	0.2814	0.2593	0.2373	0.2294	0.2186	0.2076	0.1984	0.1891	0.1788	0.1734	0.1722	0.1675	0.1583	0.1538	0.1474
Pos 11											0.1882	0.176	0.1633	0.1556	0.1496	0.1403	0.1354	0.125	0.1156	0.1085	0.1064	0.1047	0.1019	0.0979	0.0948
Pos 12												0.226	0.223	0.205	0.188	0.1764	0.163	0.159	0.1503	0.1447	0.1353	0.1294	0.1288	0.1265	0.1231
Pos 13													0.1656	0.1642	0.1598	0.1495	0.1439	0.1371	0.1309	0.1275	0.1252	0.1235	0.1176	0.113	0.1064
Pos 14														0.2399	0.2238	0.2097	0.202	0.1954	0.1883	0.1775	0.1713	0.1651	0.1672	0.1632	0.1586
Pos 15															0.1668	0.1584	0.1451	0.1412	0.1343	0.1298	0.122	0.114	0.1105	0.1071	0.1023
Pos 16																0.1462	0.1397	0.1337	0.1257	0.1193	0.1169	0.1127	0.1064	0.1028	0.1008
Pos 17																	0.1615	0.157	0.1496	0.1469	0.1372	0.1301	0.1258	0.1239	0.1222
Pos 18																		0.191	0.1763	0.1622	0.1542	0.1581	0.1582	0.1343	0.1281
Pos 19																			0.1126	0.1037	0.1012	0.1009	0.1022	0.0962	0.0926
Pos 20																				0.1351	0.1328	0.1304	0.1372	0.1272	0.1201
Pos 21																					0.2234	0.2078	0.2014	0.1985	0.1946
Pos 22																						0.1113	0.1071	0.1043	0.1023
Pos 23																							0.1198	0.1165	0.1135
Pos 24																								0.1414	0.1308
Pos 25																									0.1621

* Pos1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.05- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Fifth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0752	0.805	0.6411	0.5631	0.4307	0.3981	0.5336	0.4578	0.4168	0.3789	0.3394	0.2967	0.2576	0.2334	0.2183	0.1967	0.1844	0.1723	0.165	0.1558	0.1416	0.1417	0.1334	0.1308
Pos 2		0.5428	0.3896	0.3404	0.3252	0.2925	0.2735	0.3436	0.3083	0.2714	0.2494	0.2339	0.1955	0.1816	0.1703	0.1605	0.1542	0.1469	0.1406	0.1358	0.1286	0.1279	0.1247	0.1214	0.1142
Pos 3			0.638	0.4897	0.4413	0.3894	0.339	0.505	0.4497	0.3809	0.3437	0.3211	0.2677	0.2488	0.2287	0.2171	0.1994	0.1847	0.178	0.1692	0.1596	0.1469	0.1401	0.1337	0.125
Pos 4				0.4307	0.3292	0.298	0.2941	0.6341	0.4982	0.4188	0.3244	0.2922	0.2849	0.2649	0.2469	0.2201	0.2019	0.173	0.1515	0.1314	0.1201	0.1187	0.1107	0.1002	0.0941
Pos 5					0.2955	0.268	0.2426	0.3163	0.2698	0.2386	0.1999	0.1888	0.1746	0.1618	0.155	0.1401	0.1372	0.1261	0.1168	0.1077	0.1027	0.0992	0.0964	0.0898	0.0859
Pos 6						0.3275	0.2835	0.4202	0.3817	0.3389	0.3119	0.2571	0.2283	0.2093	0.1838	0.1672	0.1445	0.1389	0.1305	0.1237	0.1146	0.1063	0.1019	0.0978	0.0949
Pos 7							0.5	0.578	0.5043	0.4602	0.4436	0.3978	0.3939	0.3637	0.3146	0.293	0.2641	0.2518	0.2458	0.2492	0.2358	0.2281	0.2235	0.2193	0.2183
Pos 8								0.2343	0.209	0.1931	0.1879	0.1785	0.1767	0.165	0.1552	0.153	0.1525	0.1505	0.148	0.1545	0.1517	0.1478	0.1479	0.1521	0.1564
Pos 9									0.5528	0.4905	0.4347	0.3848	0.3762	0.3329	0.3194	0.2998	0.2914	0.2658	0.2595	0.2536	0.2351	0.2429	0.232	0.228	0.2237
Pos 10										0.4859	0.4168	0.3974	0.3525	0.3375	0.3209	0.2917	0.2961	0.2789	0.256	0.2461	0.2381	0.2284	0.2202	0.2092	0.2008
Pos 11											0.2267	0.2082	0.1913	0.1822	0.1735	0.1603	0.1517	0.137	0.1283	0.1167	0.111	0.1109	0.1099	0.1031	0.098
Pos 12												0.259	0.2466	0.2253	0.2027	0.1885	0.1732	0.1683	0.1605	0.1556	0.1481	0.1397	0.1375	0.1317	0.1304
Pos 13													0.2106	0.1959	0.1804	0.1649	0.1565	0.1471	0.1391	0.1321	0.1272	0.1236	0.1184	0.1135	0.1031
Pos 14														0.3363	0.3116	0.3028	0.2826	0.2712	0.2543	0.2489	0.2365	0.232	0.2529	0.2402	0.2393
Pos 15															0.2094	0.1998	0.1779	0.1739	0.169	0.1651	0.1525	0.1404	0.1314	0.1313	0.1289
Pos 16																0.1574	0.1483	0.1402	0.1306	0.124	0.1176	0.1128	0.1083	0.1011	0.0973
Pos 17																	0.1594	0.1529	0.1441	0.141	0.1329	0.1251	0.1219	0.1192	0.1161
Pos 18																		0.1536	0.1433	0.132	0.1288	0.1241	0.1285	0.1198	0.113
Pos 19																			0.1311	0.1199	0.1139	0.1112	0.1103	0.1031	0.0987
Pos 20																				0.0953	0.0908	0.0854	0.0822	0.0759	0.0721
Pos 21																					0.3373	0.3188	0.2773	0.2776	0.2726
Pos 22																						0.1343	0.1286	0.1284	0.1256
Pos 23																							0.113	0.1097	0.1074
Pos 24																								0.0937	0.0881
Pos 25																									0.1155

* Pos1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.06- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Sixth Highest Market Capitalization																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0281	0.8091	0.6624	0.5372	0.4435	0.4106	0.6547	0.7379	0.63159	0.5755	0.5629	0.5425	0.4485	0.4132	0.3594	0.3078	0.2956	0.2578	0.2448	0.2286	0.2132	0.1942	0.1873	0.1834
Pos 2		0.6072	0.447	0.4476	0.4133	0.3464	0.3162	0.9202	39.789	4.89813	2.8485	3.1766	1.423	1.3593	1.8029	1.527	1.9488	1.5727	1.2652	0.8932	0.7922	0.6565	0.4105	0.4047	0.3601
Pos 3			0.7323	0.6426	0.5929	0.5315	0.5197	1.2611	0.95	0.82813	0.7615	0.8193	0.7431	0.7086	0.6353	0.6397	0.7227	0.7864	0.7441	0.6196	0.5368	0.4983	0.5142	0.5627	0.6016
Pos 4				0.4019	0.3115	0.2627	0.2556	0.4219	0.4068	0.35148	0.2837	0.256	0.2317	0.2111	0.1964	0.1848	0.1728	0.1586	0.1419	0.1258	0.1202	0.1155	0.1112	0.1048	0.0991
Pos 5					0.3482	0.2886	0.2723	0.4835	0.5413	0.47851	0.3888	0.3546	0.3183	0.295	0.2771	0.2542	0.2395	0.2192	0.1944	0.1741	0.1655	0.1624	0.1538	0.1449	0.1357
Pos 6						2.4829	2.4174	0.984	1.1604	1.68581	1.2341	0.65	0.7744	0.7352	0.716	0.7469	1.2757	0.7216	-2.1634	-1.83	-0.6786	-0.432	-0.175	-0.214	-0.193
Pos 7							0.5039	-4.3054	1.8246	1.52072	1.4864	1.2734	1.1882	1.1349	1.0732	1.0595	0.9378	0.8552	0.7751	0.7783	0.7589	0.7481	0.7361	0.7409	0.6691
Pos 8								0.1584	0.1879	0.17246	0.1631	0.1508	0.1412	0.1323	0.1243	0.1187	0.1135	0.1081	0.1058	0.1057	0.1014	0.0974	0.0953	0.0933	0.0927
Pos 9									0.4669	0.41376	0.3555	0.3079	0.2749	0.2444	0.2288	0.2121	0.2029	0.1925	0.1852	0.1727	0.1645	0.1606	0.148	0.1406	0.1389
Pos 10										0.40158	0.3584	0.3275	0.2935	0.282	0.2649	0.2473	0.224	0.2145	0.1983	0.1905	0.1824	0.171	0.1623	0.16	0.1427
Pos 11											0.3956	0.3633	0.3139	0.2914	0.2699	0.2385	0.2239	0.2028	0.1786	0.1584	0.1512	0.1459	0.1522	0.1431	0.1423
Pos 12												0.5672	0.518	0.4697	0.4354	0.397	0.3939	0.3749	0.336	0.3136	0.2994	0.2985	0.3035	0.2813	0.2632
Pos 13													0.338	0.3179	0.3005	0.2823	0.2672	0.252	0.2357	0.2218	0.2156	0.2083	0.1955	0.1896	0.1689
Pos 14														0.6693	0.6292	0.615	0.599	0.5675	0.5272	0.4817	0.4522	0.4359	0.4364	0.4138	0.4377
Pos 15															0.419	0.3852	0.3513	0.3355	0.3146	0.3022	0.287	0.2604	0.2635	0.2527	0.233
Pos 16																0.3201	0.289	0.2796	0.2532	0.2505	0.2388	0.2282	0.2191	0.2	0.2007
Pos 17																	0.2063	0.1995	0.1862	0.1818	0.169	0.1571	0.149	0.1454	0.1377
Pos 18																		0.2856	0.2649	0.2415	0.2385	0.2333	0.2378	0.2202	0.2114
Pos 19																			0.1748	0.159	0.1511	0.1465	0.1551	0.148	0.137
Pos 20																				0.1456	0.1395	0.1364	0.1466	0.1334	0.1308
Pos 21																					0.1111	0.0945	0.066	0.0629	0.0583
Pos 22																						0.2395	0.222	0.2196	0.2042
Pos 23																							0.1517	0.1475	0.1454
Pos 24																								0.6324	-0.232
Pos 25																									0.1242

* Pos1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.07- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Seventh Highest Market Capitalization																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7616	0.6366	0.5562	0.4965	0.4164	0.3671	0.4162	0.404	0.3703	0.3521	0.3052	0.281	0.2536	0.229	0.2162	0.2054	0.1953	0.1846	0.1944	0.1902	0.1786	0.1837	0.178	0.1721
Pos 2		0.8232	0.6506	0.5458	0.5182	0.4436	0.442	0.9388	0.7906	0.5422	0.4748	0.4275	0.3689	0.3335	0.3152	0.2881	0.3023	0.2813	0.2566	0.2509	0.239	0.2323	0.2602	0.2387	0.221
Pos 3			0.5356	0.4534	0.4003	0.3475	0.3154	0.3793	0.3338	0.314	0.2919	0.2673	0.2389	0.2211	0.2095	0.1992	0.1836	0.1783	0.1689	0.1627	0.1552	0.1467	0.1464	0.1408	0.1324
Pos 4				0.4055	0.3277	0.2771	0.2466	0.2761	0.2395	0.2213	0.1868	0.1734	0.1558	0.1452	0.1337	0.1243	0.1253	0.1151	0.1065	0.0973	0.0949	0.0924	0.0941	0.0864	0.083
Pos 5					0.4077	0.3533	0.3426	0.3472	0.3069	0.2927	0.2428	0.2534	0.2378	0.2323	0.2186	0.1933	0.2114	0.1813	0.162	0.1468	0.1454	0.1433	0.1492	0.1373	0.1314
Pos 6						0.7654	0.9304	0.7667	0.7466	0.6883	0.7409	0.6872	0.6843	0.6445	0.5087	0.488	0.4719	0.4501	0.4437	0.4616	0.4736	0.5354	-0.167	-0.126	-0.136
Pos 7							0.4049	0.47	0.483	0.4398	0.4545	0.3996	0.385	0.3552	0.3434	0.3253	0.3035	0.3103	0.3021	0.3322	0.3041	0.27	0.2981	0.3384	0.3639
Pos 8								0.2151	0.2059	0.1963	0.1949	0.1846	0.1753	0.1684	0.1595	0.1534	0.1511	0.1465	0.1438	0.1466	0.1406	0.1391	0.146	0.1443	0.1417
Pos 9									0.3181	0.2842	0.2778	0.2485	0.2421	0.2246	0.2173	0.2095	0.1964	0.1846	0.1779	0.176	0.1685	0.1726	0.1841	0.1769	0.1761
Pos 10										0.3165	0.3126	0.2976	0.2852	0.2757	0.2682	0.2753	0.2844	0.2804	0.2718	0.3014	0.2961	0.2999	0.3285	0.3135	0.3056
Pos 11											0.1968	0.1934	0.179	0.1674	0.1585	0.1483	0.1465	0.1333	0.1229	0.1107	0.1082	0.1096	0.1125	0.1102	0.101
Pos 12												0.198	0.1878	0.1708	0.157	0.1483	0.134	0.1297	0.1245	0.1226	0.1141	0.1099	0.1106	0.1081	0.1059
Pos 13													0.2609	0.2508	0.2378	0.2226	0.2135	0.1999	0.1869	0.1813	0.1789	0.1773	0.1898	0.1728	0.1558
Pos 14														0.2613	0.2502	0.2371	0.2166	0.2097	0.1965	0.1909	0.1823	0.1722	0.1663	0.1646	0.1602
Pos 15															0.1931	0.1847	0.1662	0.1589	0.1531	0.1525	0.1413	0.1323	0.1271	0.1243	0.1225
Pos 16																0.1382	0.1301	0.1237	0.1167	0.1146	0.1112	0.1083	0.1066	0.1034	0.0992
Pos 17																	0.129	0.1239	0.1199	0.1167	0.1082	0.1017	0.1039	0.0999	0.097
Pos 18																		0.1804	0.1665	0.1461	0.1417	0.1387	0.1507	0.142	0.1314
Pos 19																			0.1301	0.118	0.1154	0.1146	0.1183	0.1151	0.1106
Pos 20																				0.0919	0.0893	0.0861	0.0865	0.0822	0.078
Pos 21																					0.1634	0.1545	0.1434	0.142	0.1396
Pos 22																						0.1165	0.1139	0.1125	0.1083
Pos 23																							0.1107	0.1103	0.1077
Pos 24																								0.0989	0.0948
Pos 25																									0.1608

* Pos1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.08- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Eighth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.1396	0.8797	0.6902	0.5962	0.4846	0.4571	0.4565	0.3827	0.36	0.3383	0.3053	0.2977	0.2578	0.2518	0.2399	0.2611	0.2248	0.2191	0.2328	0.2307	0.2249	0.295	0.2659	0.2827
Pos 2		0.5615	0.4162	0.3398	0.3007	0.2613	0.2632	0.2605	0.2385	0.2153	0.2037	0.192	0.1676	0.1621	0.1589	0.1525	0.1506	0.1437	0.1405	0.1346	0.1277	0.124	0.1285	0.1203	0.111
Pos 3			0.5772	0.4773	0.4226	0.3658	0.3579	0.3487	0.3338	0.2963	0.2837	0.2791	0.2405	0.2333	0.2238	0.2208	0.2295	0.2194	0.211	0.2002	0.202	0.1952	0.2238	0.2143	0.205
Pos 4				2.4933	-18.35	-0.285	-0.123	-0.9976	1.3292	1.3542	38.785	1.1303	-0.087	-0.108	-0.025	0.1542	0.354	0.2668	0.4895	0.7642	1.0027	0.7024	0.1421	0.3662	-0.788
Pos 5					0.3415	0.2949	0.2872	0.2941	0.2609	0.241	0.1998	0.1932	0.1863	0.1763	0.1786	0.167	0.1623	0.146	0.1388	0.129	0.1377	0.1352	0.1498	0.1371	0.1261
Pos 6						0.5693	0.5456	0.5222	0.4802	0.4408	0.4316	0.3671	0.3612	0.3417	0.2774	0.2693	0.2404	0.2352	0.2422	0.2367	0.2236	0.2154	0.2519	0.2373	0.2315
Pos 7							0.3661	0.3515	0.3348	0.334	0.3294	0.305	0.3007	0.2696	0.2777	0.2584	0.2418	0.2297	0.2285	0.2185	0.2079	0.1992	0.2144	0.2053	0.1966
Pos 8								0.2742	0.2458	0.2342	0.2468	0.2267	0.2232	0.2068	0.1935	0.1879	0.1866	0.1825	0.1924	0.2005	0.192	0.1862	0.222	0.2256	0.2318
Pos 9									0.3509	0.3288	0.3026	0.2872	0.2848	0.2635	0.2462	0.2496	0.2584	0.2342	0.2308	0.227	0.2158	0.2031	0.2107	0.2023	0.196
Pos 10										0.2691	0.2482	0.2353	0.2209	0.2095	0.2043	0.1944	0.1915	0.1848	0.1758	0.1714	0.1675	0.1604	0.1654	0.1585	0.1506
Pos 11											0.1856	0.1763	0.1673	0.1565	0.1577	0.1515	0.1496	0.1347	0.1268	0.1181	0.1151	0.1122	0.1169	0.1109	0.1054
Pos 12												0.2124	0.2108	0.1951	0.1759	0.1708	0.1608	0.1545	0.147	0.1443	0.1359	0.1308	0.1304	0.1266	0.1226
Pos 13													0.1917	0.1825	0.1841	0.1732	0.1744	0.1646	0.1486	0.1428	0.1353	0.1314	0.1388	0.1316	0.1212
Pos 14														0.2122	0.2024	0.1931	0.1875	0.1775	0.1714	0.1641	0.1578	0.1513	0.1548	0.1486	0.1451
Pos 15															0.1453	0.1384	0.1262	0.1229	0.1174	0.1133	0.1062	0.1015	0.1018	0.0983	0.0965
Pos 16																0.1356	0.1305	0.125	0.1188	0.1113	0.1078	0.103	0.1011	0.0967	0.0943
Pos 17																	0.1368	0.1352	0.1333	0.1303	0.1226	0.1189	0.1169	0.1137	0.1105
Pos 18																		0.1876	0.1734	0.1644	0.162	0.1576	0.1718	0.1644	0.1568
Pos 19																			0.1735	0.1598	0.1544	0.1511	0.1494	0.1476	0.1372
Pos 20																				0.1161	0.115	0.111	0.1161	0.1076	0.1032
Pos 21																					0.1991	0.1933	0.1913	0.1839	0.179
Pos 22																						0.5144	0.5778	0.789	1.7082
Pos 23																							0.0964	0.0958	0.0953
Pos 24																								0.1022	0.0988
Pos 25																									0.1591

* Pos1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios (Continued)

Table H2.09- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Ninth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.2076	0.8217	0.8517	0.7186	0.5878	0.5054	0.8792	0.7446	0.7328	0.6033	0.4829	0.4494	0.3897	0.3469	0.3201	0.3243	0.2951	0.2794	0.2784	0.2656	0.2173	0.2101	0.2094	0.2008
Pos 2		0.5892	0.4088	0.4979	0.4147	0.3583	0.3144	0.4201	0.3781	0.3385	0.2994	0.2808	0.2587	0.2439	0.2325	0.2223	0.2233	0.212	0.2039	0.1973	0.1828	0.1869	0.1925	0.1847	0.1733
Pos 3			1.1575	0.9487	0.7741	0.6655	0.5788	7.6589	-19.09	9.952	1.2714	1.0172	0.8903	0.8925	0.7195	0.5354	0.4526	0.4313	0.3994	0.3767	0.365	0.3055	0.2664	0.2607	0.2572
Pos 4				0.415	0.331	0.2811	0.2506	0.426	0.3768	0.3336	0.2751	0.2474	0.2267	0.2106	0.1924	0.1798	0.1789	0.1669	0.1555	0.1384	0.1325	0.131	0.1317	0.1292	0.1202
Pos 5					0.3901	0.3308	0.2888	0.5412	0.4848	0.4606	0.328	0.2934	0.2661	0.2421	0.2215	0.1971	0.1989	0.1747	0.1569	0.1445	0.1381	0.1316	0.1301	0.1257	0.1179
Pos 6						0.3833	0.3256	0.4308	0.39	0.3724	0.3289	0.2841	0.2642	0.2422	0.2012	0.1848	0.1641	0.1594	0.1495	0.139	0.1284	0.117	0.1178	0.1158	0.1129
Pos 7							0.4864	0.6751	0.6151	0.5852	0.5222	0.4666	0.4327	0.3948	0.362	0.3417	0.3256	0.3162	0.3063	0.3024	0.2814	0.2786	0.2889	0.284	0.2801
Pos 8								0.1739	0.1598	0.1494	0.1448	0.1384	0.1279	0.12	0.115	0.1113	0.11	0.1046	0.1048	0.1069	0.1036	0.1033	0.1051	0.1001	0.0981
Pos 9									9.0847	-1.607	-0.048	-0.109	-0.081	-0.052	-0.006	0.0299	0.0618	-0.003	0.0452	0.0656	0.0855	0.0773	0.0694	0.0702	0.0886
Pos 10										0.3942	0.3728	0.339	0.3138	0.2928	0.2735	0.2594	0.2516	0.2413	0.2356	0.2266	0.2278	0.2136	0.2004	0.192	0.1858
Pos 11											0.2694	0.2557	0.2349	0.2184	0.2028	0.1849	0.1783	0.1622	0.1507	0.1382	0.1345	0.1336	0.1382	0.1329	0.1248
Pos 12												0.344	0.32	0.2828	0.244	0.2224	0.2046	0.1944	0.1842	0.1715	0.1578	0.1437	0.1419	0.1368	0.1331
Pos 13													0.583	0.5723	0.5744	0.5684	0.5768	0.5559	0.5353	0.5655	0.5188	0.4961	0.4719	0.4462	0.4092
Pos 14														0.5125	0.4818	0.4642	0.4522	0.4147	0.3841	0.3587	0.3571	0.2718	0.23	0.2197	0.2133
Pos 15															0.1888	0.1758	0.1602	0.1527	0.1433	0.1357	0.1288	0.1201	0.1149	0.1112	0.1075
Pos 16																0.1856	0.175	0.1636	0.149	0.137	0.1348	0.1252	0.1206	0.1137	0.1081
Pos 17																	0.1968	0.1911	0.1831	0.1787	0.1729	0.1693	0.1778	0.1802	0.1767
Pos 18																		0.9324	0.9061	1.9137	2.3279	7.3275	-6.632	-2.167	14.104
Pos 19																			0.1336	0.1204	0.1177	0.1135	0.11	0.1051	0.0994
Pos 20																				0.1155	0.1112	0.1079	0.1061	0.1025	0.098
Pos 21																					0.2386	0.2368	0.233	0.2345	0.2279
Pos 22																						0.1277	0.1228	0.1193	0.1168
Pos 23																							0.1192	0.1162	0.113
Pos 24																								-0.312	-0.249
Pos 25																									0.1803

* Pos1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix H2 - Estimates of the Position VaR@95% Cofidence Level to Component VaR@95% Confidence Level Ratio for Foreign Portfolios

Table H2.10- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Companies with Tenth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9755	0.7398	0.5989	0.5259	0.4497	0.4178	0.3674	0.3222	0.2969	0.2724	0.2496	0.232	0.2037	0.1856	0.1742	0.1615	0.1519	0.1451	0.1415	0.1351	0.1288	0.131	0.1252	0.1217
Pos 2		0.5846	0.4552	0.3794	0.344	0.316	0.3512	0.3432	0.3072	0.2954	0.2778	0.2796	0.2537	0.227	0.2296	0.2462	0.2253	0.2227	0.2118	0.2215	0.1956	0.2139	0.2144	0.2262	0.1916
Pos 3			0.633	0.5099	0.4798	0.4996	0.5394	0.4861	0.4567	0.4308	0.4175	0.3886	0.3941	0.3856	0.3587	0.376	0.3766	0.3691	0.3457	0.3267	0.2969	0.2743	0.2544	0.2502	0.2424
Pos 4				0.6368	0.4479	0.4754	0.4467	0.4749	0.4202	0.4054	0.3458	0.3139	0.2959	0.2915	0.2902	0.2752	0.2936	0.2692	0.2416	0.2019	0.2093	0.2225	0.245	0.197	0.2016
Pos 5					0.389	0.3841	0.4012	0.4176	0.3549	0.3385	0.286	0.2799	0.2728	0.2625	0.2543	0.2523	0.2793	0.2401	0.215	0.1966	0.2077	0.2141	0.2228	0.1839	0.1854
Pos 6						0.3282	0.3383	0.3222	0.2881	0.2788	0.2541	0.2316	0.2244	0.2003	0.182	0.1839	0.1585	0.152	0.1439	0.1372	0.1273	0.1224	0.1243	0.1219	0.1212
Pos 7							0.3892	0.3435	0.3038	0.2759	0.2593	0.2376	0.2317	0.2206	0.2104	0.2027	0.1996	0.1903	0.1851	0.1903	0.1899	0.1819	0.1923	0.1833	0.1744
Pos 8								0.2768	0.2533	0.239	0.2303	0.2097	0.2063	0.1939	0.1773	0.1768	0.1714	0.1693	0.1657	0.1664	0.1616	0.1502	0.1541	0.152	0.1527
Pos 9									0.482	0.4779	0.4033	0.3642	0.3351	0.3069	0.2949	0.2775	0.2632	0.2408	0.2327	0.2083	0.2081	0.2168	0.2024	0.1941	0.1924
Pos 10										0.2686	0.2592	0.2368	0.2188	0.2045	0.1924	0.1901	0.1835	0.1791	0.1687	0.1678	0.1657	0.162	0.1645	0.1597	0.1526
Pos 11											0.2851	0.2675	0.2563	0.2411	0.2356	0.2228	0.2079	0.1898	0.1784	0.1616	0.162	0.1583	0.1599	0.1497	0.1488
Pos 12												0.4192	0.4614	0.4229	0.4081	0.4158	0.4438	0.4207	0.4283	0.3894	0.497	0.4705	0.5623	0.525	0.4731
Pos 13													0.2706	0.2572	0.2489	0.2638	0.2535	0.2508	0.2436	0.2348	0.2364	0.23	0.2366	0.2296	0.2231
Pos 14														0.2371	0.2189	0.1998	0.1865	0.1774	0.1659	0.1642	0.1593	0.1526	0.1487	0.1443	0.1447
Pos 15															0.2216	0.2141	0.2034	0.1927	0.1839	0.1884	0.1882	0.1798	0.1726	0.1666	0.1623
Pos 16																0.3744	0.4048	0.3714	0.6024	1.3636	-19.03	9.9044	-0.3767	-0.152	0.0227
Pos 17																	0.1301	0.1224	0.1164	0.1132	0.1044	0.0995	0.0974	0.0955	0.0921
Pos 18																		0.2069	0.188	0.1727	0.1666	0.1638	0.156	0.1478	0.1444
Pos 19																			0.1303	0.1178	0.1158	0.1129	0.1085	0.1003	0.0941
Pos 20																				0.1517	0.152	0.1465	0.1512	0.1444	0.1446
Pos 21																					0.134	0.1269	0.1248	0.1253	0.1225
Pos 22																						0.1645	0.1699	0.167	0.1605
Pos 23																							0.1436	0.136	0.1346
Pos 24																								0.1885	0.269
Pos 25																									0.1459

* Pos1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix H3 - Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Frechet Random Walk Model

Table H3.01- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Frechet Random Walk Model

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0263	0.8349	0.69583	0.5813	0.5522	0.5667	0.7655	0.7193	0.7092	1.0612	0.8503	0.7124	0.7222	0.9731	1.4545	1.0252	0.82	0.7242	0.7061	0.9111	0.7488	0.51867	0.77942	1.1912
Pos 2		0.5783	0.4503	0.37772	0.35677	0.3287	0.3022	0.3184	0.2842	0.2713	0.3077	0.3211	0.4112	0.4281	0.4284	0.4141	0.5984	0.7079	0.8697	0.8052	0.5898	0.5909	0.54018	0.50415	0.5849
Pos 3			0.7389	0.57266	0.51485	0.5548	0.5344	0.4911	0.5147	0.5293	0.6762	0.5292	0.3876	0.3271	0.3897	0.4069	0.3662	0.3299	0.3461	0.3421	0.4808	0.4279	0.45769	0.42156	0.3878
Pos 4				0.55017	0.55738	0.4981	0.4259	0.431	0.3958	0.3848	0.4759	0.4535	0.4021	0.3471	0.331	0.3405	0.3208	0.3262	0.3136	0.285	0.3067	0.3053	0.35701	0.38652	0.4225
Pos 5					0.54025	0.4791	0.4455	0.48	0.4292	0.4148	0.4246	0.4932	0.5042	0.5019	0.568	0.6501	0.5714	0.576	0.5084	0.6507	0.6083	0.6127	0.55465	0.64372	0.5939
Pos 6						0.3378	0.3074	0.342	0.3175	0.2782	0.255	0.2461	0.2664	0.2547	0.2396	0.2451	0.2334	0.2481	0.2785	0.2851	0.3015	0.2743	0.24606	0.2208	0.2124
Pos 7							0.3949	0.3553	0.3502	0.3159	0.3806	0.4175	0.3456	0.3446	0.3207	0.3521	0.3497	0.288	0.2485	0.2399	0.2486	0.2598	0.25549	0.25514	0.2384
Pos 8								0.2209	0.2021	0.1874	0.2107	0.1923	0.1838	0.1736	0.1601	0.1516	0.1549	0.1436	0.1427	0.1373	0.1345	0.1403	0.14417	0.13296	0.1371
Pos 9									0.3514	0.3399	0.3356	0.3539	0.3781	0.4132	0.3851	0.4104	0.3991	0.3396	0.2918	0.2594	0.2478	0.2356	0.24779	0.24642	0.2368
Pos 10										0.3907	0.4273	0.4752	0.4299	0.3799	0.3684	0.3011	0.2941	0.2751	0.2765	0.2591	0.2333	0.2294	0.20617	0.19645	0.1773
Pos 11											0.1605	0.1657	0.2006	0.189	0.1853	0.1607	0.1507	0.1469	0.1418	0.1464	0.1464	0.1336	0.13589	0.13778	0.1455
Pos 12												0.218	0.2274	0.2206	0.2328	0.2449	0.2148	0.2442	0.2272	0.2357	0.2265	0.2293	0.22684	0.25434	0.2579
Pos 13													0.1438	0.1407	0.1365	0.1407	0.1553	0.1525	0.1538	0.1542	0.1518	0.1478	0.14114	0.13388	0.1306
Pos 14														0.2001	0.2066	0.1957	0.1919	0.1885	0.1902	0.1913	0.1795	0.1813	0.19794	0.21203	0.2153
Pos 15															0.177	0.1855	0.1977	0.1891	0.191	0.1677	0.1438	0.1527	0.16208	0.16393	0.1649
Pos 16																0.1528	0.1457	0.1511	0.1544	0.1287	0.1391	0.1339	0.13221	0.12492	0.1221
Pos 17																	0.1854	0.1993	0.1897	0.2133	0.1913	0.1734	0.17088	0.16443	0.1537
Pos 18																		0.218	0.194	0.1848	0.2402	0.2401	0.25282	0.21156	0.1915
Pos 19																			0.2245	0.256	0.2648	0.29	0.30162	0.33416	0.2994
Pos 20																				0.2076	0.2179	0.2212	0.19464	0.19227	0.1917
Pos 21																					0.1426	0.1364	0.14743	0.16203	0.1652
Pos 22																						0.1645	0.14971	0.14552	0.1402
Pos 23																							0.12501	0.12026	0.1184
Pos 24																								0.19486	0.175
Pos 25																									0.2087

* Pos1,...,Pos 25 represents position

** Port 1,...,Port 25 represents portfolio

Appendix H3 - Estimates of the Position VaR@95% to Component VaR@95% Confidence Level Ratio for Geometric Brownian Motion Model

Table H3.02- Estimates of the Position VaR@95% Confidence Level to Component VaR@95% Confidence Level Ratio for Geometric Brownian Motion Model

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7575	0.6162	0.4797	0.43227	0.39966	0.3684	0.3318	0.2832	0.2601	0.23901	0.229	0.2201	0.2228	0.2201	0.1907	0.1799	0.1736	0.1707	0.1689	0.1634	0.1611	0.1551	0.153	0.1363
Pos 2		0.6789	0.5449	0.5067	0.45052	0.42196	0.3759	0.3636	0.362	0.3511	0.32465	0.2727	0.2676	0.245	0.2568	0.2461	0.2367	0.2137	0.1992	0.1749	0.1593	0.1576	0.1616	0.1574	0.1456
Pos 3			0.615	0.5374	0.45712	0.43014	0.3763	0.3233	0.3085	0.2825	0.27343	0.2546	0.2629	0.2638	0.2477	0.2346	0.2405	0.2342	0.2099	0.2213	0.2154	0.1953	0.1987	0.2243	0.2437
Pos 4				0.5556	0.50797	0.44906	0.4429	0.3999	0.3858	0.3813	0.35036	0.3654	0.3383	0.3473	0.3238	0.3687	0.3284	0.3328	0.3691	0.3515	0.3787	0.3469	0.3317	0.3141	0.3523
Pos 5					0.42046	0.38234	0.3745	0.3645	0.3376	0.3066	0.29753	0.2831	0.2522	0.2687	0.2317	0.2414	0.2331	0.2247	0.2374	0.2213	0.2287	0.2329	0.2173	0.2116	0.2048
Pos 6						0.32692	0.2979	0.2941	0.2841	0.2576	0.25047	0.2328	0.2191	0.21	0.1987	0.1894	0.1869	0.1783	0.1853	0.1806	0.1788	0.1674	0.1634	0.1584	0.1609
Pos 7							0.5299	0.4537	0.4146	0.4262	0.45639	0.4826	0.4986	0.4793	0.4512	0.4992	0.5599	0.5618	0.5499	0.5372	0.496	0.4196	0.3696	0.4219	0.4281
Pos 8								0.375	0.362	0.3386	0.34113	0.32	0.2876	0.2724	0.3038	0.2971	0.2611	0.2455	0.2401	0.2575	0.2467	0.2426	0.2325	0.2318	0.2297
Pos 9									0.2795	0.2537	0.23992	0.23	0.2149	0.2023	0.1812	0.1663	0.1638	0.1673	0.1714	0.1691	0.1842	0.2012	0.185	0.1708	0.1818
Pos 10										0.3641	0.31082	0.2829	0.3028	0.2749	0.2776	0.2475	0.2539	0.2624	0.2528	0.2724	0.2667	0.2523	0.2551	0.2115	0.2057
Pos 11											0.24235	0.2389	0.2306	0.2231	0.2152	0.1992	0.2044	0.2078	0.1926	0.1876	0.1815	0.1797	0.1852	0.1888	0.1905
Pos 12												0.4461	0.3939	0.3594	0.3637	0.3842	0.3384	0.346	0.3153	0.2926	0.2726	0.2607	0.2824	0.243	0.2545
Pos 13													0.2459	0.2279	0.2145	0.2161	0.1941	0.1799	0.1686	0.1684	0.1602	0.1735	0.1728	0.1705	0.1708
Pos 14														0.2574	0.2721	0.2774	0.2664	0.251	0.2295	0.2096	0.1983	0.1888	0.1952	0.1901	0.1946
Pos 15															0.266	0.278	0.2764	0.2578	0.2535	0.255	0.2708	0.2792	0.2662	0.2397	0.2253
Pos 16																0.2158	0.2104	0.2009	0.1915	0.2006	0.1971	0.1935	0.1747	0.1817	0.1745
Pos 17																	0.2442	0.236	0.2328	0.2288	0.2426	0.2601	0.2486	0.2491	0.253
Pos 18																		0.2575	0.2553	0.2486	0.2296	0.2222	0.2263	0.2177	0.2186
Pos 19																			0.2455	0.2127	0.1989	0.1959	0.1912	0.1735	0.1577
Pos 20																				0.166	0.1513	0.1527	0.1451	0.1367	0.1332
Pos 21																					0.1802	0.1736	0.1701	0.1752	0.1503
Pos 22																						0.1821	0.1765	0.1746	0.18
Pos 23																							0.3479	0.376	0.3977
Pos 24																								0.1408	0.1306
Pos 25																									0.4433

* Pos1,…,Pos 25 represents position

** Port 1,…,Port 25 represents portfolio

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.01 - Australia

Top 25	Company	DS Code*	Market Value**	Industry Group
1	NATIONAL AUS.BANK	A:NABK(P)	68216.56	BANKS
2	BHP BILLITON	A:BHPY(P)	38933.61	MINING SERVICES
3	NEWS CORPORATION	A:NECO(P)	35989.02	SUBSCRIBED ENTERTAINMENT
4	WESTPAC BANKING	A:WEBA(P)	32149.88	BANKS
5	AUS.AND NZ.BANKING GP.	A:ANBG(P)	30726.21	BANKS
6	RIO TINTO	A:CRAM(P)	17333.25	MINING SERVICES
7	COLESMYER	A:COLE(P)	9920.70	RETAILERS & MULTIDEPARTMENT
8	FOSTERS GROUP	A:FOST(P)	9920.35	BREWERS
9	WOODSIDE PETROLEUM	A:WOOD(P)	9669.62	OIL & GAS EXPLORATION OR PRODUCTION
10	WESTFIELD HOLDINGS	A:WELD(P)	9170.75	REAL ESTATE DEVELOPMENT
11	AMCOR	A:AMCO(P)	8034.02	BUSINESS SUPPORT
12	SUNCORP - METWAY	A:MENK(P)	7317.84	TV, RADIO & FILM
13	PUBLISHING AND BCAST.	A:PBLX(P)	7326.24	BANKS
14	GENERAL PR.TST.	A:GPTS(P)	6578.12	REAL ESTATE DEVELOPMENT
15	QBE INSURANCE GROUP	A:QBEI(P)	6491.60	INSURANCE NON-LIFE
16	STOCKLAND	A:STCK(P)	6188.74	REAL ESTATE DEVELOPMENT
17	AUST.GAS LIGHT	A:AGLT(P)	5449.45	MINING FINANCE
18	BRAMBLES INDUSTRIES	A:BRAI(P)	5267.37	GAS DISTRIBUTION
19	ALUMINA	A:WMCX(P)	5729.25	BUSINESS SUPPORT
20	COCA - COLA AMATIL	A:COCA(P)	4461.73	SOFT DRINKS
21	LEND LEASE CORPORATION	A:LEND(P)	4190.42	REAL ESTATE DEVELOPMENT
22	SANTOS	A:SANT(P)	3988.44	OIL & GAS EXPLORATION OR PRODUCTION
23	ORICA	A:ICIA(P)	3578.27	CHEMICALS, COMMODITY
24	HARDIE JAMES	A:HJIS(P)	3530.24	BUILDING MATERIALS
25	ORIGIN ENERGY (EX BORAL)	A:BORA(P)	3126.04	OIL & GAS EXPLORATION OR PRODUCTION

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.02 - Brazil

Top 25	Company	DS Code*	Market Value**	Industry Group
1	PETROBRAS ON	BR:PET(P)	23036120	OIL INTEGRATED
2	BAHEMAON 1000	BR:LH3(P)	6811210	VEHICLE DISTRIBUTION
3	BRASIL ON 1000	BR:BH3(P)	6159540	BANKS
4	BRADESCO ON 1000	BR:IO3(P)	4620880	BANKS
5	SOUZA CRUZ ON	BR:DC3(P)	4091760	TOBACCO
6	UNIBANCO ON 1000	BR:SZ3(P)	3797360	BANKS
7	ITAUSAPN	BR:UB3(P)	2832450	DIVERSIFIED INDUSTRY
8	BANESPA ON 1000	BR:IS4(P)	2792330	BANKS
9	KUALA PN 1000	BR:NES(P)	2568240	TEXTILES & LEATHER GOODS
10	SUDAMERIS ON 1000	BR:KM5(P)	1459100	BANKS
11	VCP PN1000	BR:GGB(P)	1292840	PAPER
12	ELETROBRAS PNB 1000	BR:AE3(P)	1198350	ELECTRICITY
13	BUNGE BRASIL ON	BR:PS4(P)	1173110	FOOD PROCESSORS
14	BELGO MINEIRA ON 1000	BR:EL6(P)	996620.8	STEEL
15	BAHEMAPNA 1000	BR:AX4(P)	955938.8	VEHICLE DISTRIBUTION
16	CAEMI METAL PN 1000	BR:HS3(P)	848126.2	MINING SERVICES
17	USIMINAS ON NOV	BR:LG3(P)	838095.6	STEEL
18	BEMGE ON 1000	BR:AC4(P)	810493.4	BANKS
19	GERDAUPN	BR:BH5(P)	772680.2	STEEL
20	GERDAUON	BR:EM4(P)	772680.2	STEEL
21	SUZANOPN	BR:US3(P)	712591.6	PAPER
22	PETROQUISA PN 1000	BR:MG3(P)	684571.9	DIVERSIFIED INDUSTRY
23	LIGHTON 1000NPV	BR:CG3(P)	585002	ELECTRICITY
24	BRASKEM PNA 1000	BR:SZ4(P)	557951	CHEMICALS, COMMODITY
25	ACESITA PN 1000	BR:PQ4(P)	432298.8	STEEL

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in thousands of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.03 - Chile

Top 25	Company	DS Code*	Market Value**	Industry Group
1	SANTAMARIA	CL:COE(P)	199743.60	ASSET MANAGERS
2	COPEC	CL:EIS(P)	11351.14	OIL INTEGRATED
3	ENERSIS	CL:CAA(P)	5349.92	ELECTRICITY
4	CTC 'A'	CL:END(P)	4661.75	TELECOM FIXED LINE
5	ENDESA	CL:ENT(P)	4344.16	ELECTRICITY
6	AGUAS 'A'	CL:EMO(P)	2018.98	WATER
7	ENTEL	CL:CVZ(P)	2000.93	TELECOM FIXED LINE
8	CERVEZAS	CL:CHT(P)	1927.99	BREWERS
9	CHILECTRA	CL:MNR(P)	1725.40	ELECTRICITY
10	MINERA	CL:PHC(P)	1581.55	DIVERSIFIED INDUSTRY
11	COLBUN	CL:CBN(P)	1400.02	ELECTRICITY
12	PEHUENCHE	CL:GSG(P)	1363.05	ELECTRICITY
13	GASCO	CL:CCR(P)	1175.33	GAS DISTRIBUTION
14	CONCHATORO	CL:VLR(P)	1101.72	DISTILLERS & VINTNERS
15	PASUR	CL:PSR(P)	1038.86	DIVERSIFIED INDUSTRY
16	COMERCIO	CL:CRC(P)	997.30510	INVESTMENT COMPANIES
17	PROVIDA	CL:PVD(P)	928.80360	ASSET MANAGERS
18	ANDINA 'A'	CL:AND(P)	848.75880	SOFT DRINKS
19	CCT	CL:CCT(P)	816.20250	TOBACCO
20	SQM 'A'	CL:SQA(P)	761.77970	CHEMICALS, COMMODITY
21	CRISTALES	CL:STM(P)	730.36470	ENGINEERING, GENERAL
22	LAN	CL:CST(P)	640.84560	AIRLINES & AIRPORTS
23	AES GENER	CL:LAN(P)	573.04090	ELECTRICITY
24	INFORSA	CL:CHG(P)	513.37650	BUILDING MATERIALS
25	VALORES	CL:IFS(P)	9.92344	INVESTMENT COMPANIES

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.04 - France

Top 25	Company	DS Code*	Market Value**	Industry Group
1	TOTAL SA	F:CFP(P)	170621.10	OIL INTEGRATED
2	ELF AQUITAINE	F:SNEA(P)	83139.95	OIL INTEGRATED
3	SANOFI – SYNTHELABO	F:SQ@F(P)	72913.19	PHARMACEUTICALS
4	CARREFOUR	F:CRFR(P)	58421.17	FOOD & DRUG RETAILERS
5	SOCIETE GENERALE	F:SGE(P)	50568.96	BANKS
6	AXA	F:MIDI(P)	49816.84	INSURANCE SERVICES
7	LVMH	F:LVMH(P)	45325.15	TEXTILES & LEATHER GOODS
8	CREDIT LYONNAIS SUSP	F:CAB(P)	37578.17	BANKS
9	VIVENDI UNIVERSAL	F:EX@F(P)	32773.11	SUBSCRIBED ENTERTAINMENT
10	DANONE	F:BSN(P)	31139.40	FOOD PROCESSORS
11	SUEZ	F:LE(P)	26169.44	MULTI-UTILITIES
12	SAINT GOBAIN	F:AIR(P)	25027.57	BUILDING MATERIALS
13	PEUGEOT SA	F:GOB(P)	22669.60	AUTOMOBILE
14	ALCATEL	F:PGT(P)	21660.33	TELECOM EQUIPMENT
15	SCHNEIDER ELTE.SA	F:CGE(P)	19676.50	ELECTRICAL EQUIPMENT
16	LAFARGE	F:QT@F(P)	19671.34	BUILDING MATERIALS
17	PINAULT PRINTEMPS	F:LFG(P)	18707.11	RETAILERS, MULTIDEPARTMENT
18	BOUYGUES	F:PRNT(P)	15853.46	CONSTRUCTION SERVICES
19	AGF – ASR.GL.DE FRN.	F:BYG(P)	15407.37	INSURANCE SERVICES
20	CHRISTIAN DIOR	F:AGF(P)	14622.58	TEXTILES & LEATHER GOODS
21	DEXIA (PAR)	F:CDI(P)	13406.97	BANKS
22	AIR LIQUIDE	F:BRL(P)	13225.61	CHEMICALS, COMMODITY
23	ACCOR	F:CSO(P)	12567.53	HOTELS
24	CASINO GUICHARD – P	F:TVFS(P)	12097.67	FOOD & DRUG RETAILERS
25	TF1 (TV.FSE.1)	F:MMB(P)	11324.29	TV, RADIO & FILM

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.05 - Germany

Top 25	Company	DS Code*	Market Value**	Industry Group
1	SIEMENS	D:SIE(P)	81446.76	ELECTRICAL EQUIPMENT
2	DEUTSCHE BANK	D:DBK(P)	65860.06	BANKS
3	ALLIANZ	D:DCG(P)	62522.74	INSURANCE SERVICES
4	E ON	D:EOA(P)	59018.22	MULTI-UTILITIES
5	BASF	D:ALV(P)	43773.95	CHEMICALS, COMMODITY
6	HOECHST	D:BAS(P)	41154.99	PHARMACEUTICALS
7	BMW	D:HOE(P)	40990.45	AUTOMOBILE
8	BAYER	D:BMW(P)	28280.94	CHEMICALS, COMMODITY
9	RWE	D:BAY(P)	25065.64	MULTI-UTILITIES
10	VOLKSWAGEN	D:RWE(P)	23112.44	AUTOMOBILE
11	DAHLBUSCH	D:VOW(P)	22771.70	HOSPITAL MANAGEMENT
12	BEIERSDORF	D:DAL(P)	18087.71	PERSONAL PRODUCTS
13	SCHERING	D:BEI(P)	16477.42	PHARMACEUTICALS
14	ALTANA	D:SCH(P)	14537.43	PHARMACEUTICALS
15	COMMERZBANK	D:ALT(P)	14025.05	BANKS
16	ERGO VERSICHERUNG	D:CBK(P)	13492.00	INSURANCE SERVICES
17	E ON BAYERN	D:EVG2(P)	12645.00	ELECTRICITY
18	THUEGA	D:ISA(P)	11752.35	MULTI-UTILITIES
19	THYSSENKRUPP	D:TGA(P)	11469.02	ENGINEERING, GENERAL
20	DEGUSSA	D:TKA(P)	10625.74	CHEMICALS, SPECIALITY
21	VATTENFALL EUROPE	D:DGX(P)	9944.97	ELECTRICITY
22	CONTIGAS	D:HEW(P)	8474.84	MULTI-UTILITIES
23	LINDE	D:LIN(P)	8342.48	CHEMICALS, COMMODITY
24	LUFTHANSA	D:LHA(P)	8066.71	AIRLINES & AIRPORTS
25	EUROHYPO	D:NHY(P)	6928.92	BANKS

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.06 – Hong Kong

Top 25	Company	DS Code*	Market Value**	Industry Group
1	HSBC HDG.	K:HSBC(P)	228098.00	BANKS
2	HUTCHISON WHAMP.	K:HUTI(P)	49313.86	DIVERSIFIED INDUSTRY
3	HANG SENG BANK	K:HSBA(P)	35277.19	BANKS
4	CHEUNG KONG HDG.	K:CHGK(P)	25897.67	REAL ESTATE DEVELOPMENT
5	SUN HUNG KAI PROPS.	K:SHKP(P)	23909.49	REAL ESTATE DEVELOPMENT
6	CLP HOLDINGS LTD	K:CLIG(P)	18039.91	ELECTRICITY
7	HONG KONG ELECTRIC	K:HKEL(P)	14482.82	ELECTRICITY
8	HK.& CHINA GAS	K:HKCG(P)	12247.65	GAS DISTRIBUTION
9	HENDERSON LD.DEV.	K:HELD(P)	9409.72	REAL ESTATE DEVELOPMENT
10	JOHNSON ELECTRIC HDG.	K:JNEL(P)	8701.19	ELECTRICAL EQUIPMENT
11	WHARF HDG.	K:HKWH(P)	8438.96	DIVERSIFIED INDUSTRY
12	SWIRE PACIFIC 'A'	K:SWPA(P)	7297.33	DIVERSIFIED INDUSTRY
13	CITIC PACIFIC	K:CITP(P)	7256.57	DIVERSIFIED INDUSTRY
14	BANKOF EAST ASIA	K:BEAA(P)	5195.21	BANKS
15	HANGLUNG PROPERTIES LTD	K:AMOY(P)	5029.00	REAL ESTATE DEVELOPMENT
16	HENDERSON INV.	K:HENI(P)	4779.52	REAL ESTATE DEVELOPMENT
17	GUOCO GROUP	K:GUOC(P)	3766.78	FINANCIAL SERVICES
18	SWIRE PACIFIC 'B'	K:SWPB(P)	3672.62	DIVERSIFIED INDUSTRY
19	CHINA RES.ENTREP.	K:KOWM(P)	3231.43	DIVERSIFIED INDUSTRY
20	KOWLOON MTR.BUS HDG.	K:WHEL(P)	3210.38	RAIL, ROAD, FREIGHT
21	WHEELOCK & CO.	K:CHRE(P)	3178.38	REAL ESTATE DEVELOPMENT
22	SINOLAND	K:TSTP(P)	2397.48	REAL ESTATE DEVELOPMENT
23	TSIMSHA TSUI PROPS.	K:TRON(P)	2365.82	REAL ESTATE DEVELOPMENT
24	TECHTRONIC INDS.	K:SILC(P)	2173.55	ELECTRONIC EQUIPMENT
25	DAH SING FINANCE HDG.	K:DAHF(P)	2076.12	BANKS

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.07 - India

Top 25	Company	DS Code*	Market Value**	Industry Group
1	RELIANCE INDS.	IN:REL(P)	17894.9	CHEMICALS, COMMODITY
2	HINDUSTAN LEVER	IN:HDL(P)	13601.41	PERSONAL PRODUCTS
3	WIPRO	IN:WIP(P)	8409.46	SOFTWARE
4	STATE BANK OF INDIA	IN:SBK(P)	8186.7	BANKS
5	ITC	IN:ITC(P)	6929.08	DIVERSIFIED INDUSTRY
6	RANBAXY LABS.	IN:RXL(P)	5718.97	PHARMACEUTICALS
7	HOUSING DEV.FIN.CORP.	IN:HDF(P)	3694.37	MORTGAGE FINANCE
8	DR REDDYS LABS.	IN:DRR(P)	3326.16	PHARMACEUTICALS
9	TATAIRON & STEEL	IN:HDI(P)	2718.19	STEEL
10	HINDALCO INDS.	IN:TTE(P)	2684.92	NON-FERROUS METALS
11	TATAENGR.& LOCO.	IN:TIS(P)	2628.04	COMMERCIAL VEHICLES
12	LARSEN & TOUBRO	IN:LST(P)	2515.57	ENGINGEERING CONTRACTORS
13	BAJAJ AUTO	IN:BAJ(P)	2116.21	AUTOMOBILE
14	NESTLE INDIA	IN:NES(P)	1971.68	FOOD PROCESSORS
15	HEROHONDA MOTORS	IN:HER(P)	1955.48	AUTOMOBILE
16	CIPLA	IN:CPL(P)	1836.89	PHARMACEUTICALS
17	GRASIM INDS.	IN:GSI(P)	1753.07	BUILDING MATERIALS
18	BSES	IN:BSS(P)	1502.57	ELECTRICITY
19	GUJARAT AMBUJA CEMENTS	IN:CEM(P)	1159.74	BUILDING MATERIALS
20	TATAPOWER	IN:TTP(P)	1112.07	ELECTRICITY
21	GLAXOSMITHKLINE PHARMS.	IN:GXI(P)	1037.76	PHARMACEUTICALS
22	ASIAN PAINTS	IN:API(P)	956.907	CHEMICALS, COMMODITY
23	CASTROL INDIA	IN:CAS(P)	952.2017	CHEMICALS, SPECIALITY
24	MAHINDRA & MAHINDRA	IN:COP(P)	758.8833	PERSONAL PRODUCTS
25	COLGATE – PALMOLIVE INDIA	IN:MAM(P)	756.6223	COMMERCIAL VEHICLES

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.08 - Indonesia

Top 25	Company	DS Code*	Market Value**	Industry Group
1	UNILEVER INDO.	ID:UNI(P)	4278570.0	FOOD PROCESSORS
2	GUDANG GARAM	ID:GUD(P)	4103590.0	TOBACCO
3	HM SAMPOERNA	ID:INA(P)	3815530.0	TOBACCO
4	ASTRA INTERNATIONAL	ID:ATA(P)	3322420.0	AUTO PARTS
5	BANKDANAMON	ID:BKD(P)	1378340.0	BANKS
6	BANKPAN INDONESIA	ID:BKJ(P)	944896.8	BANKS
7	BANKINTL.INDO.BII	ID:PAN(P)	935079.2	BANKS
8	SEMEN GRESIK (PERSERO)	ID:GSK(P)	900955.4	BUILDING MATERIALS
9	BANKNIAGA	ID:BKN(P)	732636.4	BANKS
10	KALBE FARMA	ID:KAL(P)	528086.8	PHARMACEUTICALS
11	INDAH KIAT PAPER&PULP	ID:IKP(P)	466727.2	PAPER
12	LIPPO BANK	ID:LPB(P)	427746.1	BANKS
13	INTL.NICKEL INDO.PT	ID:SAR(P)	400573.4	MINING SERVICES
14	SARIHUSADA	ID:ICO(P)	347992.8	FOOD & DRUG RETAILERS
15	GAJAH TUNGGAL	ID:GAJ(P)	306514.9	TYRES & RUBBER
16	PANIN LIFE	ID:AJP(P)	261661.4	INSURANCE NON-LIFE
17	BERLIAN LAJU TANKER	ID:LAJ(P)	201959.9	SHIPPING & PORTS
18	DANKOS LABS.	ID:DAN(P)	185813.5	PHARMACEUTICALS
19	UNITED TRACTOR	ID:UTR(P)	185331.7	COMMERCIAL VEHICLES
20	BANKPERMATA	ID:UNG(P)	179439.3	BANKS
21	UNGGUL INDAH CORP.	ID:CIT(P)	167495.7	CHEMICALS, COMMODITY
22	CITRA TUBINDO	ID:BKB(P)	164376.9	BUILDING MATERIALS
23	BENTOEL INTL.INVESTAMA	ID:DTI(P)	154107.3	TOBACCO
24	DUTAANGGADA REALTY	ID:RIM(P)	151567.4	REAL ESTATE DEVELOPMENT
25	DUTAPERTIWI NUSANTARA	ID:ANG(P)	149822.3	CHEMICALS, COMMODITY

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.09 - Ireland

Top 25	Company	DS Code*	Market Value**	Industry Group
1	ALLIED IRISH BANKS	ALBK(P)	22051290.00	BANKS
2	BANK OF IRELAND	BKIR(P)	20337700.00	BANKS
3	CRH	CRH(P)	15604350.00	BUILDING MATERIALS
4	ANG.IR.BK.	ANGL(P)	5150620.00	BANKS
5	KERRY GROUP'A'	KYGA(P)	4944130.00	FOOD PROCESSORS
6	ELAN	DRX(P)	3700450.00	PHARMACEUTICALS
7	INDE.NEWS &MEDIA	INWS(P)	2353770.00	PUBLISHING & PRINTING
8	IAWS GROUP 'A'	IAW(P)	1808220.00	FARMING & FISHING
9	GRAFTON GROUP	GN4(P)	1454690.00	BUILDING MATERIALS
10	JURYS DOYLE HTL.GP.	JEW(P)	1053880.00	HOTELS
11	GLANBIA	GLB(P)	961249.30	FOOD PROCESSORS
12	KINGSPAN GROUP	KSP(P)	928497.400	BUILDING MATERIALS
13	UNITED DRUG	UGN(P)	826953.20	MEDICAL EQUIPMENT & SUPPLIES
14	WTF.WEDG.UNITS	WTFSD(P)	416589.60	HOUSEHOLD APPLIANCES & HOUSEWARES
15	IRISH CONT.GP.	ICG(P)	397801.00	RAIL, ROAD, FREIGHT
16	ABBEY	ABBY(P)	360188.20	CONSTRUCTION SERVICES
17	HEITON GROUP	HIT(P)	306916.60	BUILDERS MERCHANTS
18	MCINERNEY HOLDINGS	MYP(P)	189964.40	CONSTRUCTION SERVICES
19	GRESHAM HOTEL GP.	RY5(P)	141262.90	HOTELS
20	BARLO GROUP	KMR(P)	111012.90	BUILDING MATERIALS
21	KENMARE RES.	AIN(P)	110857.20	MINING SERVICES
22	ARCON INTL.RES.	BGA(P)	106356.90	MINING SERVICES
23	IFG GROUP	IFGD(P)	73554.61	FINANCIAL SERVICES
24	AMINEX	DOP(P)	45424.40	OIL & GAS EXPLORATION OR PRODUCTION
25	ARDAGH	AGHD(P)	31261.94	DISTILLERS + VINTNERS

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.10 - Israel

Top 25	Company	DS Code*	Market Value**	Industry Group
1	ISRAEL CORPORATION	IS:ISL(P)	1224010	DIVERSIFIED INDUSTRY
2	DELEK GROUP	IS:DLE(P)	1144570	OIL INTEGRATED
3	WARDINON	IS:WRD(P)	839076.4	ELECTRONIC EQUIPMENT
4	PHOENIX INSURANCE 5	IS:PRB(P)	769590.5	HOUSE BUILDING
5	HAREL INSURANCE INVS.	IS:MGN(P)	643342.3	INSURANCE SERVICES
6	MENORAH 1	IS:ELR(P)	551455.2	LIFE ASSURANCE
7	GAZIT GLOBE (1992)	IS:MNO(P)	495482.4	REAL ESTATE DEVVELOPMENT
8	PROPERTY & BUILDING	IS:HAL(P)	487755	SEMICONDUCTORS
9	ELRON	IS:DLO(P)	424357.1	OIL & GAS EXPLORATION OR PRODUCTION
10	DELEK ENERGI	IS:KDN(P)	260136.2	VEHICLE DISTRIBUTION
11	KARDAN LTD.	IS:JRE(P)	220412.3	REAL ESTATE DEVELOPMENT
12	JERUSALEM ECONOMIC CORP.	IS:AVN(P)	204634.5	OIL & GAS EXPLORATION OR PRODUCTION
13	AVNER L	IS:FRM(P)	192181	FOOD PROCESSORS
14	FRUTAROM	IS:IRA(P)	184488.3	LIFE ASSURANCE
15	MENORAH IN.5	IS:FRI(P)	170380.2	REAL ESTATE DEVELOPMENT
16	ISRAS INVESTMENTS 1	IS:MVS(P)	156572.2	BANKS
17	FIRST INTL.MORTGAGE BANK	IS:DAN(P)	153276.6	HOTELS
18	DAN HOTELS	IS:OHH(P)	137697.3	CONSUMER FINANCE
19	OTZAR HITYASHVUTH	IS:AYL(P)	133810.8	INVESTMENT COMPANIES
20	MIVTACH (SAMIR) IN. 1	IS:CST(P)	128916.6	REAL ESTATE DEVELOPMENT
21	ISRALOM	IS:JRB(P)	125648.5	INSURANCE NON-LIFE
22	AYALON HOLDINGS	IS:PKN(P)	123378.6	CLOTHING & FOOTWEAR
23	CASTRO MODEL	IS:SA5(P)	108912.9	BANKS
24	BANKOF JERUSALEM	IS:ISA(P)	105284	INSURANCE NON-LIFE
25	SANOBRUNO ENTERPRISE 5	IS:MN5(P)	71496.35	HOUSEHOLD PRODUCTS

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** Market Value is in thousands of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.11 - Italy

Top 25	Company	DS Code*	Market Value**	Industry Group
1	TELECOM ITALIA	I:TI(P)	9858885	TELECOM FIXED LINE
2	UNICREDITO ITALIANO	I:UC(P)	5896690	FINANCIAL SERVICES
3	SAN PAOLOIMI	I:SPI(P)	2552276	BANKS
4	OLIVETTI	I:OL(P)	2270950	TELECOM FIXED LINE
5	RAS	I:R(P)	2113974	INSURANCE SERVICES
6	ALLEANZA	I:AL(P)	1623427	LEGAL SERVICES
7	MEDIOBANCA	I:MB(P)	1560312	FINANCIAL SERVICES
8	FIAT	I:F(P)	904292	AUTOMOBILE
9	CAPITALIA	I:BRM(P)	774320.4	BANKS
10	BANCA LOMBARDA	I:BL(P)	755989	BANKS
11	IFIL	I:IFL(P)	728049	FINANCIAL SERVICES
12	SAIPEM	I:SPM(P)	664760.1	BUILDING MATERIALS
13	PAR MALAT	I:PRF(P)	486024.7	LEGAL SERVICES
14	UNIPOL	I:UNI(P)	46890	INSURANCE SERVICES
15	FINECOGROUP	I:BIP(P)	434782	FINANCIAL SERVICES
16	ITALCEMENTI	I:IT(P)	406991.6	CONSTRUCTION SERVICES
17	BENETTON	I:BEN(P)	404449.1	TEXTILE
18	PIRELLI SPA	I:PPA(P)	401893	COMPUTER PRODUCTS
19	MONDADORI ED	I:MN(P)	390500.9	MEDIA
20	GRUPPO EDIT. L'ESPRESSO	I:ES(P)	353216.4	BANKS
21	MERLONI	I:MER(P)	337102	LEGAL SERVICES
22	CREDITO EMILIANO	I:CE(P)	288510	BANKS
23	SNIA ORD	I:SN(P)	250473.9	CONSULTANCY
24	AUTOSTRADA TO - MI	I:AT(P)	208189.7	AUTOMOBILE
25	BUZZI UNICEM	I:BZU(P)	191619.1	CONSTRUCTION SERVICES

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.12 - Japan

Top 25	Company	DS Code*	Market Value**	Industry Group
1	TOYOTA MOTOR	J:TYMO(P)	165491.6	AUTOMOBILE
2	NIPPON TELG. & TEL.	J:NTT(P)	120460.3	TELECOM FIXED LINE
3	NISSAN MOTOR	J:NR@N(P)	77498.81	AUTOMOBILE
4	CANON	J:CN@N(P)	72769.6	ELECTRONIC EQUIPMENT
5	HONDA MOTOR	J:HO@N(P)	68943.48	AUTOMOBILE
6	TAKEDA CHEMICAL INDS.	J:TA@N(P)	57413.94	PHARMACEUTICALS
7	SONY	J:SO@N(P)	51467.55	CONSUMER ELECTRONICS
8	MATSUSHITA ELEC.INDL.	J:MI@N(P)	48995.41	ELECTRONIC EQUIPMENT
9	TOKYOELECTRIC POWER	J:NM@N(P)	46165.25	ELECTRICITY
10	NOMURA	J:TE@N(P)	45727.99	MEDIA AGENCIES
11	SEVEN - ELEVEN JAPAN	J:DN@N(P)	39057.79	FOOD & DRUG RETAILERS
12	FUJITSU	J:HC@N(P)	27839.76	COMPUTER HARDWARE
13	HITACHI	J:FP@N(P)	27057.93	COMPUTER HARDWARE
14	KANSAI ELECTRIC PWR.	J:DE@N(P)	26891.19	ELECTRICITY
15	SHARP	J:SH@N(P)	26195.44	ELECTRONIC EQUIPMENT
16	DENSO	J:KE@N(P)	25659.13	AUTO PARTS
17	ROHM	J:ROHM(P)	25532.23	SEMICONDUCTORS
18	CHUBUELEC.POWER	J:CL@N(P)	23515.28	ELECTRICITY
19	FANUC	J:DU@N(P)	22700.67	ELECTRONIC EQUIPMENT
20	RICOH	J:TS@N(P)	21741.01	ELECTRONIC EQUIPMENT
21	TOSHIBA	J:RH@N(P)	21352.34	ELECTRONIC EQUIPMENT
22	BRIDGESTONE	J:ZJ@N(P)	20743.86	TYRES & RUBBER
23	KYOCERA	J:IY@N(P)	20585.84	ELECTRONIC EQUIPMENT
24	ITO YOKADO	J:BR@N(P)	19750.71	RETAILERS, MULTI DEPARTMENT
25	MITSUBISHI	J:CQ@N(P)	16929.04	DIVERSIFIED INDUSTRY

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.13 - Mexico

Top 25	Company	DS Code*	Market Value**	Industry Group
1	TELMEX 'L'	MX:TMA(P)	21245490	TELECOM FIXED LINE
2	WALMEX 'V'	MX:WAV(P)	19965030	DISCOUNT STORES
3	TLEVISA 'A'	MX:TVL(P)	7360570	TV, RADIO & FILM
4	GCARSO 'A1'	MX:GCR(P)	4543640	DIVERSIFIED INDUSTRY
5	FEMSA.UB	MX:FMU(P)	4278120	BREWERS
6	BIMBO 'A'	MX:BI2(P)	338151	FOOD PROCESSORS
7	APASCO	MX:APA(P)	3314870	BUILDING MATERIALS
8	KIMBER 'A'	MX:KCA(P)	2834600	PERSONAL PRODUCTS
9	INTENAL 'O'	MX:INO(P)	2386250	BANKS
10	LIVEPOL 1	MX:PL1(P)	2126390	DISCOUNT STORES
11	SANMEX 'B'	MX:IXB(P)	1304440	CONSUMER FINANCE
12	TAMSA	MX:TAM(P)	957250.3	STEEL
13	GPH 1	MX:PH1(P)	904246.5	RETAILERS, MULTI DEPARTMENT
14	GIGANTE	MX:GIG(P)	744103.9	RETAIL, HARDLINES
15	SAVIA 'A'	MX:LMA(P)	445823	TOBACCO
16	DESC'A'	MX:DSA(P)	396546.8	DIVERSIFIED INDUSTRY
17	VITRO 'A'	MX:CMA(P)	357803.8	DIVERSIFIED INDUSTRY
18	MEXCHEM 'A' SUSP - 16/11/99	MX:VIT(P)	337640.7	CHEMICALS, SPECIALITY
19	GMODERN	MX:MXC(P)	333772.8	FOOD PROCESSORS
20	REALTUR 'A'	MX:GOM(P)	327846.4	LEISURE FACILITIES
21	TMM 'A'	MX:RAT(P)	289096.7	SHIPPING & PORTS
22	GEUPEC 'B'	MX:MMA(P)	258651.6	BREWERS
23	HERDEZ	MX:GB2(P)	256759	FOOD PROCESSORS
24	ICA	MX:HZB(P)	234485.9	CONSTRUCTION SERVICES
25	CEMEX 'A'	MX:IHA(P)	178425.2	BUILDING MATERIALS

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.14 - New Zealand				
Top 25	**Company**	**DS Code***	**Market Value****	**Industry Group**
1	TELECOM CORP.OF NZ.	Z:TELZ(P)	9621880	TELECOM FIXED LINE
2	CARTER HOLT HARVEY	Z:CAHZ(P)	2806260	FORESTRY
3	INDE.NEWSPAPERS	Z:INLZ(P)	1752900	PUBLISHING & PRINTING
4	AIR NEW ZEALAND	Z:AIRN(P)	1430780	AIRLINES & AIRPORTS
5	SANFORD	Z:SANZ(P)	463968.8	FARMING & FISHING
6	NEW ZEALAND REFINING	Z:NZRZ(P)	398398.5	OIL SERVICES
7	WASTE MANAGEMENT NZ.	Z:WAMZ(P)	342625	ENVIRONMENTAL CONTROL
8	STEEL & TUBE HOLDINGS	Z:STUZ(P)	318714.9	STEEL
9	CAVALIER	Z:CAVZ(P)	283414	FURNITURE & FLOORCOVERING
10	NUPLEX INDUSTRIES	Z:NPXZ(P)	223197.5	CHEMICALS, COMMODITY
11	HALLENSTEIN GLASSON	Z:MHIZ(P)	170662.1	RETAILERS, MULTI DEPARTMENT
12	MICHAEL HILL INTL.	Z:HLGZ(P)	166616.9	RETAIL, HARDLINES
13	CDL HOTELS NEW ZEALAND	Z:CDLZ(P)	94391.36	HOTELS
14	COLONIAL MOTOR	Z:CMOZ(P)	84945.55	VEHICLE DISTRIBUTION
15	EBOSGROUP	Z:EBOZ(P)	83420.42	MEDICAL EQUIPMENT & SUPPLIES
16	KINGSGATE INTERNATIONAL	Z:KINZ(P)	82567.87	HOTELS
17	OWENS GROUP	Z:OWNZ(P)	54282.22	RAIL, ROAD, FREIGHT
18	CDL INVESTMENTS NZ.	Z:CDIZ(P)	47846.19	REAL ESTATE DEVELOPMENT
19	RICHINA PACIFIC	Z:RCHZ(P)	47644.05	REAL ESTATE DEVELOPMENT
20	TAYLORS GROUP	Z:TAYZ(P)	43739.98	BUSINESS SUPPORT
21	NEW ZEALAND OIL AND GAS	Z:NOGZ(P)	41524.9	OIL & GAS EXPLORATION OR PRODUCTION
22	DORCHESTER PACIFIC	Z:OPIZ(P)	32245.86	INVESTMENT COMPANIES
23	BROADWAY INDUSTRIES	Z:DPCZ(P)	10950.15	DIVERSIFIED INDUSTRY
24	NUHAKA FARM FOREST.FUND	Z:BWYZ(P)	8599.05	INVESTMENT COMPANIES
25	OPIOFORESTRY FUND	Z:NUHZ(P)	7930.92	INVESTMENT COMPANIES

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.15 - Singapore

Top 25	Company	DS Code*	Market Value**	Industry Group
1	UNITED OVERSEAS BANK	T:UOBS(P)	21246.51	BANKS
2	DBS GROUP	T:DBSS(P)	17385.6	BANKS
3	OVERSEAS CHINESE BKG.	T:OCBC(P)	13863.53	BANKS
4	SINGAPORE AIRLINES	T:SAIR(P)	13198.59	AIRLINES & AIRPORTS
5	SINGAPORE PRESS HDG.	T:SGPS(P)	7014.31	PUBLISHING & PRINTING
6	GREAT EASTERN HDG.	T:GELA(P)	4732.61	LIFE ASSURANCE
7	KEPPEL CORPORATION	T:KEPP(P)	3844.52	ENGINEERING, GENERAL
8	CITYDEVELOPMENTS	T:CITY(P)	3806.06	REAL ESTATE DEVELOPMENT
9	CAPITALAND	T:DBSL(P)	3478.25	REAL ESTATE DEVELOPMENT
10	FRASER & NEAVE	T:FRAS(P)	2636.22	SOFT DRINKS
11	NEPTUNE ORIENT LINES	T:NOLS(P)	1921.17	SHIPPING & PORTS
12	GOODWOOD PARK HOTEL	T:GOOD(P)	1699.8	HOTELS
13	SEMBCORP LOGISTICS	T:MART(P)	1619.01	SHIPPING & PORTS
14	ASIAPACIFIC BREWS.	T:ASIA(P)	1517.36	BREWERS
15	YEO HIAP SENG	T:YHSS(P)	1497.67	FOOD & DRUG RETAIL
16	SEMBCORP MARINE LTD.	T:JSHP(P)	1422.93	ENGINEERING, GENERAL
17	SINGAPORE LAND	T:SLND(P)	1385.86	REAL ESTATE DEVELOPMENT
18	UNITED OVERSEAS LAND	T:UL@V(P)	1306.58	REAL ESTATE DEVELOPMENT
19	OVERSEAS UNION ENTS.	T:OUES(P)	1296.99	HOTELS
20	CYCLE & CARRIAGE	T:CYCL(P)	1287.35	VEHICLE DISTRIBUTION
21	UNITED INDUSTRIAL CORP.	T:UICS(P)	1218.65	DIVERSIFIED INDUSTRY
22	HONGLEONG SING.FINANCE	T:STSP(P)	1048.05	REAL ESTATE DEVELOPMENT
23	KEPPEL LAND	T:SINF(P)	1042.69	INVESTMENT COMPANIES
24	NATSTEEL	T:NATS(P)	1002.59	STEEL
25	HAW PAR CORPORATION	T:HPBS(P)	907.2927	DIVERSIFIED INDUSTRY

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.16 - South Africa

Top 25	Company	DS Code*	Market Value**	Industry Group
1	SASOL	R:SOLJ(P)	12588.24	OIL INTEGRATED
2	ANGLOGOLD	R:ANGJ(P)	11995.46	GOLD MINING
3	ANGLOAMERICAN PLAT.	R:AMSJ(P)	11494.38	MINING SERVICES
4	STD.BK.GP.	R:SBKJ(P)	10281.17	BANKS
5	FIRSTRAND	R:FSRJ(P)	9791.53	BANKS
6	IMPALA PLATINUM	R:IMPJ(P)	7125.54	MINING SERVICES
7	NEDCOR	R:NEDJ(P)	6128.76	BANKS
8	ABSA GP.	R:ASAJ(P)	5351.28	BANKS
9	SAPPI	R:SAPJ(P)	5143.39	PAPER
10	HARMONY GOLD MINING	R:HARJ(P)	3607.89	GOLD MINING
11	LIBERTY GP.	R:LGLJ(P)	3257.03	LIFE ASSURANCE
12	BIDVEST GROUP	R:BVTJ(P)	3150.60	BUSINESS SUPPORT
13	BARLOWORLD	R:BAWJ(P)	2912.82	DIVERSIFIED INDUSTRY
14	IMPERIAL HDG.	R:IPLJ(P)	2826.47	DIVERSIFIED INDUSTRY
15	TIGERBRANDS	R:TBSJ(P)	2659.65	FOOD PROCESSORS
16	VENFIN	R:VNFJ(P)	1888.25	INVESTMENT COMPANIES
17	AMAL.BEVERAGES IND.	R:ABIJ(P)	1886.84	SOFT DRINKS
18	NAMPAK	R:NPKJ(P)	1826.35	BUSINESS SUPPORT
19	ISCOR	R:PIKJ(P)	1599.28	STEEL
20	PIK NPAY STORES	R:ISCJ(P)	1647.47	FOOD & DRUG RETAILERS
21	LIBERTY HDG.	R:LBHJ(P)	1529.65	LIFE ASSURANCE
22	PRETORIA PORT.CMT.	R:PPCJ(P)	1305.83	BUILDING MATERIALS
23	AVGOLD	R:AVGJ(P)	1204.15	GOLD MINING
24	AFRICAN OXYGEN	R:AFXJ(P)	1182.89	CHEMICALS, COMMODITY
25	ANGLOVAAL INDUSTRIES	R:AVIJ(P)	1182.72	FOOD PROCESSORS

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.17 - South Korea				
Top 25	Company	DS Code*	Market Value**	Industry Group
1	SAMSUNG ELECTRONICS	KO:SGL(P)	90282.98	ELECTRONIC EQUIPMENT
2	SK TELECOM	KO:SKT(P)	26212.04	TELECOM WIRELESS
3	POSCO	KO:PIS(P)	17289.71	STEEL
4	KOREA ELECTRIC POWER	KO:KAW(P)	17266.71	ELECTRICITY
5	HYUNDAI MOTOR	KO:HDR(P)	10764.5	AUTO PARTS
6	SAMSUNG ELTN. PF.	KO:SCT(P)	6839.21	ELECTRONIC EQUIPMENT
7	SHINHAN FINL.GROUP	KO:SEP(P)	6174.81	ELECTRONIC EQUIPMENT
8	SAMSUNG SDI	KO:SHB(P)	5645.89	BANKS
9	KIA MOTORS	KO:KAM(P)	4798.53M	AUTOMOBILE
10	SAMSUNG ELTO.MECH.	KO:SEM(P)	4494.68	ELECTRONIC EQUIPMENT
11	SAMSUNG FIRE & MAR.IN.	KO:AFM(P)	4337.76	INSURANCE NON-LIFE
12	SHINSEGAE DEPT.STORE	KO:SGD(P)	4195.98	RETAILERS, MULTI DEPARTMENT
13	CHO HUNG BANK	KO:CHB(P)	4195.98	BANKS
14	HANABANK	KO:HNB(P)	3950.39	BANKS
15	S – OILCORP.	KO:SSO(P)	3379	OIL INTEGRATED
16	SAMSUNG SECURITIES	KO:SSR(P)	2877.68	INVESTMENT BANKS
17	KORAM BANK	KO:LUS(P)	2567.31	BANKS
18	LG INV.& SECURITIES	KO:YKG(P)	2470.55	INVESTMENT BANKS
19	SK CORPORATION	KO:KAB(P)	2445.91	OIL INTEGRATED
20	HITEBREWERY	KO:CSB(P)	1832.35	BREWERS
21	HONAM PETROCHEMICAL	KO:HPL(P)	1777.88	CHEMICALS ADVANCED MATERIALS
22	SAMSUNG CORPORATION	KO:HDE(P)	1732.45	DIVERSIFIED INDUSTRY
23	CJ	KO:SSG(P)	1673.59	FOOD PROCESSORS
24	HYUNDAI ENGR.& CON.	KO:CFC(P)	1637.23	CONSTRUCTION SERVICES
25	KUMGANG KOREA CHEMICAL	KO:KKG(P)	1629.38	BUILDING MATERIALS

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** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.18 - Spain

Top 25	Company	DS Code*	Market Value**	Industry Group
1	TELEFONICA	E:TEF(P)	95064.82	TELECOM FIXED LINE
2	SANTANDER CTL.HISPANO	E:SCH(P)	73656.57	BANKS
3	BBV ARGENTARIA	E:BBVA(P)	58598.15	BANKS
4	REPSOL YPF	E:REP(P)	33782.03	OIL INTEGRATED
5	ENDESA	E:ELE(P)	28817.71	ELECTRICITY
6	IBERDROLA	E:IBE(P)	26487.91	ELECTRICITY
7	BANCO POPULAR ESPANOL	E:POP(P)	18581.12	BANKS
8	GAS NATURAL SDG	E:CTG(P)	15399.76	GAS DISTRIBUTION
9	ALTADIS	E:TAB(P)	13387.24	TOBACCO
10	PETROLEOS (CEPSA)	E:CEP(P)	11700.2	OIL INTEGRATED
11	BANESTO	E:BTO(P)	10848.01	BANKS
12	CENTROS COML.CARREFOUR	E:PRY(P)	8425	FOOD & DRUG RETAILERS
13	UNION FENOSA	E:UNF(P)	8406.7	ELECTRICITY
14	GRUPO DRAGADOS	E:DRC(P)	6830.72	CONSTRUCTION SERVICES
15	ACCIONA	E:ANA(P)	5433.48	CONSTRUCTION SERVICES
16	ZARDOYA OTIS	E:ZOT(P)	5298.45	ENGINEERING, GENERAL
17	ACERINOXR	E:ACX(P)	4749.6	STEEL
18	BANKINTER R	E:BKT(P)	4586.4	BANKS
19	CORP.FIN.ALBA	E:MAP(P)	4526.78	INSURANCE SERVICES
20	CORP.MAPFRE R	E:AGS(P)	3489.67	WATER
21	AGUAS DEBARCELONA	E:MVC(P)	3326.82	REAL ESTATE DEVELOPMENT
22	METROVACESA	E:ALB(P)	3203.99	INVESTMENT COMPANIES
23	INDRA SISTEMAS	E:IDR(P)	2883.38	SOFTWARE
24	BANCO DEVALENCIA	E:BVA(P)	2729.15	BANKS
25	BANCO DEANDALUCIA	E:AND(P)	2604.87	BANKS

* DS Code represents the code that DataStream uses to denote the various companies

** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.19 - Sweden

Top 25	Company	DS Code*	Market Value**	Industry Group
1	ERICSSON B	W:HMBF(P)	32851.83	TELECOM EQUIPMENT
2	HENNES & MAURITZ B	W:SL@G(P)	27914.45	RETAILERS, SOFT GOODS
3	SHB A	W:SVK(P)	18010.41	BANKS
4	VOLVO B	W:VOBF(P)	12446.25	COMMERCIAL VEHICLES
5	SANDVIK	W:SAND(P)	12442.71	ENGINEERING, GENERAL
6	ELECTROLUX B	W:SE@G(P)	12226.87	HOUSEHOLD APPLIANCES & HOUSEWARES
7	SCA B	W:SW@G(P)	11816.69	PAPER
8	SECURITAS B	W:SUBF(P)	6981.35	SECURITY & ALARMS
9	INVESTOR B	W:SR@G(P)	5996.53	INVESTMENT COMPANIES
10	SKANDIA	W:ISBF(P)	5455.26	LIFE ASSURANCE
11	SKF B	W:SX@G(P)	4246.18	ENGINEERING, GENERAL
12	SKANSKA B	W:SKFB(P)	3869.85	CONSTRUCTION SERVICES
13	INDUSTRIVARDEN A	W:SKBF(P)	3350.13	DIVERSIFIED INDUSTRY
14	ATLAS COPCO A	W:IU(P)	3278.39	ENGINEERING CONTRACTORS
15	ATLAS COPCO B	W:ACBF(P)	3278.39	ENGINEERING CONTRACTORS
16	HOLMEN B	W:SM@G(P)	2898.27	PAPER
17	GAMBRO A	W:INCF(P)	2820.01	MEDICAL EQUIPMENT & SUPPLIES
18	SSABA	W:SSAA(P)	1780.22	REAL ESTATE DEVELOPMENT
19	SAS	W:SAS(P)	1708.09	PAPER
20	LUNDBERGS B	W:LNBF(P)	1619.9	TYRES & RUBBER
21	KINNEVIK IND. B	W:KIBF(P)	1497.58	STEEL
22	TRELLEBORG B	W:TT@G(P)	1489.74	AIRLINES & AIRPORTS
23	OM	W:OMBU(P)	1383.02	FINANCIAL SERVICES
24	HUFVUDSTADEN A	W:HUA(P)	1198.31	REAL ESTATE DEVELOPMENT
25	RATOS A	W:RA@G(P)	1094.26	INVESTMENT COMPANIES

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** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.20 - Switzerland

Top 25	Company	DS Code*	Market Value**	Industry Group
1	NOVARTIS R	S:NOVN(P)	180604.5	PHARMACEUTICALS
2	NESTLE R	S:NESN(P)	137468.6	FOOD PROCESSORS
3	UBS R	S:UBSN(P)	126492.2	BANKS
4	ROCHE HOLDING GSH.	S:ROG(P)	97024.34	PHARMACEUTICALS
5	CREDIT SUISSE R	S:CSGN(P)	60784.83	BANKS
6	SWISS RE R	S:RUKN(P)	33974.91	RE-INSURANCE
7	ZURICH FINANCIAL SVS.	S:ZURN(P)	30843.92	INSURANCE SERVICES
8	RICHEMONT B	S:CFR(P)	16219.83	HOUSEHOLD APPLIANCES & HOUSEWARES
9	ADECCO R	S:ADEN(P)	14623.52	EDUCATION & TRAINING
10	HOLCIM R	S:HOLN(P)	14072	BUILDING MATERIALS
11	SERONO 'B'	S:SEO(P)	12268.15	PHARMACEUTICALS
12	ABB LTD. R	S:ABB(P)	6521.48	ELECTRICAL EQUIPMENT
13	SGS SURVEILLANCE N	S:PARG(P)	5901.23	SECURITY & ALARMS
14	PARGESA 'B'	S:SGSN(P)	5643.97	INVESTMENT COMPANIES
15	THE SWATCH GROUP R	S:UHRN(P)	4468.83	HOUSEHOLD APPLIANCES & HOUSEWARES
16	BALOISE R	S:BALN(P)	3507.78	INSURANCE SERVICES
17	AARE – TESSIN R (ATEL)	S:AT.N(P)	3222.19	ELECTRICITY
18	SWISS LIFER	S:RA(P)	3154.4	LIFE ASSURANCE
19	EMS – CHEMIE 'B'	S:EMS(P)	2528.98	PHARMACEUTICALS
20	LOGITECH R	S:LOGN(P)	2379.66	ELECTRICAL EQUIPMENT
21	SCHINDLER R	S:SCHN(P)	2333.04	ENGINEERING CONTRACTORS
22	LLB 'B'	S:LLB(P)	2234.56	BANKS
23	VONTOBEL 'R'	S:UNAX(P)	2036.34	DIVERSIFIED INDUSTRY
24	NEUE AARG BANK R	S:VONN(P)	1986.5	BANKS
25	UNAXIS HOLDING AG	S:NAAN(P)	1957.71	BANKS

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** Market Value is in millions of the domestic currency and the values are relative to 11 July, 2003

Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.21 - Taiwan

Top 25	Company	DS Code*	Market Value**	Industry Group
1	UNITED MICRO ELTN.	TW:UTD(P)	20025.38	COMPUTER HARDWARE
2	CATHAY FINL.HLDG.	TW:CFC(P)	18417.19	FINANCIAL SERVICES
3	HON HAI PREC.INDS CO.	TW:HON(P)	15644.18	ELECTRONIC EQUIPMENT
4	CHINA STEEL	TW:NYP(P)	12582.41	STEEL
5	NAN YA PLASTICS	TW:CST(P)	12513.16	CHEMICALS ADVANCED MATERIALS
6	FORMOSA PLASTICS	TW:FPL(P)	10998.62	CHEMICALS ADVANCED MATERIALS
7	CHINA DEV.FINL.HLDG.	TW:CFH(P)	7298.51	FINANCIAL SERVICES
8	CHINATRUST FINL.HLDG.	TW:CHI(P)	6322.66	BANKS
9	HUA NAN FINANCIAL HLDG.	TW:HNB(P)	5055.44	FINANCIAL SERVICES
10	CHINA MOTOR	TW:ASE(P)	4310.12	AUTOMOBILE
11	ADVD. SEMICON. ENGNR.	TW:CMC(P)	4153.97	SEMICONDUCTORS
12	YULON MOTOR CO.	TW:YUE(P)	3831.9	AUTOMOBILE
13	DELTA ELT.INDL.CO.	TW:DEL(P)	3244.04	ELECTRONIC EQUIPMENT
14	POU CHEN	TW:PCN(P)	3137.87	CLOTHING & FOOTWEAR
15	CHANG HWA COML.BANK	TW:CHB(P)	2832.07	BANKS
16	EVERGREEN MARINE	TW:EVE(P)	2547.13	SHIPPING & PORTS
17	CHENG SHIN RUB.INDS.CO.	TW:CSI(P)	1995.23	TYRES & RUBBER
18	UNI – PRSD.ENTS.	TW:PRE(P)	1889.21	FOOD PROCESSORS
19	WALSIN LIHWA CORP.	TW:WAL(P)	1665.99	ELECTRICAL EQUIPMENT
20	INTLBANK OF TAIPEI	TW:TAT(P)	1607.53	BANKS
21	TATUNG	TW:TAB(P)	1551.99	COMPUTER HARDWARE
22	TAIWAN CEMENT	TW:TCM(P)	1495.35	BUILDING MATERIALS
23	TAIWAN GLASS	TW:TGL(P)	1436.33	BUILDING MATERIALS
24	ASIACEMENT	TW:ACM(P)	1399.23	BUILDING MATERIALS
25	KINPO ELECTRONICS	TW:KIN(P)	1211.67	COMPUTER HARDWARE

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.22 - Thailand

Top 25	Company	DS Code*	Market Value**	Industry Group
1	SIAMCEMENT	Q:SCQT(P)	7758080	BUILDING MATERIALS
2	ADVANCED INFO.SERVICE	Q:AIS(P)	7273370	TELECOM WIRELESS
3	KRUNG THAI BANK	Q:KTBT(P)	4622860	BANKS
4	BANGKOK BANK	Q:BBLT(P)	3632320	BANKS
5	LANDAND HOUSES	Q:LAHT(P)	2500610	HOUSE BUILDING
6	SIAMCITY CEMENT	Q:SCCT(P)	2329940	BUILDING MATERIALS
7	SIAMCOMMERCIAL BANK	Q:SBBT(P)	2150980	BANKS
8	SIAMPULP PAPER	Q:SPPT(P)	1246710	PAPER
9	C P FOODS	Q:BOAT(P)	1179000	FARMING & FISHING
10	BANKOF ASIA	Q:CPFT(P)	1144430	BANKS
11	NATIONAL FINANCE	Q:NFST(P)	822703.1	FINANCIAL SERVICES
12	BANKOF AYUDHYA	Q:BAYT(P)	772900.6	BANKS
13	BANPU PUBLIC	Q:UBTT(P)	556433.9	MINING SERVICES
14	THAIMILITARY BANK	Q:TMBT(P)	544497.9	BANKS
15	BANKTHAI	Q:BPCT(P)	517244.7	BANKS
16	KIATNAKIN FINANCE	Q:KNFT(P)	510349.1	FINANCIAL SERVICES
17	THAIPLASTIC CHM.	Q:TPCT(P)	462839.8	CHEMICALS ADVANCED MATERIALS
18	DBS THAI DANU BANK	Q:TDBT(P)	435342.3	BANKS
19	TPI POLENE	Q:TPIP(P)	430367.7	CHEMICALS ADVANCED MATERIALS
20	QUALITY HOUSES	Q:QUHO(P)	403224.3	HOUSE BUILDING
21	PHOENIX PULP PAPER	Q:PPPT(P)	377023	PAPER
22	THAISTANLEY ELEC.	Q:STAN(P)	347418.4	AUTO PARTS
23	BERLI JUCKER	Q:BJCT(P)	346689	PERSONAL PRODUCTS
24	BANGKOK INSURANCE CO.	Q:BKIT(P)	327451.1	INSURANCE NON-LIFE
25	ICC INTL.	Q:ICCT(P)	305028.4	PERSONAL PRODUCTS

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.23 - Turkey

Top 25	Company	DS Code*	Market Value**	Industry Group
1	AKBANK	TK:AKB(P)	6219090	BANKS
2	TURKIYE IS BANK 'C'	TK:ISC(P)	4756020	BANKS
3	TUPRAS	TK:TUP(P)	3142900	OIL INTEGRATED
4	ENKAINSAAT	TK:ENK(P)	3018460	DIVERSIFIED INDUSTRY
5	GARANTI BANKASI	TK:GAR(P)	2155800	BANKS
6	PETROL OFISI	TK:PTO(P)	1461110	OIL SERVICES
7	PETKIM	TK:PET(P)	1367960	OIL INTEGRATED
8	YAPIKREDI BK.	TK:YKB(P)	1352930	BANKS
9	TURKHAVA YOLLARI	TK:THY(P)	1245670	AIRLINES & AIRPORTS
10	EREGLI DEMIR CELIK	TK:ERE(P)	1113280	STEEL
11	MIGROS TURK	TK:MIG(P)	997373.4	DISCOUNT STORES
12	TOFAS	TK:TOA(P)	955342.6	AUTOMOBILE
13	BSH PROFILO	TK:PEG(P)	854595.1	HOUSEHOLD APPLIANCES & HOUSEWARES
14	AYGAZ	TK:AYG(P)	786067.5	GAS DISTRIBUTION
15	VESTEL	TK:VES(P)	695396.6	CONSUMER ELECTRONICS
16	TRAKYA CAM	TK:TRK(P)	560024.6	BUILDING MATERIALS
17	FINANSBANK	TK:ALA(P)	398887.9	BANKS
18	ALARKO	TK:BRI(P)	395593.7	DIVERSIFIED INDUSTRY
19	BRISA BRIDGESTONE	TK:FIN(P)	385680.6K	TYRES & RUBBER
20	AKSAAKRILIK KIMYA	TK:AKS(P)	345915.7	TEXTILES & LEATHER GDS
21	CIMSA CIMENTO	TK:CIM(P)	311391.2	BUILDING MATERIALS
22	ASELSAN	TK:ASE(P)	284570.4	DEFENCE
23	KENTGIDA	TK:KEN(P)	278374.7	FOOD PROCESSORS
24	ANADOLU CAM SANAYII	TK:ANL(P)	246095.9	SOFT DRINKS
25	BURSA CIMENTO	TK:BUS(P)	235652.4	BUILDING MATERIALS

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.24 – United Kingdom

Top 25	Company	DS Code*	Market Value**	Industry Group
1	BP	BP.(P)	254177.7	OIL INTEGRATED
2	VODAFONE GROUP	VOD(P)	220474.6	TELECOM WIRELESS
3	GLAXOSMITHKLINE	GSK(P)	194086.9	PHARMACEUTICALS
4	SHELL TRANSPORT & TRDG.	SHEL(P)	108321.2	OIL INTEGRATED
5	BARCLAYS	BARC(P)	82901.14	BANKS
6	BT GROUP	TSCO(P)	48745.73	TELECOM FIXED LINE
7	TESCO	BT.A(P)	44550.89	FOOD & DRUG RETAILERS
8	ANGLO AMERICAN	AAL(P)	40749.23	OTHER MINING
9	UNILEVER (UK)	BATS(P)	40696.83	FOOD PROCESSORS
10	BRIT.AMERICAN TOBACCO	ULVR(P)	38540.24	TOBACCO
11	RIO TINTO	RIO(P)	36576.08	OTHER MINING
12	AVIVA	AV.(P)	29885.96	LIFE ASSURANCE
13	BG GROUP	BG.(P)	25819.7	OIL INTEGRATED
14	STD.CHARTERED	STAN(P)	25153.58	BANKS
15	PRUDENTIAL	PRU(P)	23346.1	LIFE ASSURANCE
16	RECKITT BENCKISER	RB.(P)	22135.5	HOUSEHOLD PRODUCTS
17	GUS	MKS(P)	20119.64	RETAILERS, MULTI DEPT
18	ABBEY NATIONAL	ANL(P)	20033.05	BANKS
19	MARKS & SPENCER GROUP	CBRY(P)	20016.4	RETAILERS, MULTI DEPT
20	CADBURY SCHWEPPES	GUS(P)	19882.96	FOOD PROCESSORS
21	SCOTTISH POWER	SPW(P)	18428.76	ELECTRICITY
22	REED ELSEVIER	REL(P)	17733.32	PUBLISHING & PRINTING
23	WPP GROUP	WPP(P)	16899.08	MEDIA AGENCIES
24	LEGAL & GENERAL	LGEN(P)	16099.88	LIFE ASSURANCE
25	SCOT. & SOUTHERN ENERGY	SSE(P)	14889.62	ELECTRICITY

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Appendix I1 – Individual Positions by Market Capitalization of 25 Countries and Industry Classification

Table I1.25 – United States

Top 25	Company	DS Code*	Market Value**	Industry Group
1	GENERAL ELECTRIC	U:GE(P)	4.85429E+11	DIVERSIFIED INDUSTRY
2	MICROSOFT	@MSFT(P)	3.62323E+11	SOFTWARE
3	EXXON MOBIL	U:XOM(P)	3.04866E+11	OIL INTEGRATED
4	PFIZER	U:PFE(P)	2.77765E+11	PHARMACEUTICALS
5	CITIGROUP	U:C(P)	2.552E+11	BANKS
6	AMER.INTL.GP.	U:AOL(P)	1.95013E+11	SEMICONDUCTORS
7	INTEL	U:WMT(P)	1.79356E+11	OTHER INSURANCE
8	MERCK	U:IBM(P)	1.71058E+11	PHARMACEUTICALS
9	JOHNSON&.JOHNSON	U:AIG(P)	1.48861E+11	PHARMACEUTICALS
10	VERIZON COMMS.	@INTC(P)	1.40914E+11	TELECOM FIXED LINE
11	SBC COMMUNICATIONS	U:MRK(P)	1.36133E+11	TELECOM FIXED LINE
12	CISCO SYSTEMS	U:JNJ(P)	1.21788E+11	TELECOM EQUIPMENT
13	HOME DEPOT	U:VZ(P)	1.15492E+11	RETAIL, HARDLINES
14	COCA COLA	@CSCO(P)	1.08823E+11	SOFT DRINKS
15	BRISTOLMYERS SQUIBB	U:HD(P)	1.06794E+11	PHARMACEUTICALS
16	BERKSHIRE HATHAWAY 'A'	U:KO(P)	1.01155E+11	INSURANCE SERVICES
17	BANK OFAMERICA	U:BMY(P)	95725170000	BANKS
18	ORACLE	U:MO(P)	94083520000	SOFTWARE
19	VIACOM 'A'	U:BAC(P)	90828940000	TV, RADIO & FILM
20	LILLY ELI	@ORCL(P)	88460800000	PHARMACEUTICALS
21	FANNIE MAE	U:VIA(P)	82310000000	MORTGAGE FINANCE
22	PROCTER & GAMBLE	U:LLY(P)	80830110000	HOUSEHOLD PRODUCTS
23	AOL TIME WARNER	U:FNM(P)	80230890000	ENTERTAINMENT
24	ABBOTT LABS.	U:PG(P)	79425390000	MEDICAL EQUIPMENT & SUPPLIES
25	WELLS FARGO & CO	U:ABT(P)	74671450000	PHARMACEUTICALS

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** Market Value is in thousands of the domestic currency and the values are relative to 11 July, 2003

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.01 – The Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU1	NATIONAL AUS.BANK	A:NABK(P)	68216.56M	BANKS
BR1	PETROBRAS ON	BR:PET(P)	23036120K	OIL INTEGRATED
CL1	SANTAMARIA	CL:COE(P)	199743.60M	ASSET MANAGERS
FR1	TOTAL SA	F:CFP(P)	170621.10M	OIL INTEGRATED
DE1	SIEMENS	D:SIE(P)	81446.76M	ELECTRICAL EQUIPMENT
HK1	HSBC HDG.	K:HSBC(P)	228098.00M	BANKS
IN1	RELIANCE INDS.	IN:REL(P)	17894.9M	CHEMICALS, COMMODITY
ID1	UNILEVER	ID:UNI(P)	4278570.0M	FOOD PROCESSORS
IE1	ALLIED IRISH BANKS	ALBK (P)	22051290.00M	BANKS
IL1	ISRAEL CORPORATION	IS:ISL(P)	1224010K	DIVERSIFIED INDUSTRY
IT1	TELECOM ITALIA	I:TI(P)	9858885K	TELECOM FIXED LINE
JP1	TOYOTO MOTOR	J:TYMO(P)	165491.6M	AUTOMOBILE
MX1	TELEMEX 'L'	MX:TMA(P)	21245490K	TELECOM FIXED LINE
NZ1	TELECOM CORP.OF NZ.	Z:TELZ(P)	9621880K	TELECOM FIXED LINE
SG1	UNITED OVERSEAS BANK	T:UOBS(P)	21246.51M	BANKS
SA1	SASOL	R:SOLJ(P)	12588.24M	OIL INTEGRATED
SK1	SAMSUNG ELECTRONICS	KO:SGL(P)	90282.98M	ELECTRONICS
ES1	TELEFONICA	E:TEF(P)	95064.82M	TELECOM FIXED LINE
SE1	ERICSSON B	W:HMBF(P)	32851.83M	TELECOM EQUIPMENT
CH1	NOVARTIS R	S:NOVN(P)	180604.5M	PHARMACEUTICALS
TW1	UNITED MICRO ELTN.	TW:UTD(P)	20025.38M	COMPUTER HARDWARE
TH1	SIAMCEMENT	Q:SCQT(P)	7758080K	BUILDING MATERIALS
TR1	AKBANK	TK:AKB(P)	6219090K	BANKS
UK1	BP	BP.(P)	254177.7M	OIL INTEGRATED
US1	GENERAL ELECTRIC	U:GE(P)	4.85429E+11K	DIVERSIFIED INDUSTRY

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.02 – The Second Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU2	BHP BILLITON	A:BHPY(P)	38933.61M	MINING SERVICES
BR2	BAHEMAON 1000	BR:LH3(P)	6811210K	VEHICLE DISTRIBUTION
CL2	COPEC	CL:EIS(P)	11351.14M	OIL INTEGRATED
FR2	ELF AQUITAINE	F:SNEA(P)	83139.95M	OIL INTEGRATED
DE2	DEUTSCHE BANK	D:DBK(P)	65860.06M	BANKS
HK2	HUTCHISON WHAMP.	K:HUTI(P)	49313.86M	DIVERSIFIED INDUSTRY
IN2	HINDUSTAN LEVER	IN:HDL(P)	13601.41M	PERSONAL PRODUCTS
ID2	GUDANG GARAM	ID:GUD(P)	4103590.0M	TOBACCO
IE2	BANK OF IRELAND	BKIR(P)	20337700.00M	BANKS
IL2	DELEK GROUP	IS:DLE(P)	1144570K	OIL INTEGRATED
IT2	UNICREDITO ITALIANO	I:UC(P)	5896690K	FINANCIAL SERVICES
JP2	NIPPON TELG. & TEL.	J:NTT(P)	120460.3M	TELECOM FIXED LINE
MX2	WALMEX 'V'	MX:WAV(P)	19965030K	DISCOUNT STORES
NZ2	CARTER HOLT HARVEY	Z:CAHZ(P)	2806260K	FORESTRY
SG2	DBS GROUP	T:DBSS(P)	17385.6M	BANKS
SA2	ANGLOGOLD	R:ANGJ(P)	11995.46M	GOLD MINING
SK2	SK TELECOM	KO:SKT(P)	26212.04M	TELECOM WIRELESS
ES2	SANTANDER CTL. HISPANO	E:SCH(P)	73656.57M	BANKS
SE2	HENNES & MAURITZ B	W:SL @ G(P)	27914.45M	RETAILERS, SOFT GOODS
CH2	NESTLE R	S:NESN(P)	137468.6M	FOOD PROCESSORS
TW2	CATHAY FINL.HLDG.	TW:CFC(P)	18417.19M	FINANCIAL SERVICES
TH2	ADVANCED INFO.SERVICE	Q:AIS(P)	7273370K	TELECOM WIRELESS
TR2	TURKIYE IS BANK 'C'	TK:ISC(P)	4756020K	BANKS
UK2	VODAFONE GROUP	VOD(P)	220474.6M	TELECOM WIRELESS
US2	MICROSOFT	@ MSFT(P)	3.62323E+11K	SOFTWARE

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.03 – The Third Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU3	NEWS CORPORATION	A:NECO(P)	35989.02M	SUBSCRIBED ENTERTAINMENT
BR3	BRASIL ON 1000	BR:BH3(P)	6159540K	BANKS
CL3	ENERSIS	CL:CAA(P)	5349.92M	ELECTRICITY
FR3	SANOFI - SYNTHELABO	F:SQ @ F(P)	72913.19M	PHARMACEUTICALS
DE3	ALLIANZ	D:DCG(P)	62522.74M	INSURANCE SERVICES
HK3	HANG SENG BANK	K:HSBA(P)	35277.19M	BANKS
IN3	WIPRO	IN:WIP(P)	8409.46M	SOFTWARE
ID3	HM SAMPOERNA	ID:INA(P)	3815530.0M	TOBACCO
IE3	CRH	CRH(P)	15604350.00M	BUILDING MATERIALS
IL3	WARDINON	IS:WRD(P)	839076.4K	ELECTRONIC EQUIPMENT
IT3	SAN PAOLOIMI	I:SPI(P)	2552276K	BANKS
JP3	NISSAN MOTOR	J:NR @ N(P)	77498.81M	AUTOMOBILE
MX3	TLEVISA 'A'	MX:TVL(P)	7360570K	TV, RADIO & FILM
NZ3	INDE.NEWSPAPERS	Z:INLZ(P)	1752900K	PUBLISHING & PRINTING
SG3	OVERSEAS CHINESE BKG.	T:OCBC(P)	13863.53M	BANKS
SA3	ANGLOAMERICAN PLAT.	R:AMSJ(P)	11494.38M	MINING SERVICES
SK3	POSCO	KO:PIS(P)	17289.71M	STEEL
ES3	BBV ARGENTARIA	E:BBVA(P)	58598.15M	BANKS
SE3	SHB A	W:SVK(P)	18010.41M	BANKS
CH3	UBS R	S:UBSN(P)	126492.2M	BANKS
TW3	HON HAI PREC.INDS CO.	TW:HON(P)	15644.18M	ELECTRONIC EQUIPMENT
TH3	KRUNG THAI BANK	Q:KTBT(P)	4622860K	BANKS
TR3	TUPRAS	TK:TUP(P)	3142900K	OIL INTEGRATED
UK3	GLAXOSMITHKLINE	GSK(P)	194086.9M	PHARMACEUTICALS
US3	EXXON MOBILE	U:XOM(P)	3.04866E+11K	OIL INTEGRATED

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.04 – The Fourth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU4	WESTPAC BANKING	A:WEBA(P)	32149.88M	BANKS
BR4	BRADESCO ON 1000	BR:IO3(P)	4620880K	BANKS
CL4	CTC 'A'	CL:END(P)	4661.75M	TELECOM FIXED LINE
FR4	CARREFOUR	F:CRFR(P)	58421.17M	FOOD & DRUG RETAILERS
DE4	E ON	D:EOA(P)	59018.22M	MULTI-UTILITIES
HK4	CHEUNG KONG HDG.	K:CHGK(P)	25897.67M	REAL ESTATE DEVELOPMENT
IN4	STATE BANK OF INDIA	IN:SBK(P)	8186.7M	BANKS
ID4	ASTRA INTERNATIONAL	ID:ATA(P)	3322420.0M	AUTO PARTS
IE4	ANG.IR.BK.	ANGL(P)	5150620.00M	BANKS
IL4	PHOENIX INSURANCE 5	IS:PRB(P)	769590.5K	HOUSE BUILDING
IT4	OLIVETTI	I:OL(P)	2270950K	TELECOM FIXED LINE
JP4	CANON	J:CN @ N(P)	72769.6M	ELECTRONIC EQUIPMENT
MX4	GCARSO 'A1'	MX:GCR(P)	4543640K	DIVERSIFIED INDUSTRY
NZ4	AIR NEW ZEALAND	Z:AIRN(P)	1430780K	AIRLINES & AIRPORTS
SG4	SINGAPORE AIRLINES	T:SAIR(P)	13198.59M	AIRLINES & AIRPORTS
SA4	STD.BK.GP.	R:SBKJ(P)	10281.17M	BANKS
SK4	KOREA ELECTRIC POWER	KO:KAW(P)	17266.71M	ELECTRICITY
ES4	REPSOL YPF	E:REP(P)	33782.03M	OIL INTEGRATED
SE4	VOLVO B	W:VOBF(P)	12446.25M	COMMERCIAL VEHICLES
CH4	ROCHE HOLDING GSH.	S:ROG(P)	97024.34M	PHARMACEUTICALS
TW4	CHINA STEEL	TW:NYP(P)	12582.41M	STEEL
TH4	BANGKOK BANK	Q:BBLT(P)	3632320K	BANKS
TR4	ENKAINSAAT	TK:ENK(P)	3018460K	DIVERSIFIED INDUSTRY
UK4	SHELL TRANSPORT & TRDG.	SHEL(P)	108321.2M	OIL INTEGRATED
US4	PFIZER	U:PFE(P)	2.77765E+11K	PHARMACEUTICALS

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.05 – The Fifth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU5	AUS.AND NZ.BANKING GP.	A:ANBG(P)	30726.21M	BANKS
BR5	SOUZA CRUZ ON	BR:DC3(P)	4091760K	TOBACCO
CL5	ENDESA	CL:ENT(P)	4344.16M	ELECTRICITY
FR5	SOCIETE GENERALE	F:SGE(P)	50568.96M	BANKS
DE5	BASF	D:ALV(P)	43773.95M	CHEMICALS, COMMODITY
HK5	SUN HUNG KAI PROPS.	K:SHKP(P)	23909.49M	REAL ESTATE DEVELOPMENT
IN5	ITC	IN:ITC(P)	6929.08M	DIVERSIFIED INDUSTRY
ID5	BANKDANAMON	ID:BKD(P)	1378340.0M	BANKS
IE5	KERRY GROUP 'A'	KYGA(P)	4944130.00M	FOOD PROCESSORS
IL5	HAREL INSURANCE INVS.	IS:MGN(P)	643342.3K	INSURANCE SERVICES
IT5	RAS	I:R(P)	2113974K	INSURANCE SERVICES
JP5	HONDA MOTOR	J:HO @ N(P)	68943.48M	AUTOMOBILE
MX5	FEMSA. UB	MX:FMU(P)	4278120K	BREWERS
NZ5	SANFORD	Z:SANZ(P)	463968.8K	FARMING & FISHING
SG5	SINGAPORE PRESS HDG.	T:SGPS(P)	7014.31M	PUBLISHING & PRINTING
SA5	FIRSTRAND	R:FSRJ(P)	9791.53M	BANKS
SK5	HYUNDAI MOTOR	KO:HDR(P)	10764.5M	AUTO PARTS
ES5	ENDESA	E:ELE(P)	28817.71M	ELECTRICITY
SE5	SANDVIK	W:SAND(P)	12442.71M	ENGINNEERING, GENERAL
CH5	CREDIT SUISSE R	S:CSGN(P)	60784.83M	BANKS
TW5	NAN YA PLASTICS	TW:CST(P)	12513.16M	CHEMICALS ADVANCED MATERIALS
TH5	LAND AND HOUSES	Q:LAHT(P)	2500610K	HOUSE BUILDING
TR5	GARANTI BANKASI	TK:GAR(P)	2155800K	BANKS
UK5	BARCLAYS	BARC(P)	82901.14M	BANKS
US5	CITIGROUP	U:C(P)	2.552E+11K	BANKS

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.06 – The Sixth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU6	RIO TINTO	A:CRAM(P)	17333.25M	MINING SERVICES
BR6	UNIBANCO ON 1000	BR:SZ3(P)	3797360K	BANKS
CL6	AGUAS 'A'	CL:EMO(P)	2018.98M	WATER
FR6	AXA	F:MIDI(P)	49816.84M	INSURANCE SERVICES
DE6	HOECHST	D:BAS(P)	41154.99M	PHARMACEUTICALS
HK6	CLP HOLDINGS LTD	K:CLIG(P)	18039.91M	ELECTRICITY
IN6	RANBAXY LABS.	IN:RXL(P)	5718.97M	PHARMACEUTICALS
ID6	BANKPAN INDONESIA	ID:BKJ(P)	944896.8M	BANKS
IE6	ELAN	DRX(P)	3700450.00M	PHARMACEUTICALS
IL6	MENORAH 1	IS:ELR(P)	551455.2K	LIFE INSURANCE
IT6	ALLEANZA	I:AL(P)	1623427K	LEGAL SERVICES
JP6	TAKEDA CHEMICAL INDS.	J:TA @ N(P)	57413.94M	PHARMACEUTICALS
MX6	BIMBO 'A'	MX:BI2(P)	338151K	FOOD PROCESSORS
NZ6	NEW ZEALAND REFINING	Z:NZRZ(P)	398398.5K	OIL SERVICES
SG6	GREAT EASTERN HDG.	T:GELA(P)	4732.61M	LIFE ASSURANCE
SA6	IMPALA PLATINUM	R:IMPJ(P)	7125.54M	MINING SERVICES
SK6	SAMSAUNG ELTN. PF.	KO:SCT(P)	6839.21M	ELECTRONIC EQUIPMENT
ES6	IBERDROLA	E:IBE(P)	26487.91M	ELECTRICITY
SE6	ELECTROLUX B	W:SE @ G(P)	12226.87M	HOUSEHOLD APPLIANCES & HOUSEWARES
CH6	SWISS RE R	S:RUKN(P)	33974.91M	RE-INSURANCE
TW6	FORMOSA PLASTICS	TW:FPL(P)	10998.62M	CHEMICALS ADVANCED MATERIALS
TH6	SIAMCITY CEMENT	Q:SCCT(P)	2329940K	BUILDING MATERIALS
TR6	PETROL OFISI	TK:PTO(P)	1461110K	OIL SERVICES
UK6	BT GROUP	TSCO(P)	48745.73M	TELECOM FIXED LINE
US6	AMER.INTL.GP.	U:AOL(P)	1.95013E+11K	SEMICONDUCTORS

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.07 – The Seventh Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU7	COLESMYER	A:COLE(P)	9920.70M	RETAILERS & MULTIDEPARTMENT
BR7	ITAUSAPN	BR:UB3(P)	2832450K	DIVERSIFIED INDUSTRY
CL7	ENTEL	CL:CVZ(P)	2000.93M	TELECOM FIXED LINE
FR7	LVMH	F:LVMH(P)	45325.15M	TEXTILES & LEATHER GOODS
DE7	BMW	D:HOE(P)	40990.45M	AUTOMOBILE
HK7	HONG KONG ELECTRIC	K:HKEL(P)	14482.82M	ELECTRICITY
IN7	HOUSING DEV.FIN.CORP.	IN:HDF(P)	3694.37M	MORTGAGE FINANCE
ID7	BANKINTL.INDO.BII	ID:PAN(P)	935079.2M	BANKS
IE7	INDE.NEWS & MEDIA	INWS(P)	2353770.00M	PUBLISHING & PRINTING
IL7	GAZIT GLOBE (1992)	IS:MNO(P)	495482.4K	REAL ESTATE DEVELOPMENT
IT7	MEDIOBANCA	I:MB(P)	1560312K	FINANCIAL SERVICES
JP7	SONY	J: SO @ N(P)	51467.55M	CONSUMER ELECTRONICS
MX7	APASCO	MX:APA(P)	3314870K	BUILDING MATERIALS
NZ7	WASTE MANAGEMENT NZ.	Z:WAMZ(P)	342625K	ENVIRONMENTAL CONTROL
SG7	KEPPEL CORPORATION	T:KEPP(P)	3844.52M	ENGINEERING, GENERAL
SA7	NEDCOR	R:NEDJ(P)	6128.76M	BANKS
SK7	SHINHAN FINL.GROUP	KO:SEP(P)	6174.81M	ELECTRONIC EQUIPMENT
ES7	BANCO POPULAR ESPANOL	E:POP(P)	18581.12M	BANKS
SE7	SCA B	W:SW @ G(P)	11816.69M	PAPER
CH7	ZURICH FINANCIAL SVS.	S:ZURN(P)	30843.92M	INSURANCE SERVICES
TW7	CHINA DEV.FINL.HLDG.	TW:CFH(P)	7298.51M	FINANCIAL SERVICES
TH7	SIAMCOMMERCIAL BANK	Q:SBBT(P)	2150980K	BANKS
TR7	PETKIM	TK:PET(P)	1367960K	OIL INTEGRATED
UK7	TESCO	BT.A(P)	44550.89M	FOOD & DRUG RETAILERS
US7	INTEL	U:WMT(P)	1.79356E+11K	OTHER INSURANCE

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.08 – The Eighth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU8	FOSTERS GROUP	A:FOST(P)	9920.35M	BREWERS
BR8	BANESPA ON 1000	BR:IS4(P)	2792330K	BANKS
CL8	CERVEZAS	CL:CHT(P)	1927.99M	BREWERS
FR8	CREDIT LYONNAIS SUSP	F:CAB(P)	37578.17M	BANKS
DE8	BAYER	D:BMW(P)	28280.94M	CHEMICALS, COMMODITY
HK8	HK.& CHINA GAS	K:HKCG(P)	12247.65M	GAS DISTRIBUTION
IN8	DR REDDYS LABS.	IN:DRR(P)	3326.16M	PHARMACEUTICALS
ID8	SEMEN GRESIK (PERSERO)	ID:GSK(P)	900955.4M	BUILDING MATERIALS
IE8	IAWS GROUP 'A'	IAW(P)	1808220.00M	FARMING & FISHING
IL8	PROPERTY & BUILDING	IS:HAL(P)	487755K	SEMICONDUCTORS
IT8	FIAT	I:F(P)	904292K	AUTOMOBILE
JP8	MATSUSHITA ELEC.INDL.	J:MI @ N(P)	48995.41M	ELECTRONIC EQUIPMENT
MX8	KIMBER 'A'	MX:KCA(P)	2834600K	PERSONAL PRODUCTS
NZ8	STEEL & TUBE HOLDINGS	Z:STUZ(P)	318714.9K	STEEL
SG8	CITYDEVELOPMENTS	T:CITY(P)	3806.06M	REAL ESTATE DEVELOPMENT
SA8	ABSA GP.	R:ASAJ(P)	5351.28M	BANKS
SK8	SAMSUNG SDI	KO:SHB(P)	5645.89M	BANKS
ES8	GAS NATURAL SDG	E:CTG(P)	15399.76M	GAS DISTRIBUTION
SE8	SECRITAS B	W:SUBF(P)	6981.35M	SECURITY & ALARMS
CH8	RICHEMONT B	S:CFR(P)	16219.83M	HOUSEHOLD APPLIANCES & HOUSEWARES
TW8	CHINATRUST FINL. HLDG.	TW:CHI(P)	6322.66M	BANKS
TH8	SIAMPULP PAPER	Q:SPPT(P)	1246710K	PAPER
TR8	YAPIKREDI BK.	TK:YKB(P)	1352930M	BANKS
UK8	ANGLO AMERICAN	AAL(P)	40749.23M	OTHER MINING
US8	MERCK	U:IBM(P)	1.71058E+11K	PHARMACEUTICALS

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.09 – The Ninth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU9	WOODSIDE PETROLEUM	A:WOOD(P)	9669.62M	OIL & GAS EXPLORATION OR PORDUCTION
BR9	KUALA PN 1000	BR:NES(P)	2568240K	TEXTILES & LEATHER GOODS
CL9	CHILECTRA	CL:MNR(P)	1725.40M	ELECTRICITY
FR9	VIVENDI UNIVERSAL	F:EX @ F(P)	32773.11M	SUBSCRIBED ENTERTAINMENT
DE9	RWE	D:BAY(P)	25065.64M	MULTI-UTILITIES
HK9	HENDERSON LD.DEV.	K:HELD(P)	9409.72M	REAL ESTATE DEVELOPMENT
IN9	TATAIRON & STEEL	IN:HDI(P)	2718.19M	STEEL
ID9	BANKNIAGA	ID:BKN(P)	732636.4M	BANKS
IE9	GRAFTON GROUP	GN4(P)	1454690.00M	BUILDING MATERIALS
IL9	ELRON	IS:DLO(P)	424357.1K	OIL & GAS EXPLORATION OR PRODUCTION
IT9	CAPITALIA	I:BRM(P)	774320.4K	BANKS
JP9	TOKYOELECTRIC POWER	J:NM @ N(P)	46165.25M	ELECTRICITY
MX9	INTENAL 'O'	MX:INO(P)	2386250K	BANKS
NZ9	CAVALIER	Z:CAVZ(P)	283414K	FURNITURE & FLOORCOVERING
SG9	CAPITALAND	T:DBSL(P)	3478.25M	REAL ESTATE DEVELOPMENT
SA9	SAPPI	R:SAPJ(P)	5143.39M	PAPER
SK9	KIA MOTORS	KO:KAM(P)	4798.53M	AUTOMOBILE
ES9	ALTADIS	E:TAB(P)	13387.24M	TOBACCO
SE9	INVESTOR B	W:SR @ G(P)	5996.53M	INVESTMENT COMPANIES
CH9	ADECCO R	S:ADEN(P)	14623.52M	EDUCATION & TRAINING
TW9	HUA NAN FINANCIAL HLDG.	TW:HNB(P)	5055.44M	FINANCIAL SERVICES
TH9	C P FOODS	Q:BOAT(P)	1179000K	FARMING & FISHING
TR9	TURKHAVA YOLLARI	TK:THY(P)	1245670K	AIRLINES & AIRPORTS
UK9	UNILEVER (UK)	BATS(P)	40696.83M	FOOD PROCESSORS
US9	JOHNSON & JOHNSON	U:AIG(P)	1.48861E+11K	PHARMACEUTICALS

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix I2 – Individual Positions by Market Capitalization of the Foreign Portfolios and Industry Classification

Table I2.10 – The Tenth Highest Market Capitalization Securities

Index**	Company	DS Code*	Market Value	Industry Group
AU10	WESTFIELD HOLDINGS	A:WELD(P)	9170.75M	REAL ESTATE DEVELOPMENT
BR10	SUDAMERIS ON 1000	BR:KM5(P)	1459100K	BANKS
CL10	MINERA	CL:PHC(P)	1581.55M	DIVERSIFIED INDUSTRY
FR10	DANONE	F:BSN(P)	31139.40M	FOOD PROCESSORS
DE10	VOLKSWAGEN	D:RWE(P)	23112.44M	AUTOMOBILE
HK10	JOHNSON ELECTRIC HDG.	K:JNEL(P)	8701.19M	ELECTRICAL EQUIPMENT
IN10	HINDALCO INDS.	IN:TTE(P)	2684.92M	NON-FERROUS METALS
ID10	KALBE FARMA	ID:KAL(P)	528086.8M	PHARMACEUTICALS
IE10	JURYS DOYLE HTL.GP.	JEW(P)	1053880.00M	HOTELS
IL10	DELEK ENERGI	IS:KDN(P)	260136.2K	VEHICLE DISTRIBUTION
IT10	BANCA LOMBARDA	I:BL(P)	755989K	BANKS
JP10	NOMURA	J:TE @ N(P)	45727.99M	MEDIA AGENCIES
MX10	LIVERPOL 1	MX:PL1(P)	2126390K	DISCOUNT STORES
NZ10	NUPLEX INDUSTRIES	Z:NPXZ(P)	223197.5K	CHEMICALS, COMMODITY
SG10	FRASER & NEAVE	T:FRAS(P)	2636.22M	SOFT DRINKS
SA10	HARMONY GOLD MINING	R:HARJ(P)	3607.89M	GOLD MINING
SK10	SAMSUNG ELTO.MECH.	KO:SEM(P)	4494.68M	ELECTRONIC EQUIPMENT
ES10	PETROLEOS (CEPSA)	E:CEP(P)	11700.2M	OIL INTEGRATED
SE10	SKANDIA	W:ISBF(P)	5455.26M	LIFE INSURANCE
CH10	HOLCIM R	S:HOLN(P)	14072M	BUILDING MATERIALS
TW10	CHINA MOTOR	TW:ASE(P)	4310.12M	AUTOMOBILE
TH10	BANK OF ASIA	Q:CPFT(P)	1144430K	BANKS
TR10	EREGLI DEMIR CELIK	TK:ERE(P)	1113280K	STEEL
UK10	BRIT.AMERICAN TOBACCO	ULVR(P)	38540.24M	TOBACCO
US10	VERIZON COMMS.	@ INTC(P)	1.40914E+11K	TELECOM FIXED LINE

* DS Code represents the code that DataStream uses to denote the various companies and market value is in domestic currency

** refer to Appendix Y for details on country code

Appendix J - Geometric and Arithmetic Averages % for Dispersion Reduction as a Function of the Number of Positions in Portfolios

Table J1- Geometric and Arithmetic Averages Percentages Dispersion Reduction for Domestic Portfolios																							
Country*	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
Average Relative Dispersion Reduction - Sequential Adding of Postions (% Arithmatic Averages)																									
Aggregate Port Std Dev**	1.9493	2.102	3.0049	1.6957	4.3293	1.354	3.1009	0.4354	2.9192	3.2939	2.334	1.5673	3.3807	2.8422	2.6479	2.4573	1.6794	3.8173	2.7138	0.8928	2.008	1.8393	0.9652	1.9637	2.2291
Port Std Dev/Sum Positions***	2.1358	2.3519	3.20099	1.972	4.3841	1.3586	3.3279	0.5701	3.2255	3.6243	2.5576	1.8273	3.6562	3.0025	2.7897	2.6187	1.8618	3.9176	2.912	0.9575	2.1948	2.0041	1.06	2.087	2.3126
75th-25th Range of Return****	2.0231	2.4524	2.65801	1.9061	4.7378	1.1277	2.5193	-0.9811	2.8711	4.0629	2.5318	1.2611	2.9834	2.8911	3.0566	2.3286	2.0271	3.9416	2.5164	0.9521	2.396	1.1882	1.0617	2.1151	2.2208
Average Absolute Dispersion Reduction - Relative to First Position (% Geometric Averages)																									
Aggregate Port Std Dev**	1.8516	1.9267	2.92289	1.6973	3.9037	1.192	2.8367	0.173	2.5746	3.0773	2.2516	1.5036	3.1777	2.6607	2.5965	2.3289	1.5792	3.6661	2.6106	0.8271	1.8013	1.7397	0.9598	1.8596	2.0075
Port Std Dev/Sum Positions***	2.0413	2.2349	3.14875	1.986	4.0004	1.2052	3.1079	0.4647	3.0678	2.8358	2.463	1.7875	3.5338	2.7588	2.7533	2.4877	1.7869	3.7676	2.7928	0.8994	1.9961	1.883	1.0516	2.0061	2.1277
75th-25th Range of Return****	1.8914	2.0928	2.57928	1.9344	4.2562	0.8883	2.1567	-1.2522	2.7119	3.7165	2.3787	1.1075	2.565	2.7606	2.8961	2.1952	1.8396	3.7786	2.2244	0.8287	2.0383	1.0124	1.0005	1.884	1.9428

* Refer to Appendix Y for details on country code

** Aggregate Port Std Dev represents aggregate portfolio standard deviation

*** Port Std Dev/Sum Positions represents portfolio standard deviation/sum individual positions

**** 75th-25th Range of Return represents the 75th percentile minus the 25th percentile range of return

Table J2- Geometric and Arithmetic Averages Percentages Dispersion Reduction for Foreign Portfolios										
Country*	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
Average Relative Dispersion Reduction - Sequential Adding of Postions (% Arithmetic Averages)										
Aggregate Port Std Dev**	2.2486	2.9231	5.58139	2.3725	2.0442	3.1254	3.3197	2.4262	3.3338	3.8763
Port Std Dev/Sum Positions***	2.5279	3.1257	5.54427	2.4166	2.145	3.6851	3.5282	2.7327	3.4974	4.1222
75th-25th Range of Return****	2.3573	3.1178	6.10565	2.2596	2.0928	3.1815	2.421	2.7627	3.1171	3.4355
Average Absolute Dispersion Reduction - Relative to First Position (% Geometric Averages)										
Aggregate Port Std Dev**	1.9659	2.4313	4.85564	1.9887	1.5621	2.2427	2.6924	2.0329	2.133	3.5564
Port Std Dev/Sum Positions***	2.1701	2.8338	4.68583	2.0427	1.8151	3.0316	2.956	2.3389	2.6545	3.8014
75th-25th Range of Return****	1.9811	2.7716	4.77598	1.7651	1.6897	2.3151	1.7659	2.3407	2.1102	2.9773

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix J3 - Geometric and Arithmetic Averages % for Dispersion Reduction as a Function of the Number of Positions in Portfolios

Table J3.01- Geometric and Arithmetic Averages Percentages Dispersion Reduction for Frechet Random Walk Model	
Model	**FRW***
Relative Dispersion Reduction - Sequential Adding of Postions (% Arithmetic Averages)	
Aggregate Port Std Dev**	4.015440306
Port Std Dev/Sum Positions***	4.083617594
75th-25th Range of Return****	3.814778081
Absolute Dispersion Reduction - Relative to First Position (% Geometric Averages)	
Aggregate Port Std Dev**	3.576544868
Port Std Dev/Sum Positions***	3.692630825
75th-25th Range of Return****	3.244646941

* FRW represents the Frechet Random Walk Model
** Aggregate Port Std Dev represents aggregate portfolio standard deviation
*** Port Std Dev/Sum Positions represents portfolio standard deviation/sum individual positions
**** 75th-25th Range of Return represents the 75th percentile minus the 25th percentile range of return

Table J3.02- Geometric and Arithmetic Averages Percentages Dispersion Reduction for Geometric Brownian Motion Model	
Model	**GBM***
Relative Dispersion Reduction - Sequential Adding of Postions (% Arithmetic Averages)	
Aggregate Port Std Dev**	7.269786879
Port Std Dev/Sum Positions***	7.260270975
75th-25th Range of Return****	7.501205307
Absolute Dispersion Reduction - Relative to First Position (% Geometric Averages)	
Aggregate Port Std Dev**	6.930275823
Port Std Dev/Sum Positions***	6.916311342
75th-25th Range of Return****	7.09583745

* GBM represents the Geometric Brownian Motion Model

Appendix K - Geometric Averages for Position, Diversified, Undiverisfied VAR/COV VaR@95% Confidence Level Estimates for Portfolios

Table K1- Position, Diversified, & Undiversified VAR/COV VaR@95% Confidence Level Estimates for Domestic Portfolios (Geometric Averages)																								
Country*	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
UVaR/ADPVaR**	2.4257	2.6886	3.1273	1.0235	2.8961	2.6359	2.7761	2.8918	4.034	3.84761	2.401	1.9632	3.0532	3.5105	2.6138	2.3719	1.7884	2.7169	2.10665	2.4815	1.4952	2.1173	1.024	2.6352	2.51557
UVaR/DPVaR/SP***	2.6155	3.0034	3.3566	1.0264	2.9882	2.6486	3.0505	3.1695	4.5738	3.55955	2.6133	2.257	3.4043	3.6061	2.7636	2.5344	1.9802	2.8127	2.27741	2.5521	1.6897	2.2722	1.1175	2.7813	2.63146

* Refer to Appendix Y for details on country code

** UVaR/ADVaR represents undiversified VaR/aggregate diversified portfolio VaR

*** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Table K2- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates For Foreign Portfolios (Geometric Averages)										
Country*	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
UVaR/ADPVaR**	3.7959	3.8177	4.5919	4.3444	3.9546	4.0219	4.2567	4.5124	4.2323	5.07586
UVaR/DPVaR/SP***	3.998	4.2189	4.3383	4.3967	4.2184	4.8154	4.505	4.8267	4.7642	5.29584

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix K3 - Geometric Averages for Position, Diversified, Undiversified VAR/COV VaR@95% Confidence Level Estimates for Portfolios

Table K3.01- Position, Diversified, & Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Frechet Random Walk Model (Geometric Averages)	
Model	**FRW***
UVaR/ADPVaR**	6.357108805
UVaR/DPVaR/SP***	6.466275345

* FRW represents the Frechet Random Walk Model
** UVaR/ADVaR represents undiversified VaR/aggregate diversified portfolio VaR
*** UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Table K3.02- Position, Diversified, and Undiversfied VAR/COV VaR@95% Confidence Level Estimates for Geometric Brownian Motion Model (Geometric Averages)	
Model	**GBM***
UVaR/ADPVaR**	6.650107068
UVaR/DPVaR/SP***	6.845701097

* GBM represents the Geometric Brownian Motion Model

Appendix L - Arithmetic Averages for Incremental Historical VaR Estimated from Delta VaR for Portfolios

Table L1- Incremental Historical VaR Estimated from Delta VaR for Domestic Portfolios (Arithmetic Averages)																								
Country*	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
IHVaR @95**	-22.668	-34.855	47.435	261.47	35.366	23.843	-65.096	474.32	101.01	-196	65.035	254.74	20.4	-21.405	-32.396	12.858	277.19	230.95	26.538	42.25	-66.835	-100.36	-23.849	111.92	26.677
IHVaR @98	63.726	254.36	41.913	12.285	126.57	204.4	146.53	97.369	344.04	10.77	25.963	-201.09	85.347	279.98	267.67	-311.76	75.187	94.736	112.78	136.57	21.484	47.407	-3.9017	-65.808	171.03
IHVaR @99	261.12	417.46	80.916	116.59	66.807	-81.963	-85.791	-326.95	525.84	216.22	-54.706	84.681	-37.701	78.12	-43.354	-21.275	-146.81	-100.62	212.42	365.77	120.99	208.45	65.572	163.6	-50.745
IES @95***	50.808	255.2	75.723	64.577	66.01	57.668	49.777	193.96	262.91	83.924	49.283	71.543	113.99	79.584	85.575	43.968	77.298	40.869	57.467	78.526	36.417	95.743	22.556	46.478	98.124
IES @98	84.49	316.29	159.41	117.24	38.239	80.387	61.705	236.45	459.85	115.51	20.032	56.823	271.55	57.776	42.225	103.51	86.413	38.855	120.12	31.514	52.904	97.874	68.039	75.722	62.481
IES @99	30.463	482.54	220.45	159.22	89.548	146.78	118.51	246.99	575.24	128.26	99.904	37.499	351.83	58.294	94.092	146.3	209.14	91.776	86.273	123.98	6.2697	103.17	99.119	81.314	97.991

* Refer to Appendix Y for details on country code

** IHVaR @95, IHVaR @98, IHVaR @99 represents the incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

*** IES @95, IES @98, IES @99 represents the incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level, and incremental expected shortfall at 99% confidence level respectively

Table L2- Incremental Historical VaR Estimated from Delta VaR for Foreign Portfolios (Arithmetic Averages)										
Country*	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
IHVaR @95**	63.834	361.7	7.1218	74.387	65.199	126.84	206.4	25.095	135.73	46.04
IHVaR @98	9.939	-281.82	268.1	262.95	255.7	158.42	196.74	6.4842	175.65	27.921
IHVaR @99	79.456	110.6	332.32	-59.577	96.819	-21.337	78.571	-15.755	146.91	38.568
IES @95***	102.15	91.618	146.09	110.97	129.51	201.98	127.8	147.9	237.48	190.45
IES @98	90.618	166.56	238.26	95.412	138.62	89.126	127.03	88.187	335.48	158.21
IES @99	18.51	147.71	240.11	36.472	99.157	267.89	194.6	138.53	254.23	178.98

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix L - Arithmetic Averages for Incremental Historical VaR Estimated from Delta VaR for Portfolios

Table L3.01- Incremental Historical VaR Estimated from Delta VAR for Frechet Random Walk Model (Arithmetic Averages)	
Model	**FRW***
IHVaR @95**	49.6665666
IHVaR @98	301.0865666
IHVaR @99	182.1606838
IES @95***	102.5200841
IES @98	139.7978599
IES @99	155.9745116

* FRW represents the Frechet Random Walk Model

** IHVaR @95, IHVaR @98, IHVaR @99 represents the incremental historical VaR at 95% confidence level, incremental historical VaR at 98% confidence level and incremental historical VaR at 99% confidence level respectively

*** IES @95, IES @98, IES @99 represents the incremental expected shortfall at 95% confidence level, incremental expected shortfall at 98% confidence level, and incremental expected shortfall at 99% confidence level respectively

Table L3.02- Incremental Historical VaR Estimated from Delta VAR (Arithmetic Averages)	
Model	**GBM***
IHVaR @95	-1.816021003
IHVaR @98	-10.68372748
IHVaR @99	-48.12841738
IES @95	38.95480878
IES @98	21.80370506
IES @99	38.61167851

* GBM represents the Geometric Brownian Motion Model

Appendix M - Arithmetic and Geometric Averages % for Risk Reduction as a Function of the Number of Positions in Portfolios

Table M1- Risk Reduction as a Function of the Number of Positions for Domestic Portfolios																								
Country*	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
Average Relative Risk Reduction - Sequential Adding of Positions (% Arithmetic Averages)																									
Maximum Loss	2.9828	2.3712	3.2135	2.2865	3.4025	1.8301	2.166	1.3339	3.7376	2.6332	2.942	2.0586	4.1186	2.6067	1.9552	2.6627	1.5476	3.2095	4.8465	1.1524	0.6786	3.2952	0.751	1.9253	3.1521
HVaR@99%**	2.7532	2.2671	3.1272	2.2364	4.4952	1.5119	3.0502	0.3351	3.0814	3.021	1.9774	1.781	3.0394	3.0127	2.0627	3.4566	2.058	3.322	3.0072	1.427	2.0382	1.7498	1.0439	2.0663	2.3825
HVaR@98%	2.0566	1.8528	3.0378	2.1003	4.4882	1.5314	3.0565	0.1521	2.8744	2.7455	2.1595	1.8283	3.3494	3.0448	2.6748	2.9775	1.8925	3.358	2.6357	0.9306	2.1715	1.5845	0.9012	2.1097	2.4489
HVaR@95%	1.8804	1.9347	2.8765	1.6124	4.6197	1.0504	2.8291	0.0567	2.8071	3.3726	2.0232	1.7657	3.3922	3.3101	2.8079	2.8456	1.4207	3.8584	2.129	0.5765	2.2045	1.5862	0.9061	2.16	2.1224
ES(99%)***	2.959	2.212	3.2745	2.1432	3.4834	1.5361	2.4575	0.7588	3.2772	2.6013	2.5906	1.9318	3.6566	2.4276	1.7339	2.6937	1.7612	3.2798	4.3661	1.2095	1.0275	2.5338	0.8776	2.0411	3.1201
ES(98%)	2.7296	2.0878	3.0569	2.055	3.7839	1.3988	2.6325	0.476	2.9625	2.5342	2.2134	1.7746	3.3445	2.6144	1.8803	2.8998	1.8474	3.261	3.7192	1.1032	1.4415	2.1283	0.8715	1.9913	2.6879
ES(95%)	2.2179	1.8335	2.8341	1.7921	4.1397	1.2337	2.7057	0.2612	2.7533	2.7185	2.1017	1.8336	3.2126	2.8395	2.2809	2.7632	1.6401	3.3896	2.9056	0.8629	1.8602	1.7547	0.8128	2.0018	2.3602
Average Absolute Risk Reduction - Relative to First Position (% Geometric Averages)																									
Maximum Loss	2.4775	1.761	2.6438	2.0046	2.9867	1.3406	1.5872	1.0626	2.6501	2.2074	2.6309	1.9441	3.1737	2.5764	1.8176	1.7379	1.3226	3.0444	5.4551	0.7005	0.5469	2.8059	0.8077	1.6226	2.6258
HVaR@99%**	2.436	1.8284	2.8354	1.854	3.8041	1.2935	2.335	-0.049	2.3094	2.6405	1.8482	1.6096	2.4873	2.6273	1.9105	2.7376	1.6871	3.0499	2.7777	1.1994	1.7863	1.5779	0.9875	1.8157	2.1571
HVaR@98%	1.8708	1.5709	2.8854	1.7675	3.9708	1.351	2.6056	-0.208	2.3419	2.3972	2.0069	1.5576	2.8564	2.7906	2.4783	2.439	1.6564	3.14	2.3824	0.8248	1.9357	1.4938	0.8488	1.8836	2.138
HVaR@95%	1.7464	1.565	2.6729	1.4406	4.1058	0.7877	2.5931	-0.304	2.6154	3.0511	1.8512	1.6332	3.1122	2.9844	2.6879	2.5727	1.3263	3.603	1.9025	0.4424	1.8388	1.4372	0.8488	1.9599	1.8151
ES(99%)***	2.559	1.7217	2.9587	1.7346	3.0259	1.2468	1.9688	0.6111	2.382	2.2795	2.372	1.8753	3.0195	2.3418	1.7238	2.0123	1.5452	3.1269	4.5106	0.8977	0.8916	2.2746	0.9128	1.8061	2.6704
ES(98%)	2.4219	1.7019	2.8829	1.7796	3.2896	1.2114	2.1325	0.318	2.3351	2.3095	2.0974	1.7132	2.9228	2.4333	1.873	2.3023	1.6118	3.0957	3.7282	0.8928	1.2879	1.988	0.8813	1.801	2.4278
ES(95%)	2.0546	1.6133	2.7443	1.6347	3.6698	1.0824	2.401	0.0151	2.3747	2.5537	2.0091	1.7574	2.927	2.6311	2.2564	2.4127	1.4748	3.2353	2.8188	0.7872	1.6682	1.6798	0.8266	1.8754	2.1104

* Refer to Appendix Y for details on country code

** HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level, and historical VaR at 95% confidence level respectively

*** ES(99%), ES(98%), ES(95%) represents the expected shortfall at 99% confidence level, expected shortfall at 98% confidence level, and expected shortfall at 95% confidence level respectively

Table M2- Risk Reduction as a Function of the Number of Positions for Foreign Portfolios										
Country*	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
Average Relative Risk Reduction - Sequential Adding of Postions (% Arithmetic Averages)										
Maximum Loss	3.2853	1.9899	6.6687	1.5472	1.5597	2.3531	5.9555	2.6276	4.3048	4.04
HVAR@99%**	2.3981	3.1027	5.8369	2.7385	1.6888	2.3266	3.4952	2.2628	3.0649	3.7138
HVAR@98%	2.0038	2.7493	5.5208	2.2957	1.8583	2.6609	3.0769	1.9706	3.1242	3.7496
HVAR@95%	2.5624	3.0569	5.5296	2.0552	2.1723	3.0888	2.783	2.3411	3.0187	3.7494
ES(99%)***	2.9539	2.382	6.0276	1.7529	1.4716	2.2655	5.0231	2.4712	3.597	3.6205
ES(98%)	2.6407	2.5625	5.6641	2.0779	1.5086	2.2465	4.2515	2.1864	3.4131	3.4819
ES(95%)	2.1744	2.5984	5.3115	2.0415	1.7014	2.533	3.4215	2.0644	3.1032	3.5013
Average Absolute Risk Reduction - Relative to First Position (% Geometric Averages)										
Maximum Loss	2.7914	0.887	4.7905	1.0637	0.707	1.1326	4.7622	1.6324	2.0982	3.0094
HVAR@99%**	1.8331	2.1258	4.6978	1.8505	1.0219	1.3717	2.5346	1.5872	1.3983	3.0287
HVAR@98%	1.5052	1.9538	4.6493	1.7605	1.298	1.6997	2.2451	1.4234	1.59	3.0472
HVAR@95%	1.6463	2.5385	4.5629	1.685	1.5852	1.9515	2.1564	1.6851	1.9563	3.2682
ES(99%)***	2.5335	1.2885	4.8138	1.2777	0.748	1.2388	3.9437	1.6716	1.4619	2.9021
ES(98%)	2.2021	1.6214	4.6851	1.479	0.9118	1.3221	3.3485	1.58	1.4701	2.9256
ES(95%)	1.8786	1.9603	4.6069	1.6508	1.1671	1.613	2.7535	1.5711	1.6313	3.0359

* MC1,.....,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix M - Arithmetic and Geometric Averages % for Risk Reduction as a Function of the Number of Positions in Portfolios

Table M3.01- Risk Reduction as a Function of the Number of Positions for Frechet Random Walk Model	
Model	**FRW***
Relative Risk Reduction - Sequential Adding of Positions (% Arithmatic Averages)	
Maximum Loss	9.1296
HVaR@99%**	4.448
HVaR@98%	3.3106
HVaR@95%	1.4194
ES(99%)***	7.0084
ES(98%)	5.5382
ES(95%)	3.6852
Absolute Risk Reduction - Relative to First Position (% Geometric Averages)	
Maximum Loss	6.0532
HVaR@99%**	3.6422
HVaR@98%	2.7985
HVaR@95%	0.9433
ES(99%)***	5.1441
ES(98%)	4.4835
ES(95%)	3.2081

* FRW represents the Frechet Random Walk Model
** HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level, and historical VaR at 95% confidence level respectively
*** ES(99%), ES(98%), ES(95%) represents the expected shortfall at 99% confidence level, expected shortfall at 98% confidence level, and expected shortfall at 95% confidence level respectively

Table M3.02- Risk Reduction as a Function of the Number for Geometric Brownian Motion Model	
Model	**GBM***
Relative Risk Reduction - Sequential Adding of Postions (% Arithmetic Averages)	
Maximum Loss	7.2898
HVAR@99%**	7.1228
HVAR@98%	7.4634
HVAR@95%	6.4721
ES(99%)***	6.8427
ES(98%)	6.9638
ES(95%)	6.9109
Absolute Risk Reduction - Relative to First Position (% Geometric Averages)	
Maximum Loss	6.3517
HVAR@99%**	6.4204
HVAR@98%	6.8083
HVAR@95%	6.1684
ES(99%)***	6.2827
ES(98%)	6.4344
ES(95%)	6.4819

* GBM represents the Geometric Brownian Motion Model

Appendix N - Arithmetic Averages % for Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Portfolios

Table N1- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Domestic Portfolios (% Arithmetic Averages)																									
Country*	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
Maximum Loss	432.578	5128.49	5762.72	102.023	454.67	-151.699	1824.9	-375.124	27260.5	1211.5	317.833	231.657	215.294	-1710.43	760.413	161.891	971.424	-477.314	5192.82	346.75	-266.183	848.968	13.0843	768.588	1169.02
HVaR@99%**	-348.586	3724.4	770.14	-488.756	276.752	81.9884	1121.86	3312.92	8595.82	-1505.85	731.409	605.485	621.7	-1600.57	174.214	-517.712	-164.437	-300.738	1876.32	246.488	198.77	-75.1225	530.869	24.3681	57.0007
HVaR@98%	322.873	4121.66	376.445	37.9226	157.945	7.49852	1054.45	3566.22	7614.31	-791.797	593.152	143.323	717.663	-1073.63	-103.393	8.87878	664.758	7.42321	762.26	-32.0394	-382.026	1311.97	965.314	195.548	102.305
HVaR@95%	233.723	1244.45	300.765	384.533	160.215	63.1385	910.952	2461.63	2573.12	68.7713	429.28	151.913	117.327	-145.373	224.446	355.182	83.828	180.945	1155.76	127.709	100.779	1659.07	467.029	511.943	183.178
ES(99%)***	481.574	4123.3	2947.85	-273.128	652.248	123.613	1123.7	1065.04	20884.9	1428.82	385.077	73.1578	97.7752	-920.74	573.142	10.2363	1115.2	-526.517	3692.27	378.399	-183.979	653.96	-0.98341	493.136	86.629
ES(98%)	195.883	3916.12	1832.26	-254.645	469.111	135.379	1060.08	2024.29	14479	295.428	487.93	254.399	350.54	-1251.39	318.763	-177.741	630.679	-364.987	2566.69	312.747	-31.015	705.656	61.1968	366.736	21.4352
ES(95%)	178.719	2753.64	917.301	205.075	282.299	95.8179	964.129	2667.06	7706.92	177.808	567.959	144.626	322.536	-701.267	145.969	106.882	609.701	-17.565	1298.25	224.236	12.5161	910.301	384.764	308.421	58.9856

* Refer to Appendix Y for details on country code

** HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level, and historical VaR at 95% confidence level respectively

*** ES(99%), ES(98%), ES(95%) represents the expected shortfall at 99% confidence level, expected shortfall at 98% confidence level, and expected shortfall at 95% confidence level respectively

Table N2- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Foreign Portfolios (% Arithmetic Averages)										
Country*	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
Maximum Loss	-827.771	10075.8	10013.8	-624.875	3137.41	26233.3	-1364.19	-840.396	9844.94	-2266.27
HVaR@99%**	-113.273	1976.99	1324.49	-95.8134	1674.04	8630.83	439.24	-213.24	3635.58	613.107
HVaR@98%	61.7688	2620.98	1492.69	-693.48	1484.6	6189.75	641.263	78.4858	2464.51	32.49
HVaR@95%	47.1119	1751.21	696.381	359.375	1122.77	3210.17	212.405	212.642	2435.65	66.834
ES(99%)***	-992.853	8377.85	6676.78	-162.994	3700.47	19228.1	-434.367	-605.617	7821.24	-1406.86
ES(98%)	-383.583	5527.28	3953.87	-294.774	2730.07	13561.4	29.1657	-404.984	5711.57	-423.413
ES(95%)	-195.511	-3381.55	1818.55	-136.012	1855	7397.26	361.797	39.405	3461.6	-141.001

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix N - Arithmetic Averages % for Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Portfolios

Table N3.01- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Frechet Random Walk Model (% Arithmetic Averages)	
Model	**FRW***
Maximum Loss	2.58447
HVaR@99%**	363.911
HVaR@98%	92.9077
HVaR@95%	37.2998
ES(99%)***	19.2755
ES(98%)	150.744
ES(95%)	99.3122

* FRW represents the Frechet Random Walk Model

** HVaR@99%, HVaR@98%, HVaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level, and historical VaR at 95% confidence level respectively

*** ES(99%), ES(98%), ES(95%) represents the expected shortfall at 99% confidence level, expected shortfall at 98% confidence level, and expected shortfall at 95% confidence level respectively

Table N3.02- Difference between Estimates based on Aggregate Portfolio and Sum Individual Positions for Geometric Brownian Motion Model (% Arithmetic Averages)	
Model	**GBM***
Maximum Loss	-827.771
HVaR@99%**	-113.273
HVaR@98%	61.7688
HVaR@95%	47.1119
ES(99%)***	-992.853
ES(98%)	-383.583
ES(95%)	-195.511

* GBM represents the Geometric Brownian Motion Model

Appendix O - Arithmetic Averages for Estimates of Component VaR@95% Confidence Level for Portfolios

Table O1- Estimates of Component VaR@95% Confidence Level for Domestic Portfolios (Arithmetic Averages)

Country*	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
AU	-26741.6	-12230.3	-8947.06	-6004.28	-4539.89	-3713	-3033.23	-2512.54	-2158.4	-1912.66	-1708.34	-1538.28	-1410.5	-1275.73	-1208.15	-1105.08	-1020.65	-963.74	-921.322	-871.844	-826.659	-783.546	-744.287	-712.849	-685.623
BR	-52942.1	-26277.8	-13783.2	-10256.5	-8075.17	-6459.05	-5166.98	-4574.52	-4052.42	-3660.67	-3340.63	-2970.86	-2687.12	-2566.36	-2383.41	-2179.89	-2021.04	-1938.44	-1776.54	-1666.34	-1573.26	-1470.88	-1388.89	-1321.53	-1261.12
CL	-28910.5	-13817.2	-8959.5	-6560.45	-4968.01	-3739.67	-3047.24	-2559.64	-2107.5	-1819.78	-1624.4	-1439.53	-1282.26	-1167.59	-1047.08	-943.328	-863.757	-813.461	-751.632	-709.346	-659.782	-619.434	-598.32	-587.859	-566.091
FR	-34141.8	-16517.4	-9496.89	-6551.86	-5212.37	-4535.72	-3864.45	-2988.65	-2724.06	-2336.24	-2131.68	-1929.97	-1778.29	-1644.11	-1597.44	-1489.99	-1390.91	-1320.53	-1252.38	-1179.3	-1136.76	-1085.61	-1018.04	-977.996	-943.355
DE	-45258.9	-18829.5	-8677.95	-6031.87	-5070.34	-4097.16	-3352.22	-2968.46	-2665.41	-2355.38	-2164.28	-1837.97	-1644.56	-1503.8	-1378.59	-1313.48	-1215.12	-1094.87	-999.436	-960.8	-905.131	-834.71	-799.882	-778.754	-728.179
HK	-26730.4	-14373.6	-8653.86	-6828.45	-5727.11	-4187.43	-3203.6	-2645.14	-2457.77	-2267.71	-2117.5	-1966.66	-1821.16	-1682.38	-1553.87	-1454.56	-1351.28	-1284.24	-1173.06	-1140.45	-1094.31	-1002.97	-945.254	-870.72	-804.206
IN	-42237.7	-15777.4	-11868.6	-8277.69	-6108.49	-4905.75	-3846.78	-3338.15	-2823.59	-2567.21	-2358.89	-2196.27	-1968.38	-1758.26	-1613.24	-1494.71	-1409	-1318.71	-1249.63	-1188.23	-1122.57	-1045.82	-981.863	-930.39	-904.723
ID	-46574.7	-20619.2	-14294.2	-11780.7	-9475.54	-8802.56	-7322.27	-6091.66	-5531.96	-4922.22	-4433.75	-4010.96	-3510.17	-3154.9	-2949.77	-2733.14	-2518.19	-2382.46	-2276.76	-2122.05	-1959.59	-1897.57	-1801.4	-1710.47	-1662.89
IE	-34439.9	-15650.9	-9017.75	-6256.61	-4342.8	-3947.22	-3211.79	-2569.3	-2108.31	-1812.73	-1625.27	-1462.59	-1283.53	-1182.31	-1070.76	-983.307	-916.032	-839.571	-788.934	-757.638	-800.856	-757	-719.058	-683.273	-644.037
IL	-40518.1	-17652.5	-15465	-9680.4	-6682.39	-5105.55	-4083.12	-3381.72	-2977.7	-2634.69	-2353.33	-2217.69	-1998.88	-1757.14	-1612.06	-1516.51	-1410.48	-1286.66	-1183.16	-1101.44	-1031.28	-974.798	-909.086	-851.298	-809.859
IT	-37436.4	-15627.1	-10462.6	-7998.02	-6007.87	-4896.15	-4103.54	-3485.57	-3105.98	-2631.27	-2379.81	-2125.67	-1908.39	-1695.65	-1598.3	-1460.78	-1353.25	-1284.9	-1217.17	-1167.26	-1091.17	-1042.87	-979.818	-917.66	-870.341
JP	-38874.8	-17452.2	-10757.7	-8039.26	-6366.97	-4930.78	-4236.65	-3630.34	-3313.43	-2773.56	-2512.53	-2323.72	-2120.47	-1957.33	-1833.7	-1654.24	-1578.12	-1435.11	-1383.03	-1325.99	-1261.01	-1199.63	-1149.28	-1097.42	-1070.32
MX	-39257.5	-17390.2	-9122.71	-7165.14	-5902.17	-4699.01	-3948.93	-3417.24	-2770.69	-2388.13	-2048.83	-1862.13	-1633	-1486.97	-1323.66	-1221.49	-1136.01	-1077.97	-985.633	-913.745	-844.178	-797.976	-747.597	-723.652	-718.087
NZ	-31955	-15694.8	-9197.05	-7314.32	-5213.07	-3969.84	-3194.66	-2726.67	-2336.46	-2040	-1804.13	-1619.14	-1485.11	-1337.25	-1224.72	-1143.14	-1071.61	-1013.95	-959.299	-901.026	-851.354	-800.723	-761.011	-721.122	-681.647
SG	-38609.3	-17629.3	-11090.6	-7627.11	-5754.63	-4479.48	-3691.65	-3349.46	-3031.03	-2650.67	-2417.62	-2039.57	-1848.55	-1647.85	-1473.32	-1342.36	-1252.06	-1184.11	-1119.79	-1067.3	-1009.87	-986.691	-933.517	-902.318	-855.173
SA	-43236.9	-16792	-10108.7	-7046.89	-5614.22	-4671.31	-3987.59	-3506.2	-3098.68	-2695.41	-2441.43	-2220.81	-2041.47	-1906.13	-1765.87	-1659.39	-1533.68	-1449.46	-1359.36	-1299.58	-1236.77	-1160.29	-1093.97	-1039.74	-995.944
SK	-60814.6	-26746.3	-15608.1	-10744.6	-8655.55	-7065.55	-6292.84	-5391.87	-4623.97	-4192.5	-3783.3	-3428.35	-3157.95	-2944.82	-2661.37	-2547.79	-2465.03	-2325.81	-2209.8	-2057.39	-1958.34	-1869.66	-1803.49	-1716.28	-1626.36
ES	-41409.1	-18522	-11991.1	-7855.57	-5754.72	-4304.35	-3501.41	-2970.81	-2516.24	-2153.09	-1847.25	-1680.82	-1533.05	-1411.71	-1296.73	-1174.43	-1100.03	-1046.08	-989.726	-931.673	-869.34	-834.143	-801.107	-745.729	-698.943
SE	-47541.2	-25311	-13206.8	-8774.16	-6459.29	-5252.34	-4243.07	-3643.51	-3235.02	-2886.06	-2786.7	-2522.12	-2278.78	-2108.78	-1979.03	-1823.08	-1681.9	-1573.42	-1457.01	-1346.71	-1292.78	-1218.05	-1181.45	-1105.02	-1037.1
CH	-27096.1	-11901.6	-8215.82	-5876.71	-5162.78	-4390.12	-4007.1	-3423.93	-3082.09	-2708.47	-2420.14	-2294.85	-2042.41	-1895.46	-1752.52	-1647.09	-1477.77	-1407.19	-1289.69	-1237.6	-1151.96	-1069.16	-1031.74	-982.856	-914.191
TW	-49248.3	-18671.4	-11846.6	-8579.95	-6262.73	-5190.06	-4441.04	-3892.55	-3516.94	-3223.62	-2859.58	-2612.3	-2409.81	-2244.99	-2112.3	-1980.8	-1857.09	-1739.3	-1667.58	-1592.3	-1519.51	-1459.27	-1386.69	-1329.27	-1281.25
TH	-49480.2	-19813.2	-13221.6	-9907.28	-8012.57	-6344.52	-5578.31	-4412.65	-3952.65	-3396.81	-3238.74	-3029.66	-2689.99	-2561.89	-2351.28	-2275.21	-2071.36	-1982.54	-1889.03	-1835.14	-1687.69	-1575.04	-1463.04	-1363.43	-1266.99
TR	-74622.8	-35768.8	-22494.2	-16422.3	-13444.2	-11005.4	-9454.34	-8441.28	-7486.59	-6699.57	-5984.28	-5475.11	-4924.7	-4528.91	-4232.98	-3942.39	-3699.61	-3466.69	-3296.77	-3117.51	-2952.88	-2814.73	-2654.48	-2540.8	-2389.96
UK	-33628.9	-16880.7	-9486.89	-6772.94	-5356.51	-4156.32	-3604.88	-3067.18	-2576.53	-2259.32	-2049.48	-1921.58	-1744.58	-1641.47	-1571.35	-1439.66	-1330.67	-1270.34	-1182.83	-1114.39	-1042.82	-991.774	-954.953	-926.08	-872.966
US	-37052.6	-17497.8	-9183.19	-6410.07	-5291.49	-4759.86	-3966.36	-3411.9	-2973.41	-2790.55	-2425.79	-2124.17	-1909.36	-1854.68	-1741.88	-1572.5	-1457.77	-1325.96	-1255.54	-1234.35	-1179.64	-1108.68	-1041.9	-976.456	-925.59

* Refer to Appendix Y for details on country code

** Port 1,...,Port 25 represents the twenty-five portfolios

Table 02 - Estimates of Component VaR @95% Confidence Level for Foreign Portfolios (Arithmetic Averages)

Country*	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
MC1	-26741.6	-15080.9	-8047.28	-5365.87	-4369.93	-3307.67	-2652.59	-2194.8	-1884.03	-1676.27	-1530.79	-1363.43	-1269.08	-1136.11	-1056.67	-993.646	-970.911	-939.418	-900.14	-838.865	-794.197	-755.877	-731.379	-691.573	-655.391
MC2	-33144.1	-19128.3	-10021.7	-6443.79	-4825.82	-3720.52	-2841.61	-2387.58	-2060.57	-1769.77	-1606.42	-1430.05	-1317.89	-1206.43	-1117.54	-1008.39	-972.979	-934.625	-939.824	-867.577	-807.776	-764.806	-745.804	-725.293	-688.222
MC3	-47769.3	-17294.7	-9032.79	-5910.57	-3902.53	-2865.79	-2571.44	-2195.16	-1870.68	-1933.48	-1722.58	-1518.41	-1325.29	-1201.95	-1106.19	-1015.31	-952.587	-902.346	-849.834	-812.502	-760.684	-735.573	-705.976	-664.956	-618.657
MC4	-24899.8	-15869.3	-8568.97	-5726.05	-4168.98	-3219.54	-2579.48	-2448.97	-2076.13	-1756.76	-1599.55	-1443.11	-1328.91	-1218.77	-1121.77	-1053.33	-980.308	-903.22	-855.707	-798.066	-740.615	-713.788	-696.062	-658.811	-619.78
MC5	-25627.2	-15285.4	-8201.38	-5789.54	-4657.27	-3673.76	-2896.3	-2776.59	-2246.26	-1880.25	-1681.39	-1497.89	-1366.14	-1207.3	-1098.74	-1031.87	-990.123	-919.03	-868.363	-847.626	-779.241	-749.58	-737.768	-713.279	-682.888
MC6	-31858.4	-14395	-7261.46	-5454.79	-4140.8	-2986.42	-2384.02	-3153.36	-2658.72	-2260.03	-1968.77	-1688.61	-1491.43	-1304.78	-1167.95	-1065	-990.851	-896.654	-847.195	-804.853	-739.046	-693.319	-670.177	-626.632	-606.363
MC7	-29894	-11781.4	-6574.22	-4917.29	-3668.65	-2629.83	-2115.12	-2158.41	-1833.79	-1584.44	-1425.28	-1294.19	-1160.54	-1034.82	-948.977	-896.45	-884.138	-815.636	-766.214	-758.661	-712.857	-688.01	-666.478	-644.568	-607.566
MC8	-23962.9	-14233.7	-7558.67	-4560.28	-3613.47	-2655.21	-2188.47	-1894.43	-1596.56	-1402.34	-1278.17	-1145.48	-1051.56	-954.738	-914.642	-875.25	-847.326	-781.904	-741.336	-710.142	-662.537	-612.161	-606.818	-587.026	-558.308
MC9	-29429.2	-18101.1	-8458.91	-6235.47	-4679.7	-3595.63	-2806.56	-3050.18	-2469.61	-2118.75	-1871.32	-1648.28	-1414.86	-1240.93	-1148.92	-1068.6	-1000.07	-905.627	-858.947	-834.835	-776.305	-739.018	-719.766	-665.833	-627.753
MC10	-31375.2	-16249.4	-8427	-5126.53	-3761.77	-3101.74	-2491.82	-2352.58	-1937.62	-1668.87	-1439.54	-1239.58	-1104.12	-988.986	-904.862	-824.256	-805.207	-740.63	-702.802	-664.919	-634.111	-597.043	-580.729	-548.608	-526.754

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix O - Arithmetic Averages for Estimates of Component VaR@95% Confidence Level for Portfolios

Table O3.01- Estimates of Component VaR@95% Confidence Level for Frechet Random Walk Model (Arithmetic Averages)																								
Model	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
FRW*	-8697.08	-4260.53	-2047.18	-1291.36	-876.896	-687.684	-539.538	-484.188	-405.349	-340.09	-340.853	-319.153	-311.585	-293.059	-278.471	-267.916	-248.971	-226.279	-208.492	-194.871	-183.603	-174.57	-167.962	-156.823	-147.173

* FRW represents the Frechet Random Walk Model
** Port 1,...,Port 25 represents portfolios

Table 03.02 - Estimates of Component VaR @95% Confidence Level for Geometric Brownian Motion Model (Arithmetic Averages)																								
Model	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
GBM*	-11611.7	-4103.94	-2179.43	-1375.91	-1006.68	-800.937	-604.747	-493.285	-422.356	-359.349	-319.896	-274.349	-247.371	-221.676	-199.368	-181.297	-165.209	-151.14	-138.853	-130.685	-122.535	-114.546	-105.29	-101.001	-92.8407

* GBM represents the Geometric Brownian Motion Model

Appendix P - Arithmetic Averages for Estimates Position VaR@95/Component VaR@95 Ratios for Portfolios

Table P1- Estimates Position VaR@95/Component VaR@95 Ratio for Domestic Portfolios (Arithmetic Averages)

Country*	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
AU	1	0.61673	0.46922	0.35582	0.28243	0.23974	0.21469	0.19367	0.17763	0.16224	0.14825	0.13654	0.12736	0.11831	0.11221	0.10496	0.09976	0.09519	0.09061	0.08723	0.08362	0.08006	0.07703	0.07441	0.07169
BR	1	0.60743	0.49155	0.37624	0.30014	0.25378	0.22382	0.19352	0.17799	0.15996	0.14582	0.13945	0.13053	0.12082	0.12662	0.1212	0.11537	0.10751	0.11218	0.10533	0.10232	0.10221	0.09927	0.0954	0.09242
CL	1	0.607	0.41842	0.31652	0.26779	0.25439	0.22932	0.20969	0.1974	0.18629	0.17028	0.15929	0.1508	0.14969	0.14201	0.13445	0.12844	0.12216	0.11757	0.11233	0.11078	0.10571	0.10099	0.09756	0.09347
FR	1	0.58007	0.4614	0.37649	0.31123	0.26174	0.22829	0.1521	0.15869	0.14404	0.13502	0.14446	0.13717	0.13099	0.06294	0.06808	0.06597	0.06635	0.06875	0.06397	0.06603	0.0638	0.06137	0.06372	0.0629
DE	1	0.5808	0.73025	0.56417	0.51299	0.41505	0.35799	0.34704	0.33958	0.30915	0.32886	0.43988	0.22029	0.19567	0.18147	0.1977	0.13753	-0.05727	-0.31211	-0.06519	-1.8951	0.17602	0.1679	0.21746	0.14365
HK	1	0.56899	0.3975	0.30173	0.24337	0.20386	0.25653	0.22152	0.20244	0.19751	0.17901	0.16723	0.1532	0.14415	0.1397	0.12812	0.12451	0.11717	0.11411	0.10653	0.1046	0.11341	0.11163	0.11496	0.11727
IN	1	0.61835	0.50643	0.38918	0.33107	0.28657	0.27515	0.24111	0.22108	0.19801	0.17799	0.16121	0.1515	0.14778	0.14	0.13226	0.12427	0.11793	0.11093	0.10507	0.1004	0.09726	0.09397	0.09025	0.08637
ID	1	0.61623	0.42892	0.33105	0.30833	0.31719	0.27035	0.23246	0.21488	0.18866	0.17282	0.1605	0.15498	0.14763	0.13632	0.13097	0.12233	0.11432	0.10686	0.10509	0.09882	0.09678	0.09239	0.08912	0.08629
IE	1	0.57597	0.4431	0.35743	0.31642	0.39845	0.34583	0.61512	0.60092	0.47841	0.3939	0.30945	0.24598	0.18722	0.11766	-2.83754	0.37428	0.29606	0.24068	0.22752	0.21607	0.20478	0.18725	0.17972	0.17785
IL	1	0.57961	0.49568	0.38853	0.32809	0.26962	0.25336	0.23511	0.21788	0.19603	0.17907	0.17215	0.15931	0.15816	0.14964	0.13992	0.13271	0.12812	0.13362	0.12994	0.1252	0.12287	0.12212	0.11791	0.11382
IT	1	0.61056	0.4238	0.33615	0.2803	0.23381	0.20146	0.18184	0.16282	0.1589	0.14637	0.13921	0.13256	0.13717	0.13073	0.12096	0.11427	0.1073	0.10233	0.09874	0.09406	0.08946	0.08727	0.08536	0.08202
JP	1	0.59966	0.45736	0.35206	0.28618	0.2512	0.21922	0.19192	0.17117	0.16777	0.15501	0.14169	0.13128	0.12065	0.11316	0.10768	0.10354	0.10002	0.09517	0.09031	0.08549	0.08089	0.07724	0.07439	0.07154
MX	1	0.59147	0.48473	0.36782	0.29496	0.25568	0.22048	0.19616	0.18277	0.17465	0.16844	0.15945	0.15102	0.14417	0.15266	0.14416	0.13298	0.12721	0.11773	0.11332	0.10557	0.10663	0.10176	0.09762	0.095
NZ	1	0.59962	0.4475	0.36808	0.31632	0.28145	0.24546	0.217	0.19362	0.17476	0.15987	0.14772	0.14163	0.13513	0.12783	0.12551	0.11939	0.11566	0.11309	0.10781	0.10493	0.10236	0.09832	0.0974	0.0935
SG	1	0.56062	0.39329	0.32524	0.27368	0.24753	0.22098	0.19517	0.17453	0.16177	0.15032	0.20378	0.17702	0.16309	0.15661	0.14962	0.1424	0.13357	0.12707	0.12288	0.11744	0.11435	0.11016	0.1113	0.10732
SA	1	0.66942	0.49391	0.3988	0.32493	0.27377	0.23466	0.20931	0.18728	0.17548	0.16015	0.14704	0.13591	0.12607	0.11794	0.11005	0.10444	0.09931	0.095	0.0914	0.08694	0.08429	0.08084	0.07788	0.07487
SK	1	0.5734	0.41354	0.32322	0.26704	0.22556	0.19298	0.17383	0.16233	0.14525	0.13209	0.12321	0.11679	0.10876	0.10931	0.1022	0.09631	0.0903	0.08543	0.08314	0.07887	0.07803	0.07414	0.07088	0.06833
ES	1	0.57099	0.38811	0.326	0.27497	0.24971	0.21965	0.19647	0.18772	0.17587	0.17101	0.15719	0.14544	0.13664	0.12803	0.12365	0.11754	0.11106	0.106	0.10077	0.09859	0.09406	0.09094	0.09019	0.08784
SE	1	0.63979	0.50468	0.38358	0.31017	0.25747	0.22289	0.20045	0.17632	0.15664	0.14212	0.13029	0.12099	0.11165	0.10354	0.09774	0.09416	0.08909	0.08762	0.0842	0.07998	0.07635	0.07345	0.07257	0.07343
CH	1	0.56667	0.41294	0.31653	0.26067	0.21843	0.18971	0.17425	0.16005	0.15254	0.14412	0.13464	0.12819	0.12332	0.11501	0.10692	0.11621	0.10897	0.10379	0.10025	0.09738	0.09403	0.09031	0.08652	0.08928
TW	1	0.59223	0.42329	0.32393	0.27402	0.2275	0.19484	0.17182	0.15351	0.13881	0.12829	0.11785	0.10956	0.10161	0.09471	0.08948	0.08448	0.07993	0.0756	0.07181	0.06834	0.06517	0.06259	0.06002	0.05787
TH	1	0.61756	0.44735	0.33545	0.27423	0.23494	0.20074	0.21345	0.18949	0.17459	0.15677	0.14242	0.13586	0.12481	0.11711	0.10928	0.10832	0.10128	0.09669	0.09169	0.09503	0.09337	0.09221	0.08966	0.09024
TR	1	0.53171	0.36982	0.28566	0.22953	0.19873	0.17123	0.15019	0.13389	0.12041	0.10972	0.10098	0.09701	0.09054	0.0843	0.07916	0.07417	0.07027	0.06649	0.0633	0.06026	0.0579	0.0561	0.05365	0.05254
UK	1	0.69647	0.52235	0.37644	0.30926	0.2714	0.24674	0.22307	0.21111	0.19069	0.17327	0.15792	0.14667	0.1366	0.1267	0.12029	0.11577	0.10872	0.10348	0.09912	0.09533	0.09159	0.08909	0.08483	0.08197
US	1	0.59504	0.49047	0.38202	0.31115	0.29193	0.24963	0.2221	0.19507	0.18456	0.16954	0.16155	0.15077	0.20111	0.21843	0.1601	0.12966	0.12602	0.11969	0.1315	0.13612	0.11482	0.10741	0.10633	0.09666

* Refer to Appendix Y for details on country code

** Port 1,...,Port 25 represents the twenty-five portfolios

Table P2- Estimates Position VaR@95/Component VaR@95 Ratio for Foreign Portfolios (Arithmetic Averages)

Country*	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
MC1	1	0.79156	0.60198	0.47843	0.39735	0.33944	0.31374	0.31336	0.28375	0.2626	0.24369	0.22932	0.21147	0.19934	0.18545	0.17548	0.16395	0.15627	0.15027	0.14475	0.1405	0.13459	0.13576	0.13364	0.13191
MC2	1	1.28586	0.87432	0.61341	0.47129	0.38362	0.37747	0.35373	0.3114	0.29263	0.2607	0.24462	0.22612	0.21035	0.19563	0.19483	0.18618	0.17449	0.17082	0.16847	0.16914	0.17032	0.1372	0.13984	0.14146
MC3	1	0.82533	0.62924	0.52026	0.55283	0.50569	0.66825	0.59322	0.46967	0.43637	0.42949	0.37686	0.39949	0.35248	0.31737	0.29849	0.28116	0.15054	0.17954	0.18488	0.18588	0.18205	0.1995	0.21508	0.23852
MC4	1	0.91752	0.6723	0.50694	0.4324	0.36272	0.33598	0.31227	0.27585	0.25786	0.23714	0.22101	0.2069	0.19937	0.18656	0.17508	0.16662	0.16015	0.15027	0.14248	0.14136	0.13632	0.13475	0.12946	0.12609
MC5	1	0.80899	0.61084	0.47549	0.39087	0.33435	0.33297	0.44564	0.40351	0.36951	0.31981	0.2882	0.2612	0.24735	0.22706	0.20841	0.19339	0.1803	0.1684	0.15834	0.15899	0.1521	0.14605	0.13888	0.13401
MC6	1	0.81765	0.66279	0.53862	0.44061	0.72593	0.67081	0.0723	5.11837	1.13822	0.80467	0.73411	0.5462	0.5214	0.51908	0.47422	0.4986	0.42344	0.21977	0.19654	0.22978	0.22618	0.2195	0.22979	0.18376
MC7	1	0.7924	0.60758	0.49021	0.43006	0.43389	0.43557	0.47617	0.42538	0.36657	0.33872	0.303	0.28324	0.26461	0.23996	0.222	0.21008	0.19904	0.18605	0.18077	0.17436	0.16964	0.14189	0.13811	0.13454
MC8	1	0.85055	0.62437	1.00015	-3.33686	0.2819	0.30781	0.18875	0.43964	0.40738	3.77766	0.32583	0.2127	0.19708	0.19016	0.19103	0.19659	0.18161	0.18835	0.19398	0.20088	0.19648	0.18118	0.18956	0.17505
MC9	1	0.89842	0.796	0.67834	0.52568	0.43446	0.39287	1.40065	-0.76158	1.17115	0.39706	0.33669	0.32975	0.32592	0.29001	0.26144	0.24913	0.27029	0.25294	0.29055	0.30052	0.50615	-0.12316	0.05047	0.70392
MC10	1	0.78005	0.60933	0.53125	0.43732	0.40883	0.41198	0.37894	0.35427	0.33071	0.29916	0.28984	0.28099	0.26107	0.24724	0.25284	0.24368	0.2287	0.22592	0.25079	-0.72444	0.62713	0.16348	0.16507	0.16873

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix P - Arithmetic Averages for Estimates Position VaR@95/Component VaR@95 Ratios for Portfolios

Table P3.01- Estimates Position VaR@95/Component VaR@95 Ratio for Frechet Random Walk Model (Arithmetic Averages)																								
Model	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
FRW*	1	0.80229	0.67469	0.54909	0.51011	0.45844	0.42527	0.42553	0.39606	0.38215	0.42866	0.393	0.35332	0.33163	0.34016	0.36292	0.32675	0.30799	0.29824	0.29278	0.29076	0.27405	0.25505	0.26413	0.27451

* FRW represents the Frechet Random Walk Model
** Port 1,...,Port 25 represents portfolios

Table P3.02- Estimates Position VaR@95/Component VaR@95 Ratio for Geometric Brownian Motion Model (Arithmetic Averages)																								
Model	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
GBM*	1	0.71824	0.59204	0.51984	0.45367	0.40168	0.39512	0.36325	0.33527	0.32217	0.30237	0.30317	0.28727	0.2753	0.26828	0.26572	0.25755	0.25173	0.24581	0.23623	0.22862	0.21996	0.21966	0.21301	0.22255

* GBM represents the Geometric Brownian Motion Model

Appendix Q - Geometric Averages % for Estimates Position VaR@95/Component VaR@95Ratio for Portfolios

Table Q1- Estimates Position VaR@95/Component VaR@95 Ratio for Domestic Portfolios (% Geometric Averages)

Country*	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24
AU	-10.9919	-9.11222	-7.31488	-8.1606	-7.31942	-6.48615	-6.32405	-6.38027	-6.25542	-5.7284	-5.63228	-5.36509	-4.48759	-5.33851	-4.21698	-4.91183	-4.48194	-3.78836	-4.22586	-4.14848	-3.7804	-4.33116	-3.95066	-4.41954
BR	-10.9068	-8.76525	-6.61162	-7.79441	-7.18309	-6.38236	-6.70569	-5.89089	-4.65877	-5.15306	-5.13744	-4.13902	-4.61903	-4.06541	-2.80057	-5.11912	-4.84323	-4.48666	-4.64617	-4.35389	-3.07405	-2.81874	-4.09889	-3.90608
CL	-10.7801	-8.92219	-8.15221	-7.3442	-7.28812	-6.11273	-6.12429	-5.73147	-6.80376	-4.72522	-5.17312	-5.02453	-4.75169	-2.67265	-5.36354	-3.82839	-4.49306	-4.20186	-4.43092	-4.52036	-3.07346	-3.88322	-4.32052	-2.36437
FR	-9.69144	-6.21319	-7.53101	-7.63567	-7.37996	-6.61167	-6.7901	2.57579	-5.79925	-4.68988	-4.51307	-4.9509	-5.08041	-4.47236	-5.10646	-4.41823	-3.49499	-4.65901	-4.88468	-3.36309	-3.80394	-3.27769	-1.64667	-3.90596
DE	-10.3711	-9.28304	-6.97042	-7.59736	-6.53234	-7.26193	-5.9101	-6.24808	-5.77807	-5.30889	-5.11132	-11.2479	-4.82937	-4.39466	-3.96572	-4.45274	-3.6266	-180.442	-5.19199	-4.54098	-4.59243	-5.56173	-3.96143	-3.37306
HK	-11.0842	-9.5532	-8.3687	-7.60711	-7.18402	-6.55563	-1.83547	-4.12782	-5.696	-5.05213	-5.6799	-5.15814	-4.6547	-4.65644	-4.55348	-4.1118	-4.54049	-3.88478	-3.78184	-3.72333	-3.64622	-3.61307	-1.32548	-25.6923
IN	-10.709	-8.37188	-7.27224	-8.27644	-7.50008	-7.06893	-6.15648	-5.61976	-5.72031	-6.08984	-5.64384	-5.49828	-5.14066	-5.43692	-4.3553	-4.25948	-4.76116	-4.81693	-4.15408	-4.17478	-4.69521	-4.12145	-4.31961	-3.91046
ID	-9.96019	-9.03485	-7.64253	-7.33451	-5.13597	-4.89518	-7.24851	-6.42228	-5.00268	-6.85515	-5.75373	-5.10187	-5.38639	-4.87884	-5.36216	-4.02548	-4.95805	-4.56178	-4.6867	-5.32919	-4.59594	-2.89945	-4.01952	-4.00927
IE	-7.27537	-6.60632	-5.25963	-5.26439	-3.03508	-2.10133	-5.8311	-14.6462	-9.93207	-5.68949	-4.24029	-5.34668	-6.45747	-3.54619	-6.72663	-5.12133	-4.53482	-3.70572	0.39967	-2.83532	-3.00467	-3.21586	-4.42828	-4.4174
IL	-10.8431	-8.96999	-5.48957	-7.97448	-6.94823	-6.78983	-5.41485	-5.85189	-5.11091	-5.42236	-5.10112	-3.45849	-5.22015	-4.18948	-3.92396	-4.4276	-4.26816	-4.91614	0.40358	-3.86432	-3.44179	-4.47109	-4.01901	-4.67901
IT	-10.932	-9.71597	-8.17164	-7.29495	-7.42385	-6.73497	-6.3733	-6.14865	-5.43573	-5.31068	-5.13856	-4.37675	-4.89191	-7.71101	-4.92406	-4.55216	-4.65796	-4.40475	-4.84348	-4.02196	-4.4206	-3.96959	-4.79172	-5.75969
JP	-11.2036	-9.28909	-6.63634	-7.84637	-6.66654	-6.11393	-6.62053	-6.2529	-5.86249	-5.92049	-5.53496	-5.45462	-4.87457	-4.80179	-4.94029	-4.26262	-4.41052	-3.6209	-4.27906	-3.82562	-4.1098	-4.08163	-3.386	-0.26239
MX	-10.0765	-8.90871	-6.29197	-7.13989	-6.31633	-5.42088	-5.84201	-5.20182	-6.68213	-4.6023	-4.12443	-3.9716	-3.92528	-2.99772	-4.39011	-4.54941	-4.9624	-4.17987	-4.90789	-3.84608	-3.9927	-1.36641	-4.87547	-3.73102
NZ	-10.4489	-8.58773	-7.75753	-6.74503	-7.35973	-6.83682	-6.59201	-5.92551	-5.74434	-5.66957	-5.13184	-4.57338	-4.00855	-4.53589	-4.2979	-3.1596	-4.32099	-2.76361	-3.15763	-3.61068	-3.65402	-4.0474	-3.98151	-3.14386
SG	-10.9978	-9.05292	-8.2664	-7.61258	-6.70623	-6.30144	-6.9136	-6.14497	-5.87931	-5.64929	-5.50318	-1.81922	-4.97474	-5.02204	-3.30519	-3.81071	-5.14634	-5.07023	-4.16706	-3.77125	-4.1021	-3.80121	-3.83028	-3.57381
SA	-10.2458	-7.6314	-7.90003	-8.7453	-7.66795	-5.79709	-6.73227	-6.11214	-5.53829	-3.15164	-5.96519	-5.71656	-5.32999	-5.12228	-5.19168	-4.67499	-4.73119	-4.14178	-4.15195	-3.76908	-4.01983	-4.48019	-3.37284	-4.28567
SK	-11.0998	-8.7115	-8.24868	-7.30484	-7.35298	-6.78696	-5.70511	-6.99048	-5.20647	-5.11678	-5.57336	-5.36226	-5.67746	-5.27519	-2.41428	-4.95704	-4.60858	-4.11588	-4.19028	-4.41913	-3.64155	-3.89753	-4.08236	-4.47394
ES	-10.9388	-9.70319	-8.09039	-7.5225	-7.6484	-7.33977	-6.67717	-6.18214	-5.4936	-5.90516	-6.3304	-5.12072	-4.68023	-4.79311	-4.85354	-5.05372	-4.01126	-4.23547	-4.44187	-4.24464	-3.45131	-4.13734	-3.8174	-7.77235
SE	-10.635	-9.30934	-9.45565	-8.09685	-8.20013	-7.04158	-6.67853	-5.69148	-6.16606	-5.90082	-5.20653	-5.39117	-5.23082	-4.87026	-4.5173	-4.67311	-4.60879	-4.52903	-4.56744	-4.72526	-4.34578	-4.41675	-4.10721	-5.29907
CH	-10.6009	-8.49253	-8.76435	-7.39658	-7.13622	-6.48804	-5.88677	-5.73514	-5.83538	-5.08386	-5.24001	-4.92606	-5.3663	-4.31081	-4.97487	-4.77427	-5.02728	-4.29862	-4.97274	-3.96225	-4.75682	-4.35156	-3.81129	-4.37413
TW	-11.0254	-9.7124	-7.92945	-8.29156	-7.40393	-6.72386	-6.76366	-6.29789	-5.9718	-5.22442	-6.04347	-5.53735	-4.48437	-5.1028	-4.86432	-4.83738	-4.69066	-4.89149	-4.90592	-4.32513	-3.82083	-4.84021	-3.96813	-3.22817
TH	-10.0382	-8.37106	-8.96548	-8.09944	-7.21824	-6.07289	-6.71088	-4.44897	-6.01608	-5.5044	-5.64762	-5.40804	-4.95142	-4.89806	-4.9502	-4.68952	-4.38731	-4.26654	-4.34966	-4.04309	-3.77584	-4.43205	-4.64823	-4.00139
TR	-12.0313	-9.96197	-8.89569	-8.22923	-7.45964	-6.6619	-6.62745	-6.22538	-5.99299	-5.89599	-5.67782	-5.4462	-5.42081	-5.20285	-4.94898	-5.06391	-4.70153	-4.62709	-4.40841	-4.45972	-4.39948	-4.21644	-4.21879	-4.18019
UK	-9.66241	-7.98201	-8.82667	-6.69915	-7.68099	-6.90651	-5.59131	-5.95251	-5.16877	-5.9453	-4.93451	-5.76164	-4.65202	-5.04973	-4.91298	-4.55835	-4.41365	-4.15759	-3.92694	-4.00439	-4.04363	-4.77618	-3.01279	-3.67717
US	-11.4602	-8.92587	-5.13641	-6.42352	-7.60929	-5.87466	-6.44869	-5.74626	-6.00847	-5.13842	-6.0271	-3.95055	-4.56671	-4.02829	-4.63165	-5.5362	-5.01027	-4.02526	-4.20584	-3.13129	-3.0902	-7.72045	-8.1363	-18.5171

* Refer to Appendix Y for details on country code

** Pos 1,...,Pos 25 represents the twenty-five positions

Table Q2- Estimates Position VaR@95/Component VaR@95 Ratio for Foreign Portfolios (% Geometric Averages)

Country*	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24
MC1	-8.15395	-6.42914	-7.16708	-5.71877	-7.23093	-7.37364	-3.33541	0.57768	-4.99418	-4.34273	-5.115	-4.27379	-4.15285	-4.39452	-4.45595	-2.85393	-3.85329	-4.20094	-3.34487	-1.70901	-1.45331	-2.0865	-1.6878	-2.93085
MC2	-7.68018	-6.73969	-8.18157	-5.984	-7.57316	-7.98855	-1.82625	-4.11426	-5.0274	-5.27651	-5.59858	-4.15177	-3.95308	-2.82244	-4.70861	6.09078	-3.37869	-4.7724	-4.78461	-175.667	-3.75603	-2.40107	-0.50293	-4.25253
MC3	-9.54438	-5.47025	-8.19627	-6.10656	1.21434	-8.74607	-7.84314	-3.87198	-6.32397	-4.09394	-6.04491	-1.04201	3.82042	-4.19561	-4.4321	-4.58213	-3.90818	-4.65504	-4.50808	-2.80721	-0.12469	-3.03619	-2.93827	-12.7558
MC4	-8.60521	-6.05643	-7.41633	-7.24617	-4.38265	-7.59031	-4.25558	-3.14537	-4.95758	-4.6116	-4.77976	-4.56564	-3.61431	-3.69265	-4.77315	-4.05017	-3.42821	-5.54713	-3.21142	-2.33342	-3.39113	-2.77573	-2.63615	-7.48135
MC5	-8.1268	-6.55246	-7.14151	-6.98576	-5.99117	-6.31147	-4.50087	-2.3504	-5.49839	-5.71997	-5.81548	-5.14238	-5.77735	-3.04715	-4.74103	-5.20071	-3.88471	-4.28326	-4.62598	-5.44028	-5.18381	-2.21588	-2.51243	-5.95988
MC6	-6.82245	-2.24589	-0.88967	-6.45168	-4.60227	-187.411	1.58748	-3.10079	-7.29737	-6.66613	-7.04273	-5.73423	-5.61528	-3.78699	-5.69797	-5.0561	-4.93241	-4.20691	-3.97679	-2.12349	-14.894	-5.18459	-2.10985	-136.622
MC7	-7.06999	-5.55717	-6.15464	-7.27481	-5.50258	-191.322	-0.59206	-2.42347	-3.62669	-0.23381	-4.65354	-4.7044	-4.20426	-4.35456	-4.44724	-3.61803	-3.50236	-4.4279	-2.66848	-3.21654	-3.86408	-2.38423	-1.35159	-4.16247
MC8	-5.1282	-6.80567	-4.59631	-194.664	-4.85759	-4.62621	-3.39529	-0.98159	-3.57543	-3.79368	-3.96335	-4.13816	-3.74356	-3.39677	-4.00625	-3.95873	-2.6371	-2.53286	-3.83715	-2.32368	-2.63139	49.1967	-0.59804	-3.28621
MC9	-6.47036	-5.18262	-6.60851	-5.72892	-5.80821	-6.23007	-3.01907	-3.31491	-25.1271	-4.89208	-5.34924	-7.04397	-2.90667	-7.65948	-5.48099	-5.83057	-1.33457	47.4111	-4.80997	-3.23252	-1.1359	-2.94974	-2.63584	-20.2326
MC10	-8.4011	-4.73352	-4.26997	-5.32855	-3.63797	-5.10891	-4.36224	-3.43914	-5.58	-3.69968	-4.53772	0.9358	-1.59733	-4.39445	-3.06619	-26.7702	-4.2192	-5.01389	-5.2857	-0.96502	-2.21147	-0.82265	-3.18988	42.6554

* MC1,...,MC10 represents companies with the highest market capitalization from all 25 countries to the ones with tenth highest market capitalization

Appendix Q - Geometric Averages % for Estimates Position VaR@95/Component VaR@95 Ratio for Portfolios

Table Q3.01- Estimates Position VaR@95/Component VaR@95 Ratio for Frechet Random Walk Model (% Geometric Averages)																							
Model	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24
FRW*	15.1897	11.6627	6.93739	7.75574	8.89426	5.19887	4.3613	3.97329	3.99736	0.84422	5.29922	7.18498	4.75537	6.11528	4.499	2.50531	2.51049	2.88591	9.82092	2.91338	8.37318	-1.0668	1.47944	-6.4631

* FRW represents the Frechet Random Walk Model
** Port 1,...,Port 25 represents portfolios

Table Q3.02- Estimates Position VaR@95/Component VaR@95 Ratio for Geometric Brownian Motion Model (% Geometric Averages)																							
Model	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5	Pos 6	Pos 7	Pos 8	Pos 9	Pos 10	Pos 11	Pos 12	Pos 13	Pos 14	Pos 15	Pos 16	Pos 17	Pos 18	Pos 19	Pos 20	Pos 21	Pos 22	Pos 23	Pos 24
GBM*	5.24251	4.38073	5.58043	6.77731	4.55169	3.85367	6.06408	3.89438	3.76711	2.32811	4.23046	1.33762	2.44306	2.76318	3.50738	2.63555	5.40718	2.37996	-2.76778	0.06724	-0.17601	3.94957	11.4741	-3.40883

* GBM represents the Geometric Brownian Motion Model

Appendix R – Variance/Covariance VaR at the 95% Confidence Level for both Domestic and Foreign Portfolios

Figure R1 - Variance/Covariance VaR at the 95% Confidence Level for Domestic Portfolios

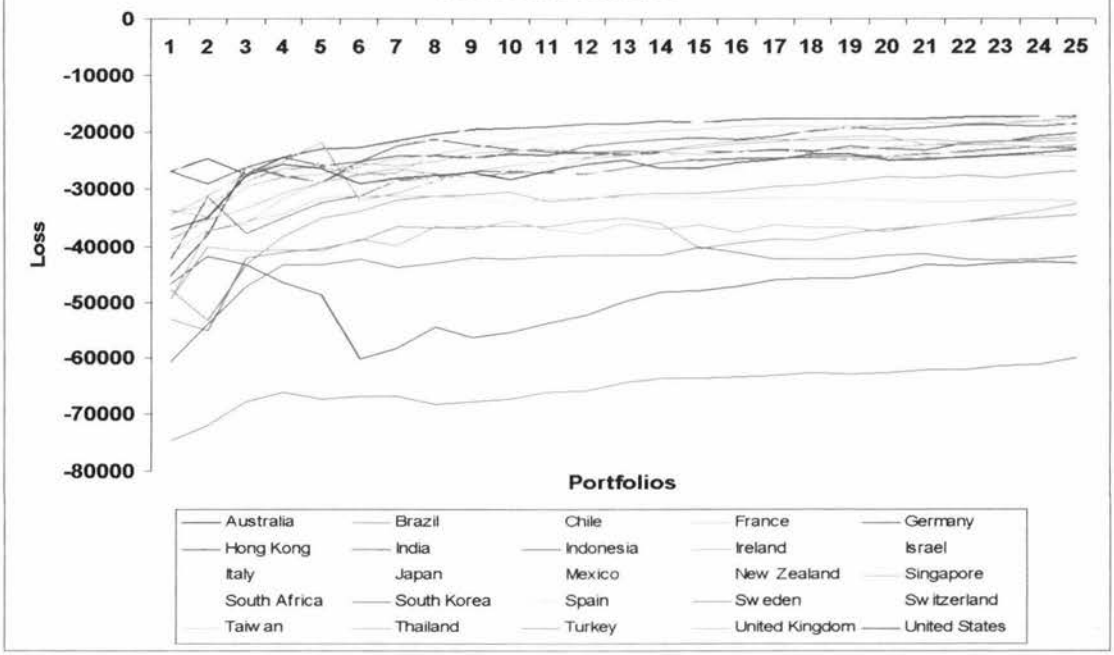
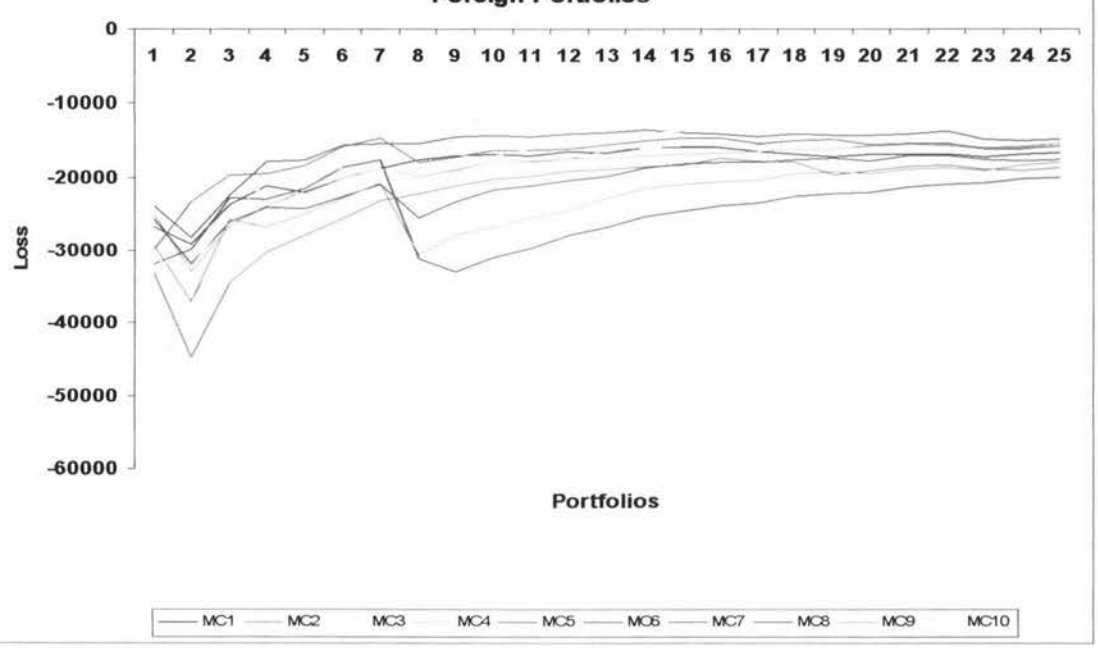
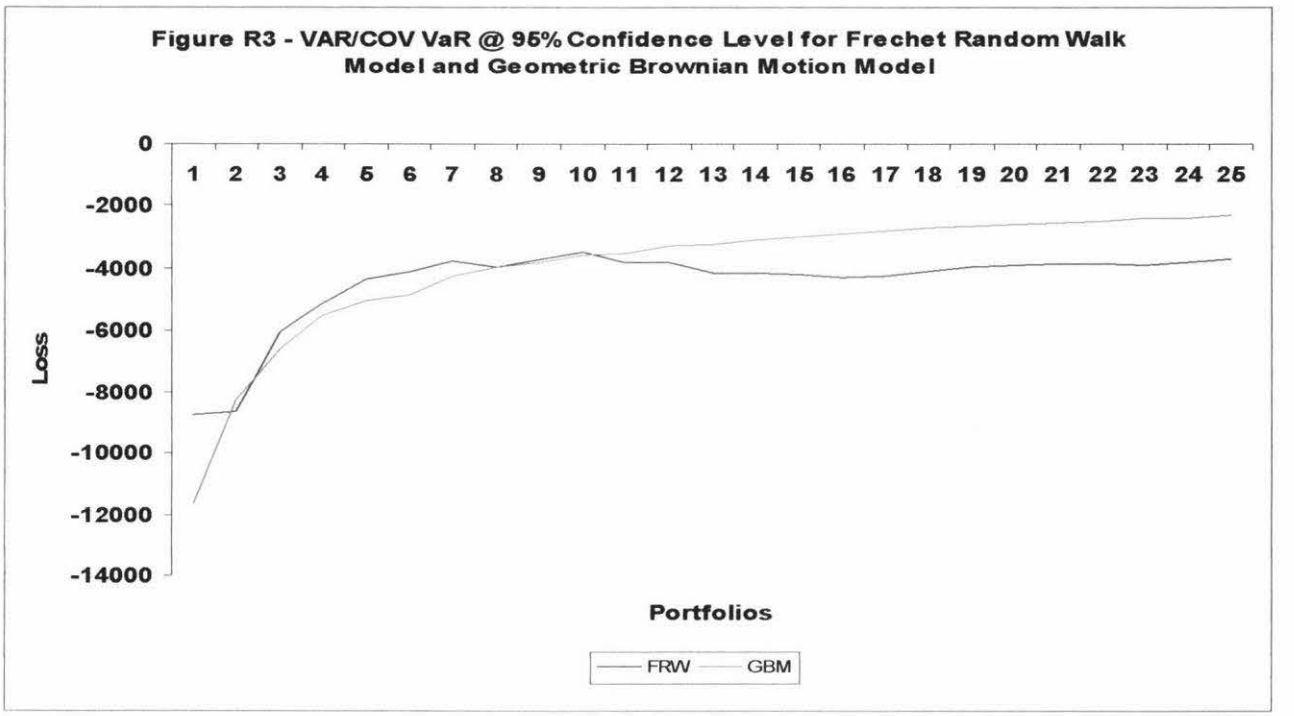


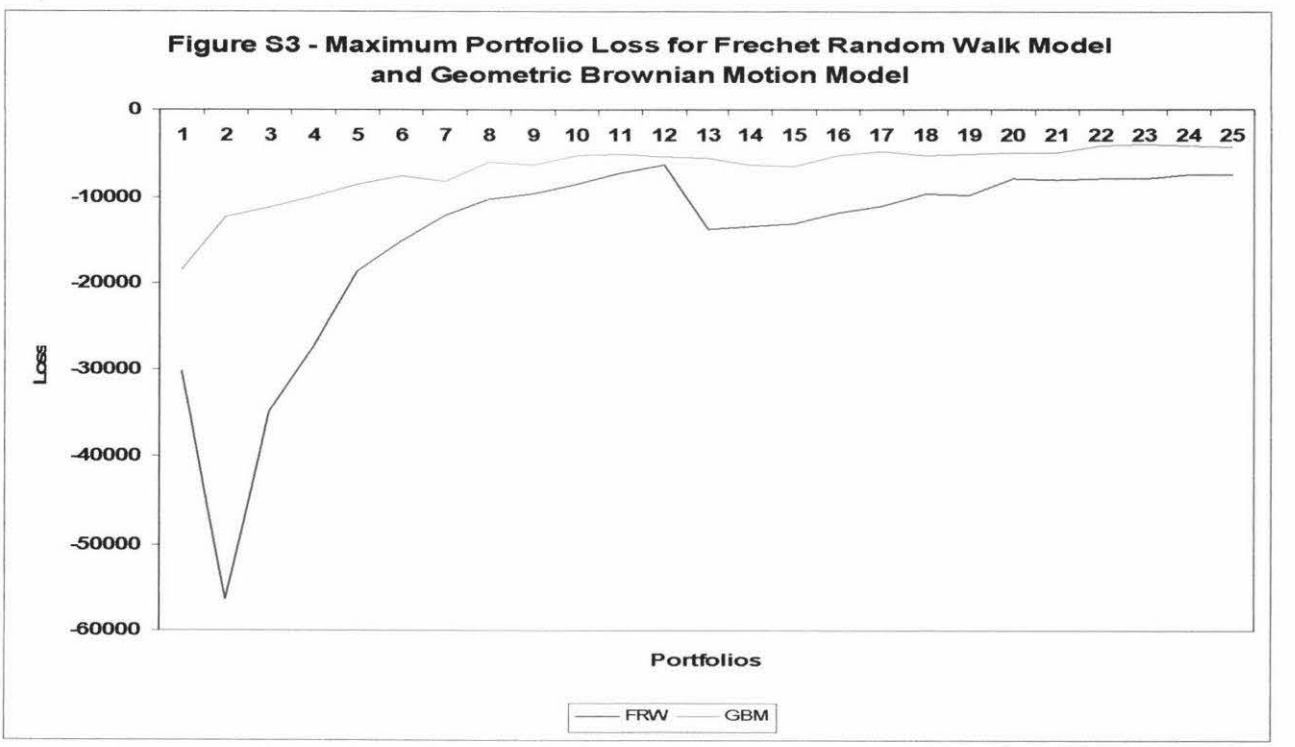
Figure R2 - Variance/Covariance VaR at the 95% Confidence Level for Foreign Portfolios



Appendix R – Variance/Covariance VaR @ 95% Confidence Level for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix S – Maximum Portfolio Loss for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix S – Maximum Portfolio Loss for both Domestic and Foreign Portfolios

Figure S1 - Maximum Portfolio Loss for Domestic Portfolios

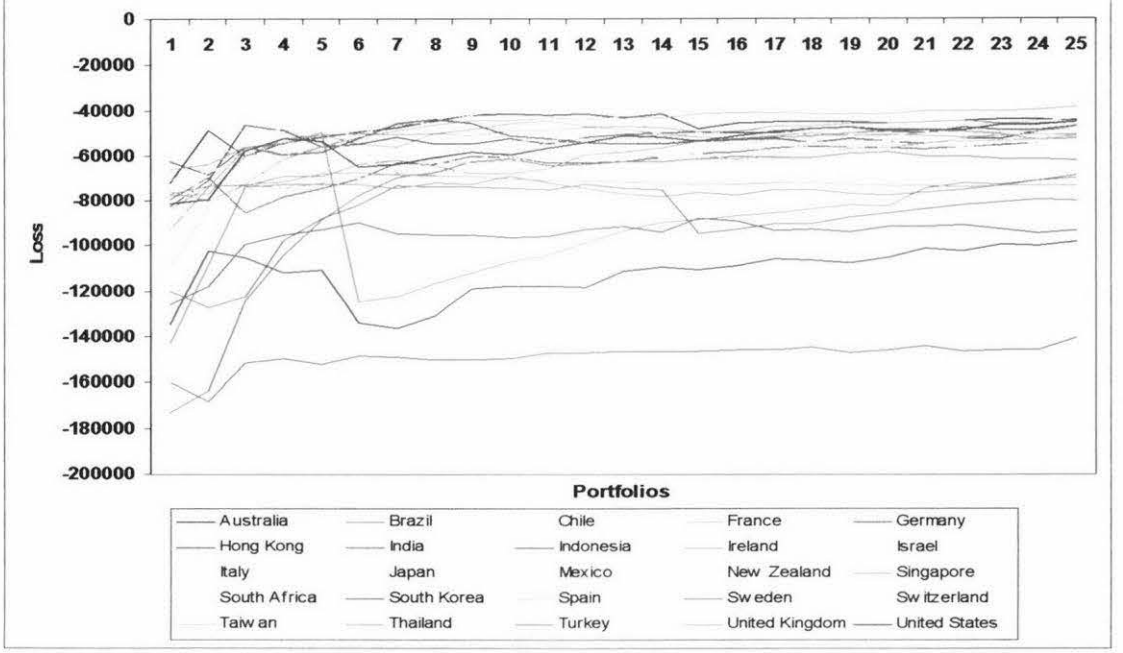
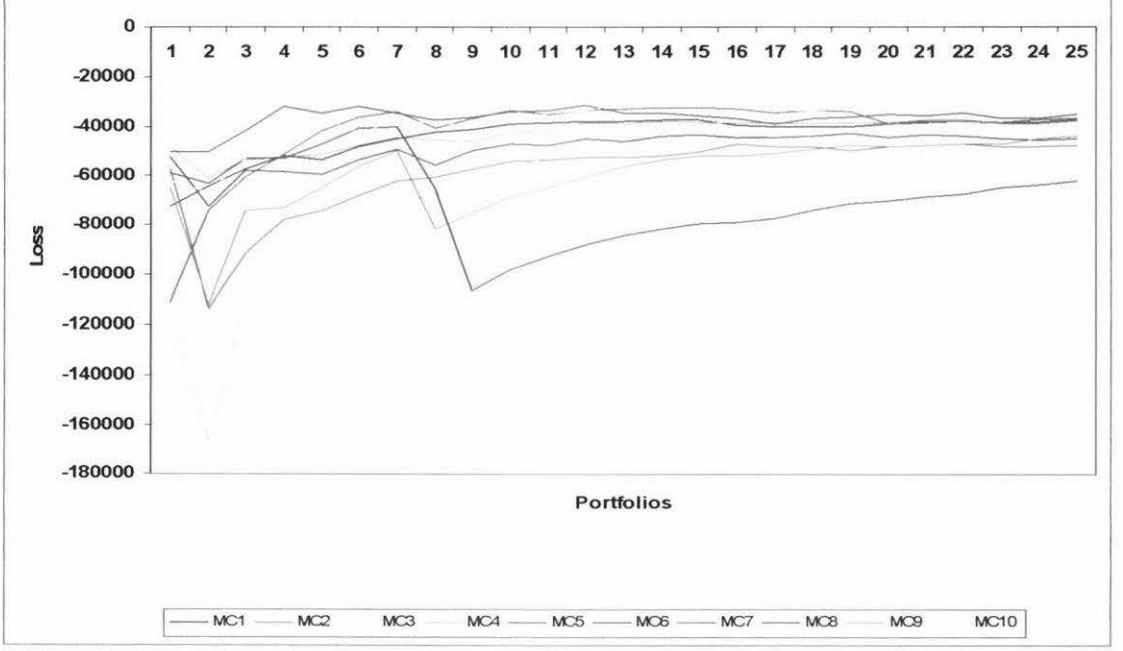
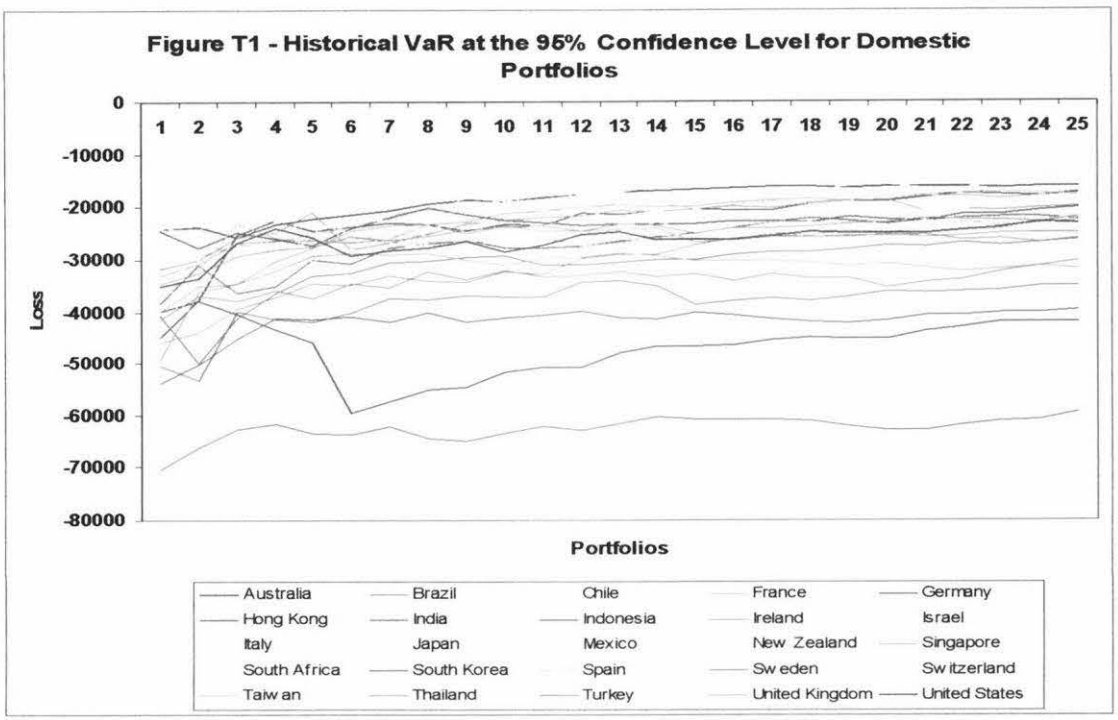
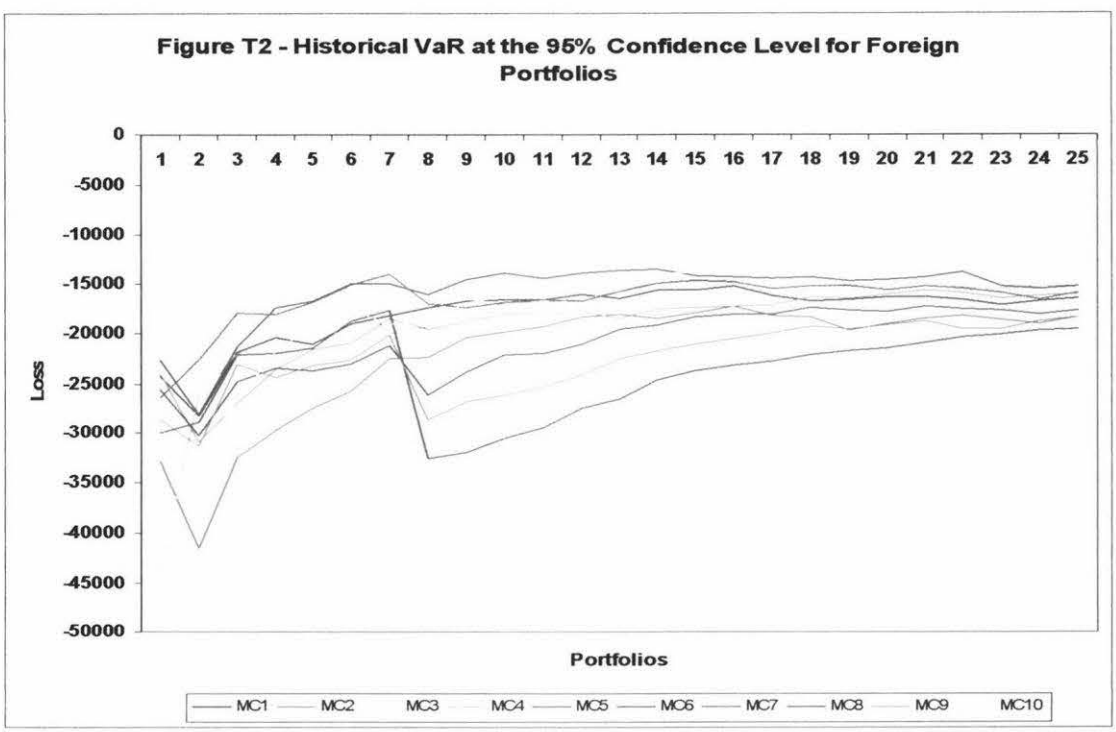


Figure S2 - Maximum Portfolio Loss for Foreign Portfolios

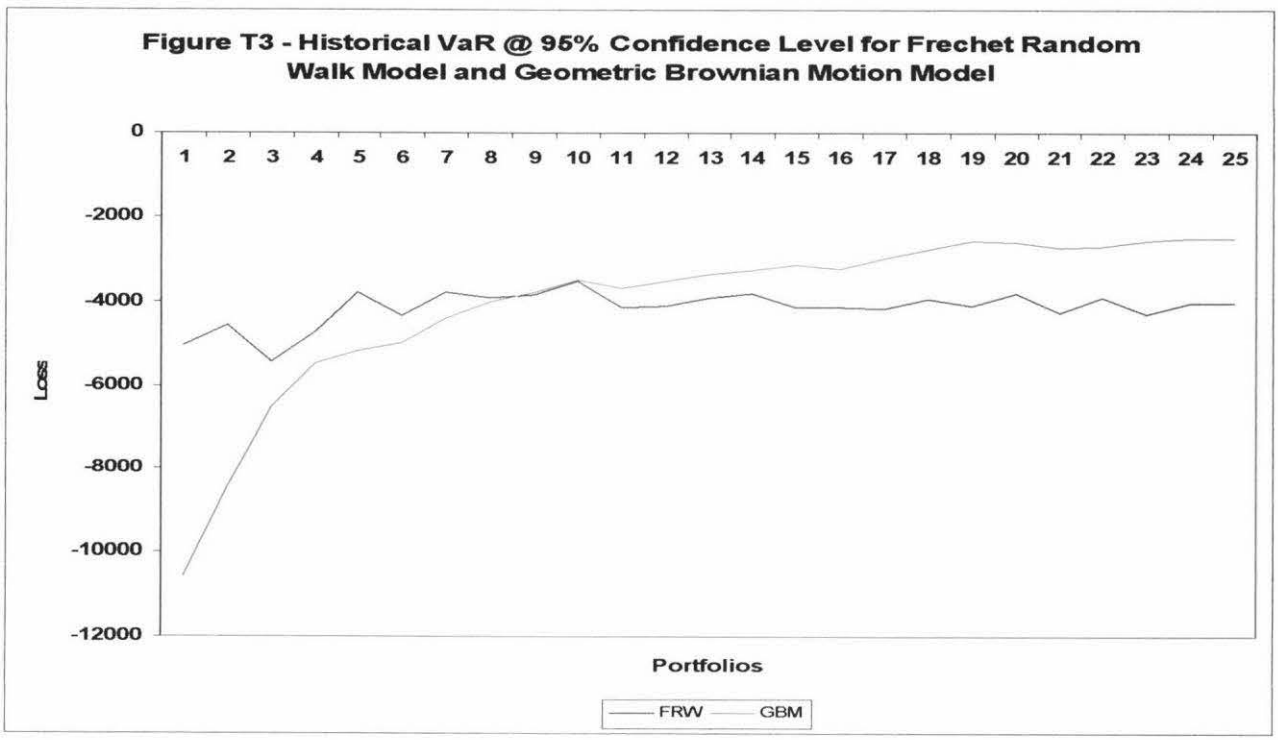


Appendix T – Historical VaR at the 95% Confidence Level for both Domestic and Foreign Portfolios

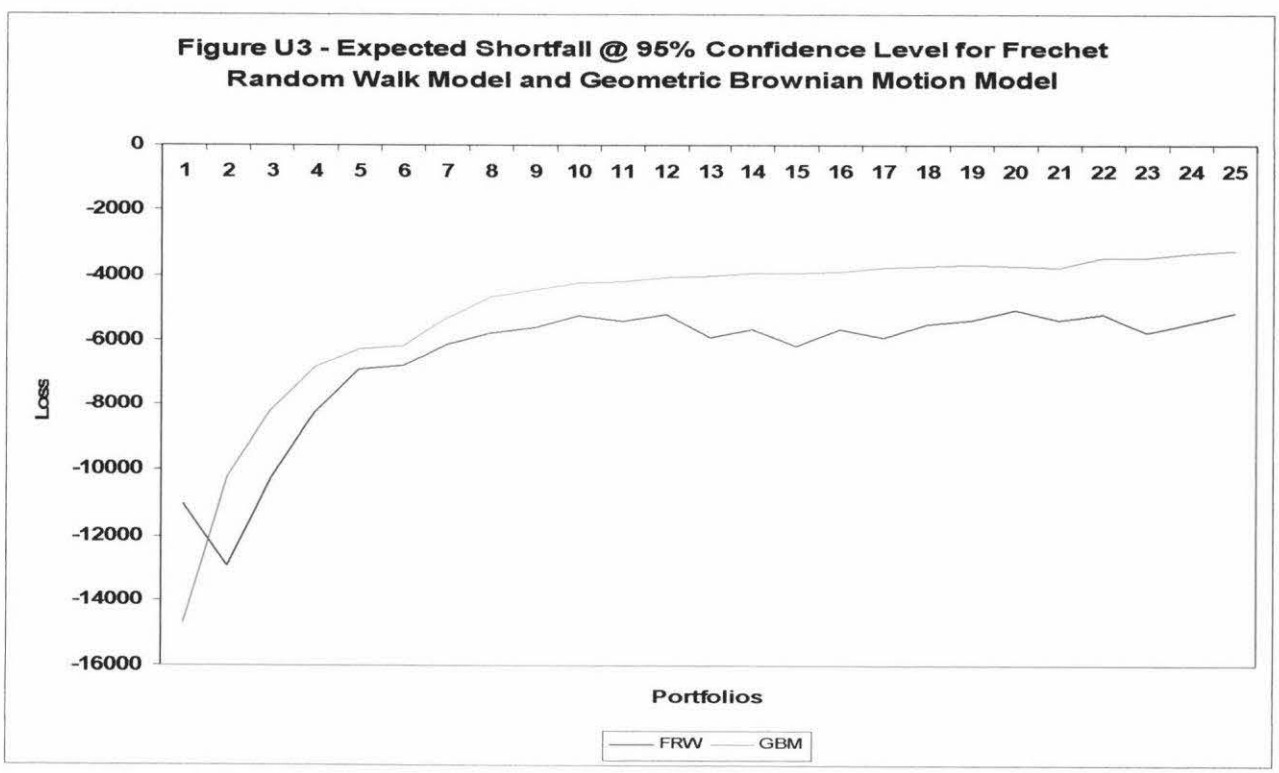




Appendix T – Historical VaR @ 95% Confidence Level for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix U – Expected Shortfall @ 95% Confidence Level for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix U – Expected Shortfall at the 95% Confidence Level for both Domestic and Foreign Portfolios

Figure U1 - Expected Shortfall at the 95% Confidence Level for Domestic Portfolios

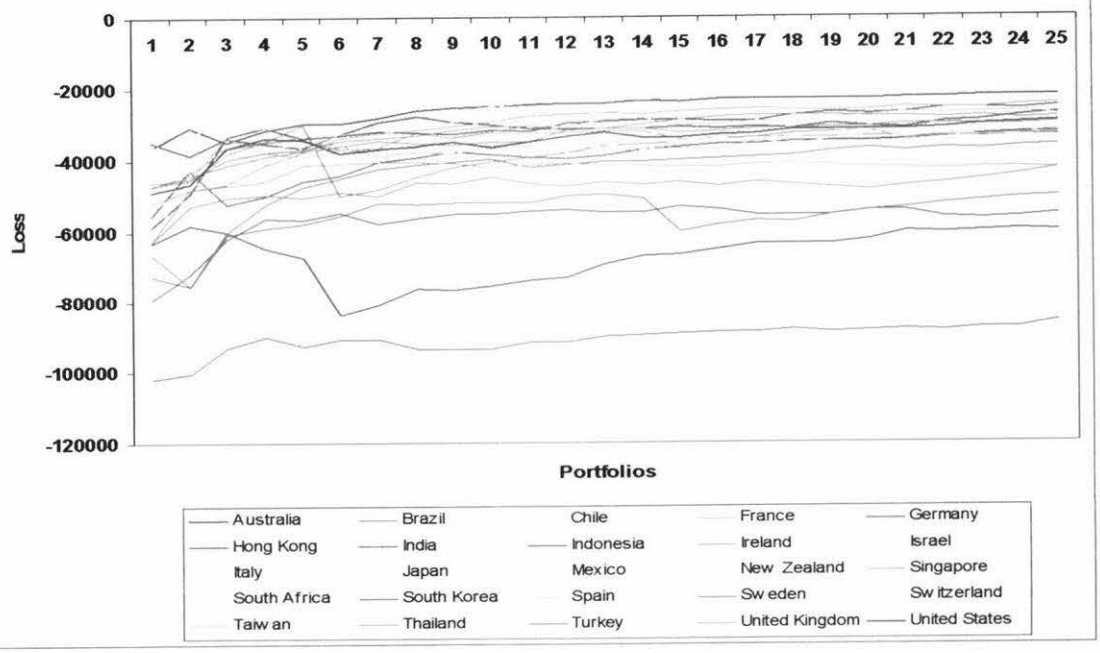
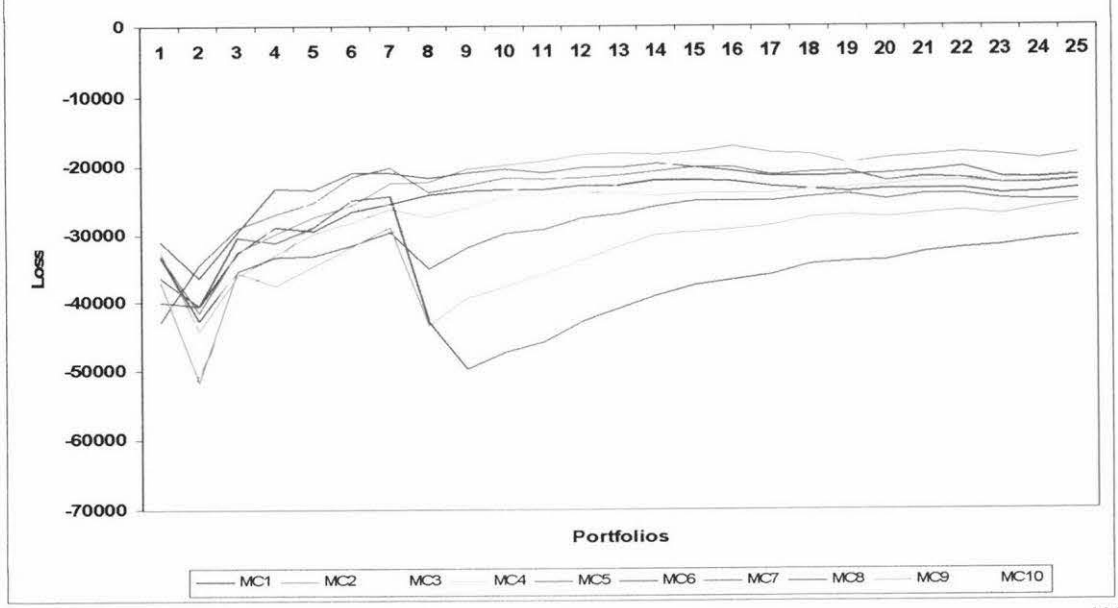


Figure U2 - Expected Shortfall at the 95% Confidence Level for Foreign Portfolios



Appendix V – Ratio of Diversified Portfolio VaR to Aggregate VaR from Individual Positions for both Domestic and Foreign Portfolios

Figure V1 - Ratio of Diversified Portfolio VaR to Aggregate VaR from Individual Positions for Domestic Portfolios

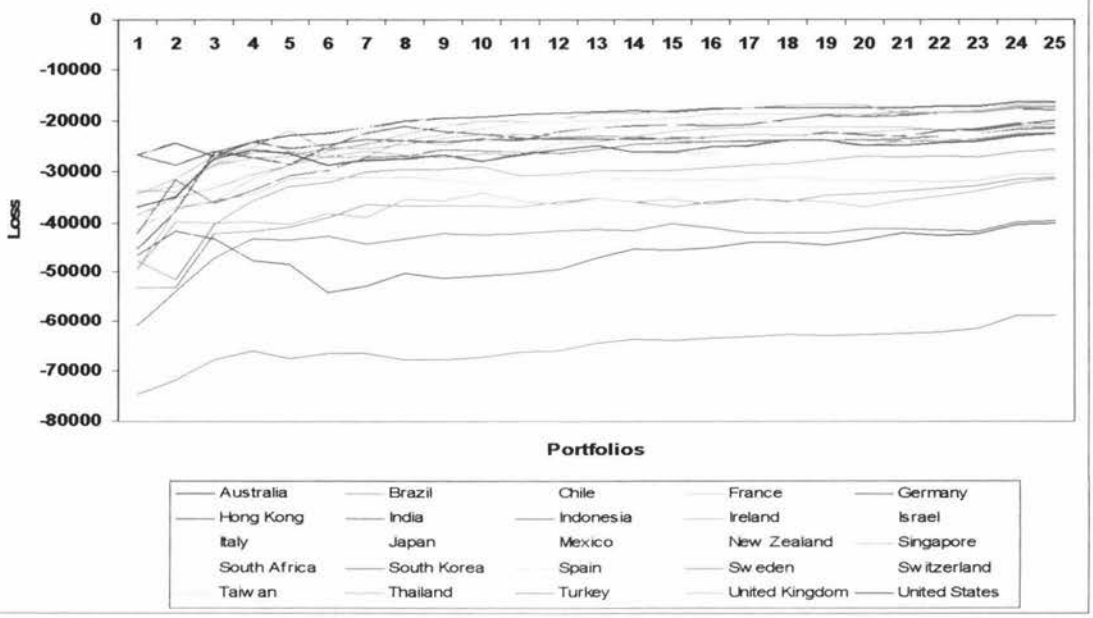
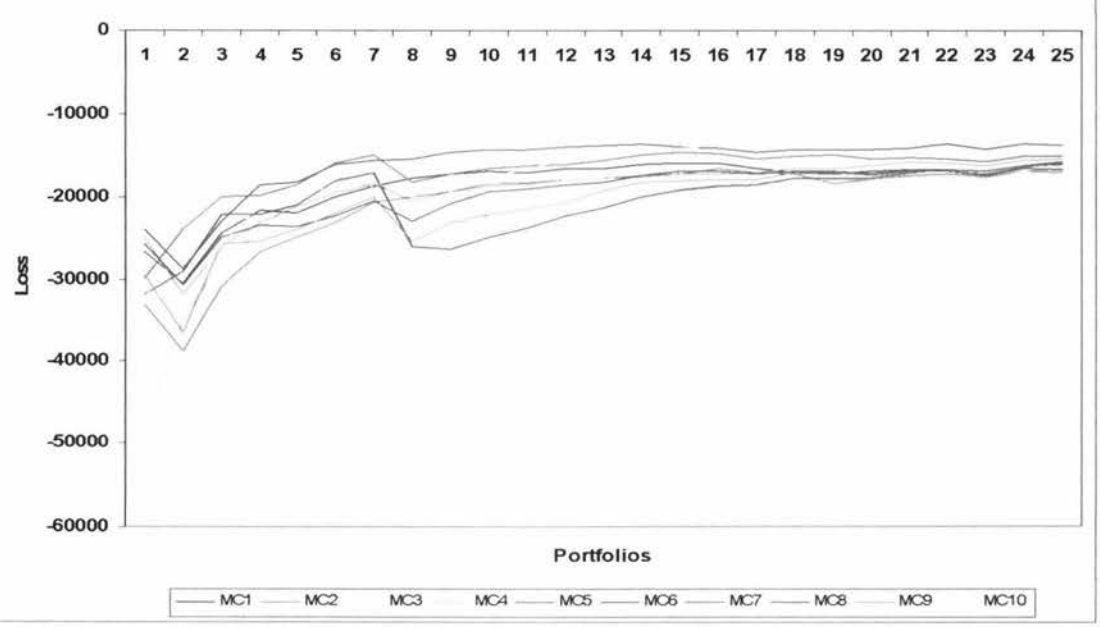
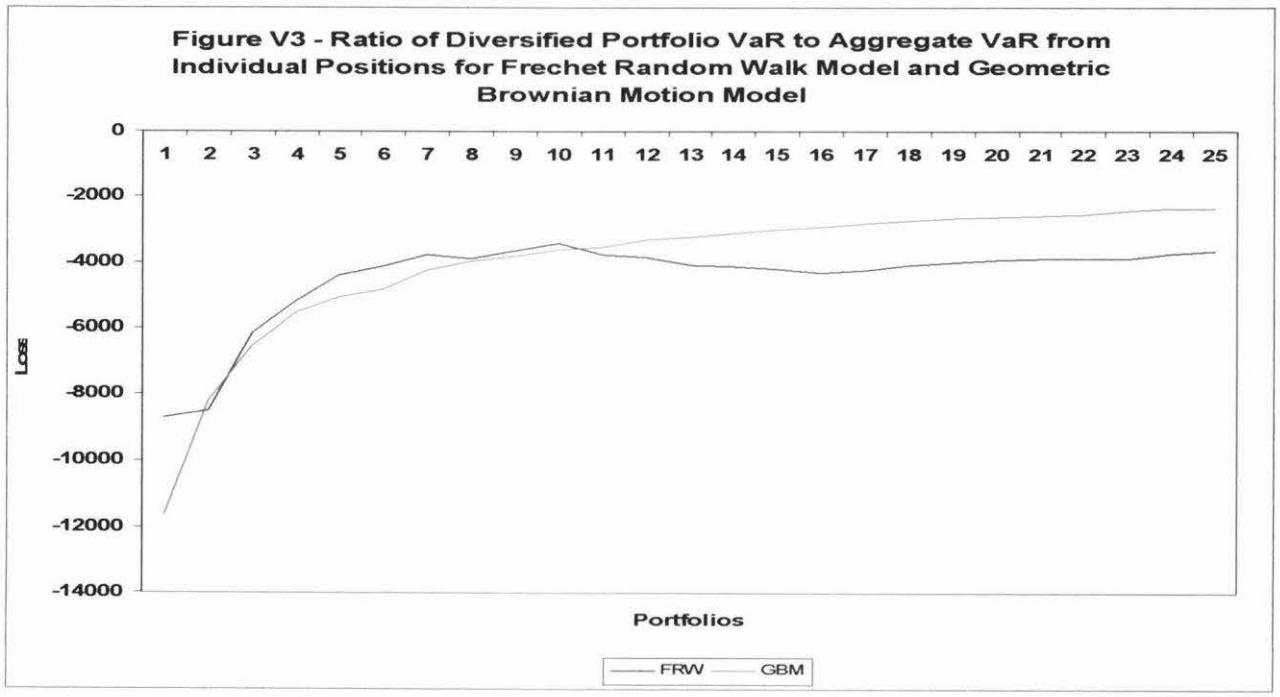


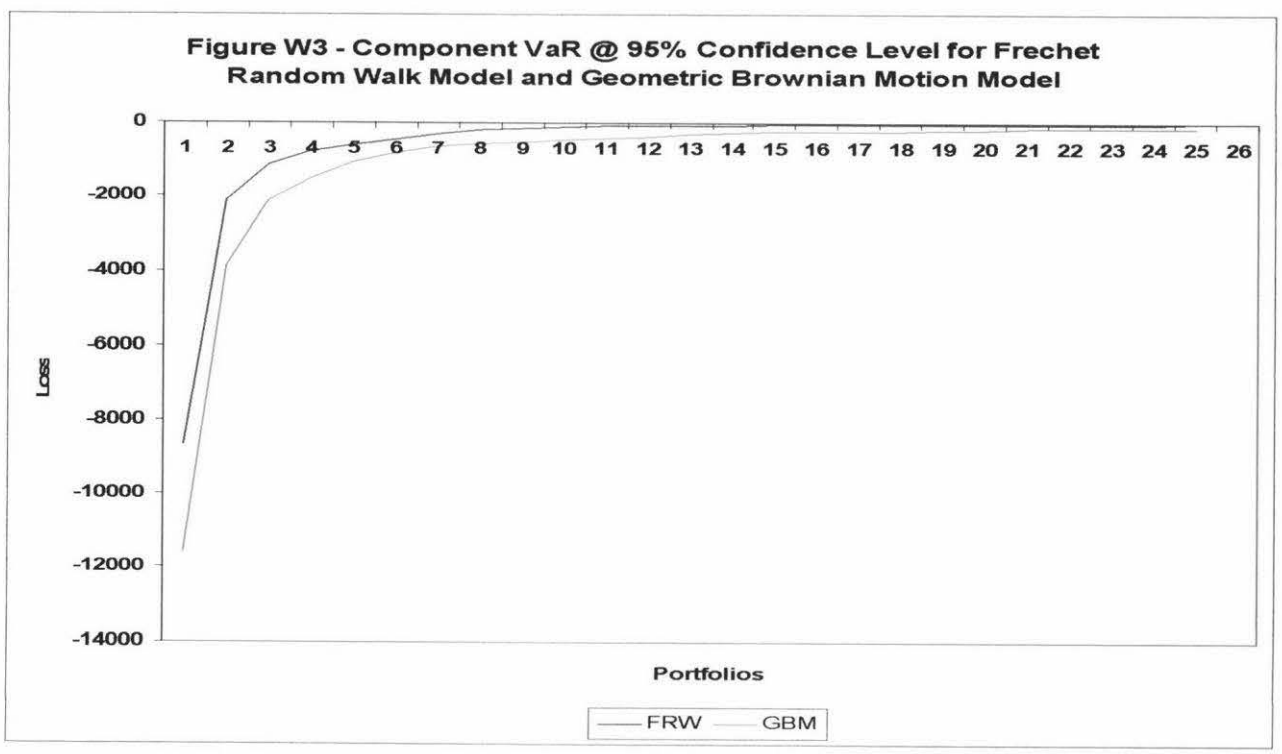
Figure V2 - Ratio of Diversified Portfolio VaR to Aggregate VaR from Individual Positions for Foreign Portfolios



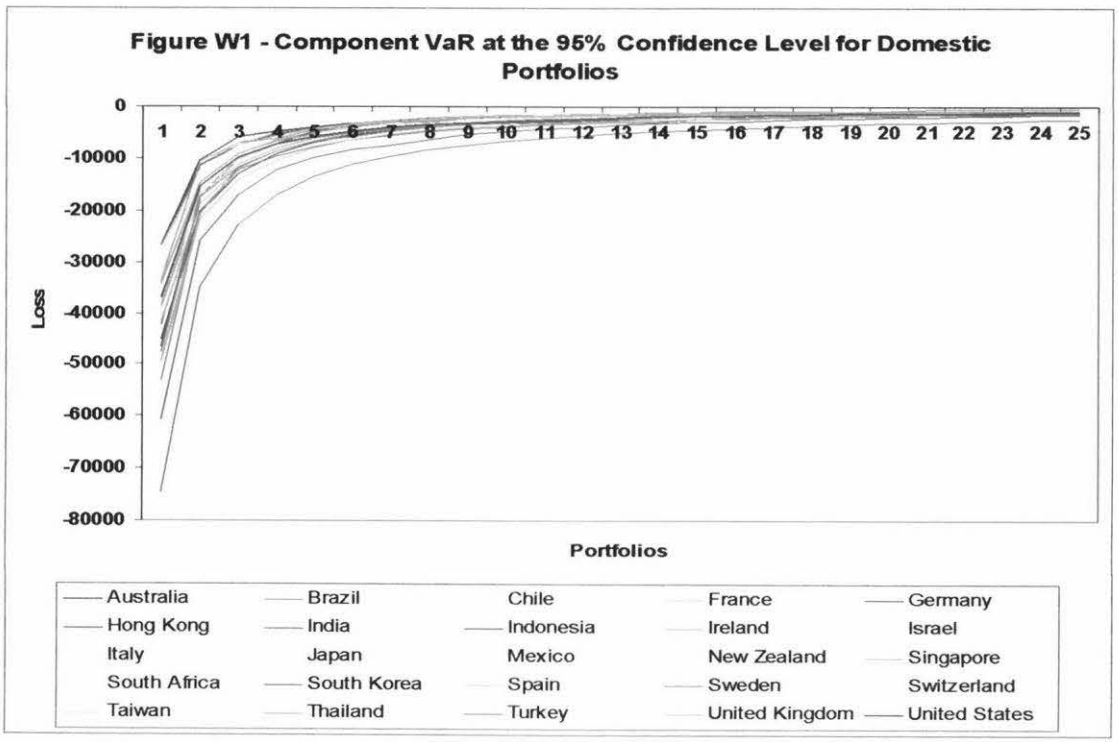
Appendix V – Ratio of Diversified Portfolio VaR to Aggregate VaR from Individual Positions for Both Frechet Random Walk Model and Geometric Brownian Motion Model

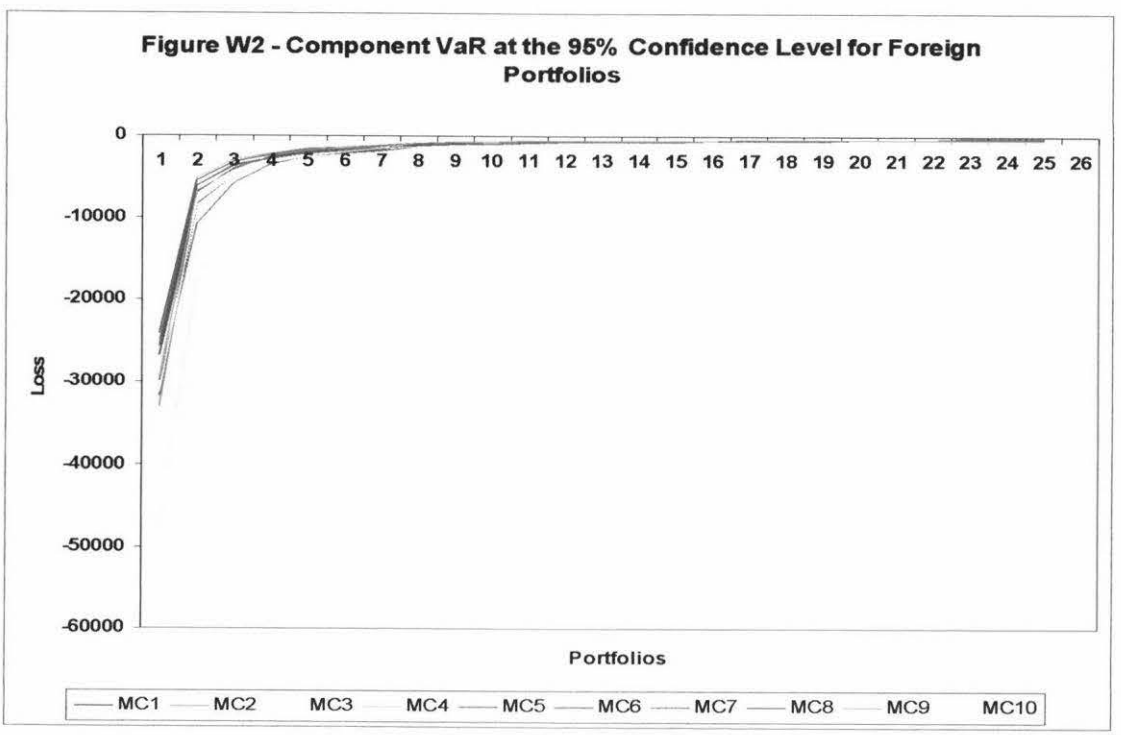


Appendix W – Component VaR @ 95% Confidence Level for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix W – Component VaR at the 95% Confidence Level for both Domestic and Foreign Portfolios





Appendix X – Ratio of Position VaR at the 95% Confidence Level to Component VaR at the 95% Confidence Level for both Domestic and Foreign Portfolios

Figure X1 - Ratio of Position VaR at the 95% Confidence Level to Component VaR at the 95% Confidence Level for Domestic Portfolios

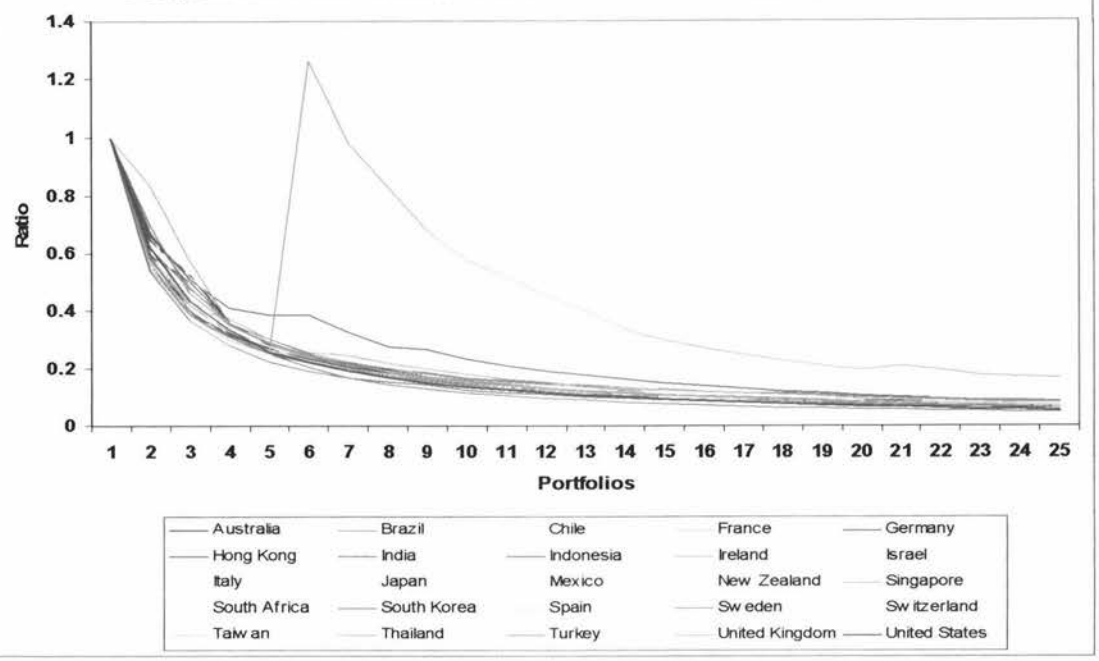
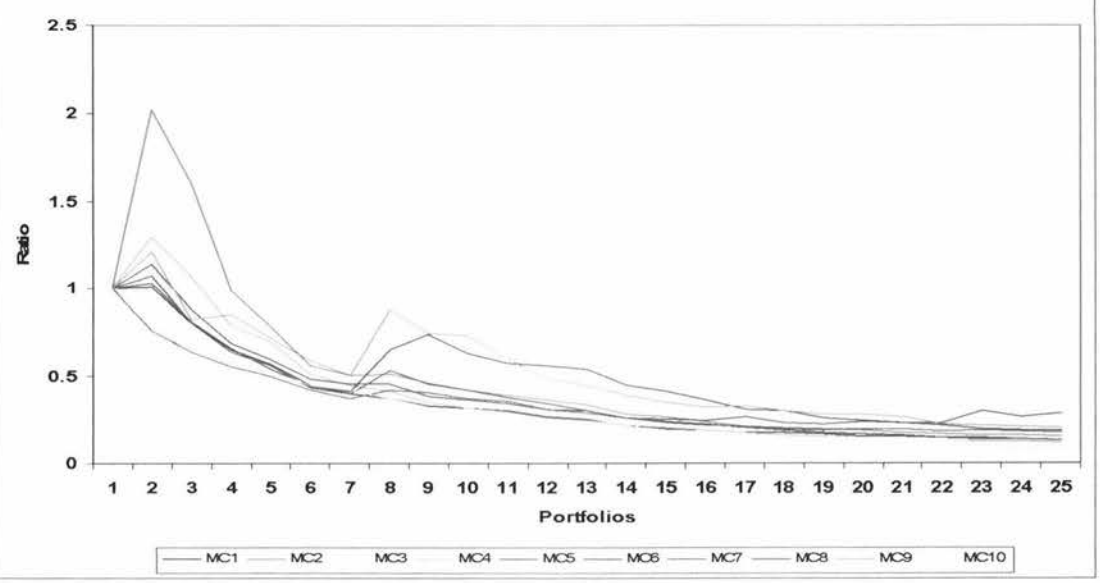
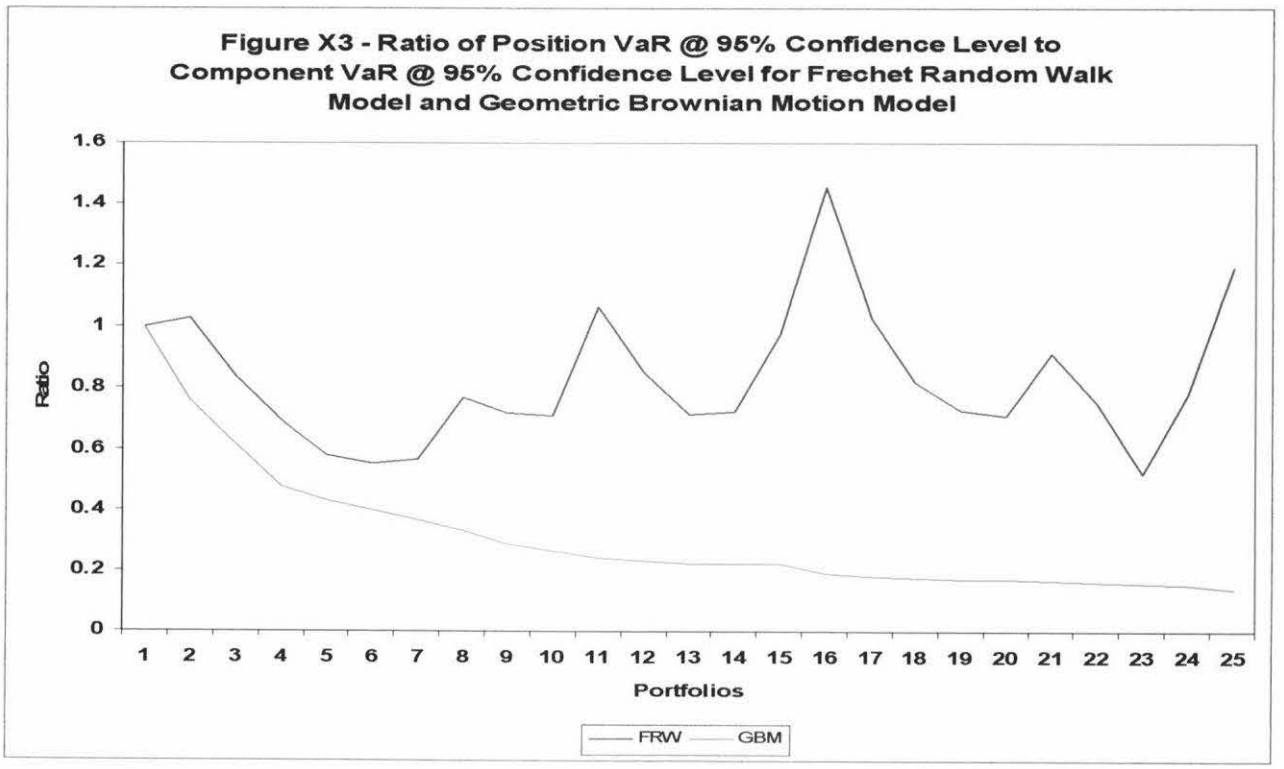


Figure X2 - Ratio of Position VaR at the 95% Confidence Level to Component VaR at the 95% Confidence Level for Foreign Portfolios



Appendix X – Ratio of Position VaR @ 95% Confidence Level to Component VaR @ 95% Confidence Level for both Frechet Random Walk Model and Geometric Brownian Motion Model



Appendix Y – Defining the Country Code and the Classification of Countries into Developed or Emerging

Table Y1 – Country Database Classifications and Compositions			
Country #	**Country Code**	**Country**	**Classification**
1	**AU**	Australia	Developed
2	**BR**	Brazil	Emerging
3	**CL**	Chile	Emerging
4	**FR**	France	Developed
5	**DE**	Germany	Developed
6	**HK**	Hong Kong	Developed
7	**IN**	India	Emerging
8	**ID**	Indonesia	Emerging
9	**IE**	Ireland	Developed
10	**IL**	Israel	Emerging
11	**IT**	Italy	Developed
12	**JP**	Japan	Developed
13	**MX**	Mexico	Emerging
14	**NZ**	New Zealand	Developed
15	**SG**	Singapore	Developed
16	**SA**	South Africa	Emerging
17	**SK**	South Korea	Emerging
18	**ES**	Spain	Developed
19	**SE**	Sweden	Developed
20	**CH**	Switzerland	Developed
21	**TW**	Taiwan	Emerging
22	**TH**	Thailand	Emerging
23	**TR**	Turkey	Emerging
24	**UK**	United Kingdom	Developed
25	**US**	United States	Developed

Appendix Z1 - Average Beta Estimates for Domestic Portfolios

Table Z1.01- Average Beta Estimates for Australia

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8461	0.6372	0.7622	0.834	0.82	0.86648	0.9175	0.94297	0.9571	0.9672	0.9904	0.9793	1.0094	1.0129	1.0379	1.0589	1.0461	1.0233	1.0192	1.0194	1.0209	1.0273	1.0245	1.0179
Pos 2		1.1536	0.8502	0.907	0.9234	1.0166	1.03472	1.0794	1.1352	1.1338	1.156	1.166	1.1548	1.1774	1.1455	1.1659	1.1724	1.1626	1.1916	1.1906	1.1851	1.1995	1.2086	1.2071	1.2008
Pos 3			1.4842	1.567	1.5609	1.514	1.5386	1.5808	1.59107	1.5853	1.5867	1.5873	1.643	1.6628	1.6077	1.6292	1.6291	1.6132	1.5827	1.5652	1.5629	1.5572	1.5515	1.5513	1.5354
Pos 4				0.7143	0.8082	0.786	0.82183	0.8704	0.89547	0.9024	0.9077	0.9293	0.9207	0.9502	0.9302	0.9546	0.9758	0.9723	0.9514	0.9493	0.952	0.9544	0.9579	0.9518	0.9484
Pos 5					0.8153	0.7896	0.8284	0.8762	0.90686	0.9225	0.9331	0.9608	0.949	0.9803	0.9603	0.9853	1.0043	0.9942	0.9776	0.9803	0.9831	0.9894	0.9938	0.994	0.993
Pos 6						0.9965	1.02416	1.0648	1.1044	1.0937	1.1161	1.1257	1.1152	1.1332	1.0936	1.1128	1.1218	1.1111	1.1408	1.1304	1.1252	1.132	1.1424	1.1415	1.1309
Pos 7							0.81616	0.8652	0.87314	0.8778	0.8887	0.9028	0.8938	0.9214	0.8913	0.915	0.9313	0.9239	0.9111	0.909	0.914	0.9164	0.9187	0.9197	0.9173
Pos 8								0.6737	0.68835	0.6995	0.7139	0.7261	0.721	0.7429	0.7273	0.7452	0.7636	0.7589	0.7468	0.7447	0.7511	0.7573	0.7616	0.766	0.7654
Pos 9									0.79706	0.8125	0.8323	0.845	0.8357	0.8623	0.8452	0.8673	0.8786	0.8718	0.8792	0.8873	0.8901	0.9155	0.9175	0.9169	0.9151
Pos 10										0.9451	0.9573	0.9732	0.9809	1.0125	0.99	1.0162	1.0394	1.0333	1.0156	1.0095	1.0166	1.021	1.0285	1.0276	1.026
Pos 11											0.8718	0.8857	0.8813	0.909	0.8825	0.9058	0.9206	0.9089	0.9083	0.9181	0.9156	0.9267	0.9393	0.9443	0.9459
Pos 12												0.8429	0.847	0.8787	0.8602	0.8822	0.8992	0.9003	0.8846	0.8896	0.8876	0.8951	0.9003	0.8987	0.8978
Pos 13													0.9993	1.0223	0.9972	1.0169	1.0293	1.0227	1.003	0.9928	0.9917	0.9911	0.9969	0.9938	0.9959
Pos 14														0.6772	0.6606	0.6984	0.7153	0.7092	0.6947	0.7013	0.7022	0.7099	0.715	0.7163	0.7182
Pos 15															1.307	1.3335	1.3497	1.3239	1.2878	1.286	1.2824	1.2886	1.2922	1.2913	1.2702
Pos 16																0.6467	0.6635	0.6557	0.6474	0.6529	0.6589	0.666	0.6704	0.6687	0.6691
Pos 17																	0.7531	0.7457	0.7259	0.7318	0.7402	0.7448	0.7492	0.7447	0.7464
Pos 18																		1.1144	1.0839	1.076	1.0854	1.0803	1.0839	1.0812	1.0651
Pos 19																			1.2236	1.211	1.2051	1.2279	1.2432	1.2388	1.2332
Pos 20																				1.0209	1.0179	1.0221	1.0254	1.0355	1.0288
Pos 21																					0.9946	0.9955	0.9997	0.9915	0.9914
Pos 22																						0.877	0.8813	0.8835	0.8869
Pos 23																							0.8851	0.8844	0.883
Pos 24																								1.0299	1.032
Pos 25																									1.1042

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.02- Average Beta Estimates for Brazil

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7162	0.8775	0.9191	0.9403	0.964	1.0331	1.035	1.0357	1.0245	1.0222	1.0511	1.0653	1.0501	0.899	0.918	0.9324	0.9253	0.9598	0.9722	0.9827	0.9998	1.0021	1.0156	1.0315
Pos 2		1.1918	1.4403	1.4253	1.4023	1.4043	1.4985	1.4632	1.43	1.4193	1.4066	1.4299	1.4422	1.4044	1.1556	1.1785	1.1912	1.1798	1.2238	1.2399	1.257	1.2748	1.2906	1.3075	1.3199
Pos 3			0.6235	0.5673	0.5501	0.5505	0.5846	0.5599	0.5427	0.5278	0.5028	0.5171	0.5141	0.4784	0.3922	0.4013	0.4117	0.3959	0.4279	0.4305	0.4333	0.4441	0.4538	0.4576	0.4645
Pos 4				1.0687	1.0936	1.1236	1.2118	1.2016	1.2177	1.21	1.2021	1.2314	1.2438	1.2056	0.9899	1.0116	1.0298	1.0321	1.07	1.0838	1.0979	1.1183	1.1296	1.1399	1.1398
Pos 5					1.0193	1.0165	1.1029	1.1284	1.1239	1.117	1.1157	1.1499	1.1606	1.1317	0.9467	0.9691	0.9865	0.9736	1.0133	1.0279	1.0421	1.0559	1.0681	1.0848	1.0852
Pos 6						0.8953	0.9614	0.9482	0.932	0.9257	0.914	0.9346	0.9425	0.9145	0.7654	0.7842	0.7945	0.7877	0.8192	0.8299	0.8415	0.8605	0.8648	0.8754	0.8774
Pos 7							0.536	0.5345	0.5363	0.5367	0.5383	0.5573	0.5649	0.5448	0.4529	0.4665	0.4755	0.4758	0.4974	0.5054	0.5171	0.5295	0.5398	0.5448	0.5481
Pos 8								1.1013	1.1111	1.1112	1.1092	1.1396	1.152	1.1245	0.9262	0.9452	0.9634	0.9586	0.9936	1.009	1.0242	1.0408	1.0566	1.0712	1.0766
Pos 9									1.038	1.028	1.0089	1.0252	1.0304	0.9881	0.8167	0.8365	0.8565	0.8551	0.8874	0.8976	0.9041	0.9237	0.9278	0.9383	0.937
Pos 10										1.0809	1.0706	1.0959	1.1044	1.0705	0.8572	0.8765	0.8942	0.8953	0.9315	0.949	0.9619	0.9795	0.9972	1.0106	1.0112
Pos 11											1.108	1.1366	1.1588	1.1378	0.9716	0.9929	1.0102	1.004	1.0403	1.0593	1.0734	1.0934	1.0983	1.1123	1.1257
Pos 12												0.7513	0.7538	0.7047	0.5246	0.5441	0.5532	0.5494	0.5757	0.5845	0.5948	0.6108	0.6222	0.6254	0.636
Pos 13													0.8467	0.8226	0.7003	0.7177	0.7399	0.7312	0.7613	0.7721	0.7839	0.7983	0.7995	0.8095	0.8079
Pos 14														1.3905	1.1534	1.1802	1.1908	1.1897	1.229	1.2485	1.2617	1.2835	1.2856	1.3053	1.312
Pos 15															2.0772	2.1008	2.0857	1.9901	2.0354	2.0455	2.0239	2.0336	2.0136	2.0164	2.0006
Pos 16																0.5986	0.6059	0.5904	0.6149	0.6232	0.6318	0.6575	0.6664	0.6794	0.6902
Pos 17																	0.7617	0.7422	0.7735	0.7884	0.8116	0.8228	0.8355	0.8458	0.854
Pos 18																		1.2023	1.2486	1.2652	1.2837	1.3039	1.32	1.334	1.3418
Pos 19																			0.3239	0.3312	0.3353	0.3426	0.3496	0.3502	0.3577
Pos 20																				0.7218	0.7317	0.7451	0.7464	0.7548	0.7599
Pos 21																					0.7814	0.801	0.8004	0.8069	0.8146
Pos 22																						0.5984	0.5972	0.5928	0.6014
Pos 23																							0.7894	0.7919	0.8007
Pos 24																								0.7481	0.7541
Pos 25																									0.9114

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.03- Average Beta Estimates for Chile

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7908	0.7664	0.764	0.8188	0.8881	0.9149	0.95635	1.0362	1.0563	1.0787	1.1116	1.1459	1.0957	1.14448	1.1544	1.1907	1.1888	1.2216	1.2296	1.244	1.2566	1.2509	1.2462	1.2463
Pos 2		1.1418	1.1237	1.1488	1.1689	1.2597	1.2998	1.35462	1.448	1.4756	1.48916	1.5218	1.556	1.4039	1.45811	1.475	1.5042	1.5196	1.5418	1.5489	1.5696	1.5877	1.5624	1.5441	1.5321
Pos 3			1.0343	1.0338	1.0636	1.1421	1.1907	1.23873	1.3287	1.3571	1.3774	1.4084	1.4499	1.3636	1.41743	1.4442	1.4786	1.4876	1.518	1.519	1.5458	1.5629	1.5577	1.5399	1.5311
Pos 4				0.9744	1.0014	1.082	1.114	1.15905	1.2437	1.2723	1.29405	1.3157	1.3458	1.2569	1.3042	1.3216	1.3499	1.3671	1.4006	1.41	1.4328	1.454	1.4383	1.4348	1.4208
Pos 5					0.8263	0.8967	0.93	0.9784	1.0626	1.1039	1.12449	1.1595	1.1918	1.0936	1.14556	1.1728	1.2074	1.2192	1.249	1.2794	1.2996	1.3173	1.314	1.2886	1.2912
Pos 6						0.5938	0.606	0.60825	0.6507	0.6735	0.67603	0.7053	0.725	0.6879	0.71964	0.7405	0.7658	0.7628	0.7869	0.7812	0.7936	0.8112	0.7972	0.7561	0.7483
Pos 7							0.8029	0.81167	0.8755	0.9094	0.91253	0.9412	0.9673	0.8956	0.92881	0.9509	0.9834	1.0167	1.0469	1.0463	1.0713	1.0963	1.1025	1.0718	1.0635
Pos 8								0.74852	0.8146	0.8346	0.8379	0.8633	0.8961	0.8572	0.89711	0.9081	0.9267	0.9304	0.9527	0.9611	0.9843	0.9973	0.9846	0.9829	0.9771
Pos 9									0.4056	0.4257	0.43445	0.4472	0.4646	0.4461	0.47836	0.4991	0.519	0.5238	0.5421	0.5494	0.557	0.5695	0.5702	0.553	0.5522
Pos 10										0.7637	0.74884	0.7636	0.786	0.7458	0.77731	0.7966	0.8126	0.8062	0.8222	0.8159	0.8412	0.8514	0.8436	0.8082	0.8018
Pos 11											0.89356	0.9155	0.9463	0.8906	0.92671	0.9438	0.9735	0.9794	1.0022	1.009	1.0315	1.0504	1.0522	1.0246	1.0271
Pos 12												0.6966	0.7136	0.6618	0.6925	0.6944	0.7208	0.7242	0.7439	0.7516	0.7632	0.7859	0.7954	0.7777	0.7805
Pos 13													0.6139	0.5685	0.59471	0.611	0.6281	0.6339	0.6453	0.6516	0.6648	0.6835	0.6826	0.6617	0.6599
Pos 14														1.4482	1.47825	1.5221	1.5452	1.4866	1.4937	1.4925	1.5042	1.5053	1.4681	1.3481	1.3479
Pos 15															0.4364	0.4551	0.4738	0.4765	0.4932	0.4927	0.5029	0.5161	0.5182	0.5007	0.5027
Pos 16																0.5984	0.6038	0.5946	0.6148	0.6046	0.6234	0.6399	0.6222	0.5912	0.5859
Pos 17																	0.5656	0.567	0.5894	0.5893	0.5987	0.6082	0.6107	0.5981	0.5926
Pos 18																		1.0034	1.0307	1.0255	1.0485	1.0627	1.0543	1.0298	1.0283
Pos 19																			0.574	0.5822	0.5969	0.61	0.614	0.5923	0.5863
Pos 20																				0.916	0.9351	0.9457	0.9461	0.9314	0.9196
Pos 21																					0.5813	0.5881	0.5858	0.5688	0.5713
Pos 22																						0.6666	0.6655	0.644	0.6465
Pos 23																							1.2077	1.1832	1.1897
Pos 24																								1.6895	1.664
Pos 25																									1.1086

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.04- Average Beta Estimates for France

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.87734	0.94898	0.98363	0.95459	0.87851	0.85552	0.96266	0.88823	0.92574	0.90624	0.91373	0.8949	0.88536	0.77385	0.76376	0.76523	0.75727	0.73296	0.74614	0.73246	0.73487	0.73938	0.72394	0.69916
Pos 2		1.12927	1.08186	1.02583	0.94421	0.84618	0.81512	0.91735	0.83648	0.84955	0.8227	0.8175	0.79345	0.77937	0.66128	0.66131	0.65943	0.6451	0.62235	0.63522	0.62263	0.62445	0.62658	0.6128	0.59477
Pos 3			0.96151	1.03479	1.01154	0.936	0.90093	1.02589	0.952	1.00672	1.01405	1.0323	1.01921	1.0062	0.84497	0.83801	0.84851	0.83614	0.80937	0.82934	0.81295	0.81509	0.83958	0.81137	0.79462
Pos 4				0.95245	0.9695	0.92074	0.92472	1.03509	0.96778	1.01789	1.01809	1.01868	1.0149	1.00236	0.90988	0.90828	0.9023	0.90923	0.89204	0.90512	0.89761	0.89336	0.92337	0.90742	0.89185
Pos 5					1.12809	1.09935	1.10991	1.24874	1.20511	1.25544	1.25518	1.26803	1.27263	1.27918	1.17769	1.19119	1.18873	1.18586	1.16743	1.19189	1.18591	1.18891	1.21095	1.19596	1.17177
Pos 6						1.28315	1.29005	1.44378	1.36537	1.43505	1.42446	1.44128	1.44386	1.44815	1.31564	1.31959	1.32812	1.32902	1.31175	1.33703	1.32795	1.32746	1.35746	1.34009	1.32018
Pos 7							1.07446	1.19135	1.14193	1.18465	1.17056	1.18071	1.19286	1.19527	1.11513	1.12133	1.12391	1.13786	1.12908	1.14779	1.19885	1.19238	1.21197	1.20191	1.18867
Pos 8								0.16831	0.13814	0.14311	0.1459	0.14629	0.15298	0.15497	0.09908	0.10201	0.10545	0.09951	0.09154	0.10222	0.09425	0.09658	0.09891	0.08843	0.08286
Pos 9									1.38312	1.41184	1.41374	1.39169	1.37727	1.36097	1.27629	1.26803	1.25931	1.26218	1.28448	1.29529	1.27616	1.26853	1.28507	1.30576	1.31891
Pos 10										0.64235	0.65488	0.67648	0.68469	0.69069	0.56816	0.57627	0.58578	0.57846	0.54276	0.56152	0.55181	0.55514	0.5672	0.5442	0.51598
Pos 11											1.01773	1.02456	1.02557	1.02381	0.90852	0.90591	0.9062	0.90199	0.89499	0.90837	0.8913	0.88866	0.91187	0.90266	0.89031
Pos 12												0.93448	0.95057	0.96337	0.86943	0.88116	0.89526	0.88666	0.86262	0.88089	0.86838	0.87323	0.891	0.86559	0.83935
Pos 13													1.03859	1.05572	0.95695	0.97938	1.01709	1.00708	0.98733	1.00651	0.99226	0.99577	1.02006	0.99487	0.97441
Pos 14														1.01103	0.91154	0.92378	0.9384	0.9378	0.92714	0.94918	0.94285	0.9445	0.96102	0.94261	0.92116
Pos 15															1.88814	1.87997	1.8695	1.87363	1.90956	1.92345	1.90026	1.88557	1.9195	1.94426	1.94938
Pos 16																0.98727	1.00429	0.99708	0.98633	1.00539	0.99232	0.99855	1.01866	1.0037	0.98547
Pos 17																	0.89531	0.87989	0.8643	0.88044	0.85924	0.87004	0.89339	0.86579	0.83847
Pos 18																		1.07218	1.07749	1.0912	1.08765	1.08247	1.10251	1.0996	1.09492
Pos 19																			1.15528	1.16571	1.15213	1.14139	1.15933	1.19904	1.21317
Pos 20																				0.72004	0.71274	0.7148	0.73532	0.72008	0.70987
Pos 21																					1.24982	1.24125	1.26018	1.24909	1.23675
Pos 22																						1.03031	1.04241	1.0329	1.01736
Pos 23																							0.58664	0.57035	0.55088
Pos 24																								1.19043	1.2069
Pos 25																									1.24528

* Pos 1,...,Pos 25 represents the twenty-five positions
** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.05- Average Beta Estimates for Germany

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0731	1.4975	1.4853	1.3361	1.34977	1.3766	1.33906	1.2981	1.2911	1.276	1.35911	1.3789	1.3791	1.3967	1.38	1.3663	1.414	1.4511	1.421	1.4224	1.458	1.4449	1.4293	1.4642
Pos 2		0.9111	1.3046	1.3268	1.2427	1.26856	1.2792	1.27009	1.2361	1.237	1.2198	1.30659	1.3254	1.3372	1.3476	1.3597	1.351	1.3949	1.4328	1.4046	1.4126	1.4458	1.4372	1.4217	1.4532
Pos 3			0.2114	0.2154	0.1857	0.19136	0.1903	0.17768	0.1686	0.1722	0.1645	0.19356	0.2002	0.2035	0.2078	0.2081	0.2164	0.2352	0.2482	0.2392	0.2361	0.2481	0.2474	0.242	0.2586
Pos 4				0.9654	0.842	0.86149	0.8597	0.84267	0.826	0.9109	0.8794	0.95575	0.9741	0.9916	1.0102	0.9814	0.9777	1.0213	1.051	1.0218	1.0223	1.0496	1.0408	1.0203	1.0412
Pos 5					1.3002	1.3173	1.3305	1.29592	1.2578	1.2641	1.2363	1.33141	1.3581	1.3692	1.3833	1.3847	1.4009	1.4574	1.4987	1.4565	1.4713	1.5134	1.4996	1.4745	1.5105
Pos 6						0.9236	0.9575	0.96917	1.0202	1.0255	1.0197	1.09832	1.1193	1.1335	1.1393	1.1192	1.1115	1.1599	1.1847	1.1785	1.1979	1.2346	1.2362	1.2281	1.2522
Pos 7							0.8571	0.81921	0.8023	0.8034	0.765	0.82821	0.8457	0.8684	0.8836	0.8583	0.8594	0.8957	0.9221	0.8892	0.8867	0.9122	0.9038	0.8909	0.9188
Pos 8								1.16601	1.1608	1.163	1.1996	1.28734	1.3124	1.3284	1.3304	1.3178	1.3147	1.3681	1.3969	1.3798	1.4027	1.4315	1.431	1.419	1.4486
Pos 9									1.1214	1.136	1.1175	1.20327	1.2335	1.2472	1.2552	1.2271	1.2237	1.2751	1.3062	1.3025	1.3295	1.3686	1.3703	1.345	1.3741
Pos 10										0.9051	0.8652	0.93948	0.965	0.9828	1.0101	0.977	0.9893	1.0294	1.0654	1.0328	1.04	1.0695	1.0646	1.0309	1.055
Pos 11											1.1489	1.22936	1.2496	1.2545	1.252	1.2401	1.2378	1.2821	1.3161	1.3028	1.3196	1.3507	1.3521	1.3418	1.3716
Pos 12												0.16448	0.1756	0.1831	0.1884	0.1878	0.1952	0.2141	0.231	0.2238	0.226	0.2415	0.2435	0.2381	0.2534
Pos 13													0.7533	0.7705	0.7816	0.7518	0.769	0.8037	0.8193	0.8007	0.8085	0.8442	0.8295	0.8007	0.8235
Pos 14														0.8562	0.8736	0.8564	0.8658	0.8984	0.9151	0.8859	0.8866	0.9121	0.9042	0.8817	0.9064
Pos 15															0.8433	0.815	0.8254	0.857	0.8771	0.8453	0.8428	0.8692	0.86	0.8298	0.8578
Pos 16																1.255	1.2585	1.3103	1.3479	1.3312	1.3447	1.3864	1.3852	1.37	1.4057
Pos 17																	0.9859	1.0295	1.0664	1.0303	1.0226	1.0483	1.0318	0.9905	1.0204
Pos 18																		0.2396	0.2565	0.2486	0.2497	0.2649	0.2622	0.2551	0.2736
Pos 19																			0.4257	0.4048	0.397	0.4137	0.406	0.391	0.4087
Pos 20																				1.3352	1.3505	1.3891	1.4032	1.3815	1.4229
Pos 21																					0.8877	0.9124	0.9187	0.9062	0.9297
Pos 22																						0.3296	0.3289	0.3198	0.3404
Pos 23																							1.0844	1.0675	1.0999
Pos 24																								1.3985	1.4321
Pos 25																									0.4411

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.06- Average Beta Estimates for Hong Kong

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.7737	0.86273	0.77542	0.7123	0.81068	0.8969	0.94079	0.88235	0.83346	0.81329	0.79985	0.7958	0.80464	0.8139	0.8108	0.82799	0.8182	0.8455	0.82423	0.81894	0.85142	0.86237	0.8882	0.8918
Pos 2		1.20899	1.28576	1.25159	1.1712	1.32661	1.46804	1.52746	1.43287	1.36875	1.31756	1.28872	1.2911	1.29327	1.2947	1.2862	1.30949	1.296	1.3377	1.29712	1.28709	1.34201	1.35214	1.39882	1.4126
Pos 3			0.83061	0.72572	0.6805	0.78623	0.87899	0.9295	0.8754	0.83144	0.81982	0.80801	0.7957	0.80301	0.81113	0.8021	0.8125	0.8045	0.8323	0.81691	0.80416	0.84094	0.84941	0.8803	0.8796
Pos 4				1.2094	1.1472	1.30179	1.44222	1.49577	1.41274	1.33991	1.29371	1.26284	1.2638	1.27088	1.27655	1.268	1.28928	1.2743	1.3167	1.2775	1.27	1.32682	1.33746	1.37965	1.3923
Pos 5					1.258	1.42467	1.57433	1.64554	1.60465	1.51034	1.46424	1.44391	1.4299	1.44175	1.45901	1.4518	1.47203	1.4641	1.5104	1.46781	1.45051	1.51642	1.53053	1.58529	1.5953
Pos 6						0.31707	0.38325	0.4281	0.38794	0.3797	0.37019	0.35949	0.3519	0.34571	0.34255	0.3339	0.33515	0.3289	0.3408	0.33398	0.32548	0.33825	0.3427	0.3527	0.3534
Pos 7							0.31765	0.35126	0.31425	0.28869	0.27716	0.26803	0.2689	0.26346	0.26149	0.2579	0.25928	0.2541	0.2628	0.25552	0.24969	0.26173	0.26233	0.27134	0.2691
Pos 8								0.61184	0.55653	0.52669	0.50755	0.49555	0.4846	0.47857	0.48036	0.4855	0.48455	0.4759	0.4916	0.47787	0.4684	0.4933	0.49442	0.50422	0.4999
Pos 9									1.4685	1.38213	1.35084	1.33302	1.3196	1.33256	1.34546	1.3389	1.3692	1.3592	1.4025	1.37105	1.35732	1.41451	1.42265	1.47316	1.4864
Pos 10										1.44352	1.38943	1.35852	1.3374	1.32604	1.33382	1.3133	1.36226	1.3399	1.3784	1.3346	1.31728	1.37582	1.38199	1.44462	1.4663
Pos 11											1.33057	1.31201	1.3074	1.31816	1.3382	1.3351	1.3591	1.3475	1.3904	1.39985	1.38243	1.44775	1.46217	1.52433	1.5454
Pos 12												1.19873	1.1828	1.18263	1.19374	1.1778	1.19904	1.2513	1.2934	1.25699	1.23211	1.29217	1.30319	1.34463	1.3548
Pos 13													1.0968	1.099	1.10173	1.0912	1.11455	1.1024	1.1369	1.1111	1.1214	1.16866	1.18616	1.22525	1.2288
Pos 14														0.95577	0.96643	0.9589	0.97363	0.9624	0.9947	0.97185	0.97218	1.01048	1.0228	1.0582	1.0571
Pos 15															0.89705	0.8986	0.90385	0.8947	0.9221	0.90439	0.90143	0.94146	0.95219	0.98698	0.9954
Pos 16																1.0305	1.03173	1.0104	1.0437	1.02472	1.01079	1.05204	1.06368	1.10271	1.1146
Pos 17																	0.74942	0.7363	0.7646	0.73911	0.73849	0.77661	0.79545	0.81663	0.8159
Pos 18																		1.1317	1.1737	1.14089	1.11961	1.17526	1.18951	1.22533	1.2329
Pos 19																			0.3487	0.33953	0.3362	0.35062	0.35484	0.36643	0.3659
Pos 20																				1.47047	1.45735	1.52912	1.54144	1.60062	1.6154
Pos 21																					1.20724	1.25939	1.2772	1.33041	1.3446
Pos 22																						0.19604	0.19738	0.2045	0.1956
Pos 23																							0.77137	0.79482	0.7939
Pos 24																								0.37904	0.5318
Pos 25																									0.4984

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.07- Average Beta Estimates for India

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.1302	0.7793	0.8445	0.91395	0.95445	1.02401	1.01463	1.05886	1.06926	1.0781	1.0668	1.091	1.13704	1.14429	1.16054	1.15475	1.16404	1.15459	1.15108	1.15519	1.17727	1.1983	1.2077	1.1818
Pos 2		0.8779	0.51121	0.5383	0.60094	0.62412	0.67484	0.67374	0.70409	0.69707	0.6771	0.6628	0.6768	0.71898	0.73418	0.74781	0.74119	0.75034	0.75277	0.74799	0.75888	0.77383	0.7929	0.8065	0.7871
Pos 3			1.56228	1.5908	1.68242	1.71895	1.83483	1.82998	1.8956	1.81389	1.7557	1.7132	1.7451	1.80081	1.79008	1.79637	1.77215	1.78292	1.76593	1.74162	1.75543	1.79139	1.8275	1.8426	1.7921
Pos 4				0.7948	0.84123	0.85989	0.9249	0.92456	0.96546	0.98087	0.9933	0.9949	1.021	1.06447	1.07935	1.0838	1.08968	1.10568	1.1085	1.11203	1.12086	1.14692	1.1734	1.1933	1.1724
Pos 5					0.68035	0.70473	0.7551	0.76711	0.79791	0.78749	0.7761	0.7623	0.7834	0.82653	0.83563	0.83588	0.83193	0.83909	0.8396	0.8407	0.85074	0.8677	0.8904	0.9016	0.8731
Pos 6						0.80001	0.86583	0.92726	0.95713	0.93232	0.906	0.8912	0.9291	0.97154	0.9911	1.01952	1.0109	1.00663	0.9935	0.98345	0.9985	1.02402	1.0456	1.0578	1.0326
Pos 7							0.50545	0.49778	0.52367	0.51559	0.5036	0.4887	0.4965	0.51488	0.5114	0.52089	0.51686	0.53063	0.52885	0.52844	0.5372	0.55378	0.5625	0.5758	0.5611
Pos 8								0.96172	1.00985	0.9612	0.9233	0.9036	0.932	0.97471	0.97563	1.0256	1.0083	1.00594	1.00518	0.99479	1.0064	1.02274	1.0426	1.0565	1.0406
Pos 9									0.63185	0.62537	0.6147	0.6021	0.6156	0.65007	0.63882	0.64351	0.64944	0.65184	0.65334	0.64789	0.65801	0.67345	0.6871	0.6969	0.6863
Pos 10										1.18795	1.2263	1.2278	1.2667	1.31595	1.32224	1.33382	1.34538	1.37028	1.37335	1.37845	1.38367	1.41499	1.4456	1.4749	1.4698
Pos 11											1.1253	1.1224	1.1499	1.19992	1.2021	1.20907	1.21243	1.23459	1.24096	1.26685	1.28027	1.30654	1.3336	1.3606	1.3385
Pos 12												1.1595	1.1972	1.24517	1.2526	1.26192	1.28859	1.30682	1.3288	1.32572	1.3357	1.36487	1.3972	1.4159	1.3955
Pos 13													0.6853	0.71309	0.73392	0.74332	0.73962	0.74271	0.74513	0.74388	0.7508	0.76678	0.7788	0.7896	0.7811
Pos 14														0.45551	0.47066	0.47777	0.47679	0.48297	0.4787	0.47104	0.48344	0.49299	0.512	0.5245	0.5072
Pos 15															0.88874	0.90525	0.90154	0.91256	0.90929	0.90317	0.91282	0.93152	0.9513	0.9624	0.9444
Pos 16																0.82101	0.81836	0.8158	0.81112	0.80258	0.81882	0.83802	0.8499	0.8623	0.8388
Pos 17																	1.04304	1.06358	1.08279	1.07779	1.08034	1.11081	1.1406	1.1599	1.1238
Pos 18																		0.84425	0.84586	0.87216	0.87556	0.89647	0.9099	0.9213	0.9098
Pos 19																			1.00331	0.99892	1.00387	1.02474	1.0508	1.0681	1.0451
Pos 20																				1.06721	1.07709	1.09984	1.1198	1.1436	1.126
Pos 21																					0.83052	0.85108	0.8677	0.8821	0.8706
Pos 22																						0.50707	0.5163	0.5263	0.5149
Pos 23																							0.6067	0.6239	0.6096
Pos 24																								0.68	0.6675
Pos 25																									1.4479

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.08- Average Beta Estimates for Indonesia

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8165	0.686	0.5986	0.4892	0.3268	0.3436	0.3799	0.3366	0.3539	0.3677	0.3782	0.4012	0.4206	0.4268	0.4359	0.4543	0.4612	0.4656	0.48	0.5029	0.5013	0.5102	0.5139	0.5186
Pos 2		1.1519	1.0838	0.9579	0.7643	0.4922	0.5251	0.5855	0.5278	0.5523	0.5864	0.5959	0.6269	0.6579	0.6729	0.6784	0.7068	0.717	0.7256	0.7485	0.7798	0.7616	0.7772	0.7843	0.7767
Pos 3			1.1956	1.0683	0.853	0.5643	0.5933	0.6515	0.5668	0.5968	0.6328	0.6439	0.6811	0.7146	0.7281	0.7358	0.7637	0.774	0.781	0.8014	0.8344	0.8097	0.8183	0.8287	0.8211
Pos 4				1.4332	1.1825	0.8164	0.8623	0.9381	0.8546	0.8978	0.938	0.9577	1.0078	1.0534	1.08	1.0863	1.1288	1.1408	1.1607	1.1848	1.2332	1.2074	1.2248	1.2286	1.2191
Pos 5					1.5869	1.0299	1.0302	1.0799	0.9763	0.9821	0.972	0.9643	1.0154	1.0346	1.024	1.0223	1.0437	1.04	1.0285	1.0361	1.0735	1.047	1.0601	1.0629	1.0213
Pos 6						2.0841	2.0462	2.1107	1.8829	1.874	1.8738	1.8615	1.9327	1.9912	1.9675	1.9689	1.9957	1.9784	1.946	1.9517	2.0099	1.9643	1.9693	1.9494	1.8996
Pos 7							0.8118	0.8675	0.8289	0.8627	0.8787	0.8965	0.945	0.9788	0.9953	1.0188	1.051	1.0572	1.0605	1.0806	1.1234	1.1023	1.1089	1.1172	1.0987
Pos 8								0.5907	0.5233	0.5446	0.5687	0.58	0.6112	0.6375	0.6492	0.6567	0.6836	0.6918	0.6959	0.7115	0.7417	0.721	0.7334	0.74	0.7306
Pos 9									1.5298	1.5152	1.5155	1.5048	1.5748	1.6166	1.6003	1.5934	1.6187	1.6008	1.5789	1.6013	1.6611	1.6256	1.6297	1.616	1.5805
Pos 10										0.8001	0.842	0.8579	0.9094	0.9573	0.9853	1.0015	1.0476	1.081	1.0938	1.1179	1.1653	1.1401	1.1572	1.1717	1.1637
Pos 11											0.8757	0.8727	0.9163	0.9517	0.9644	0.9709	1.0054	1.0151	1.0145	1.0351	1.0761	1.0401	1.0545	1.0565	1.0613
Pos 12												0.9532	0.9997	1.0401	1.0436	1.0523	1.0748	1.077	1.0707	1.0976	1.1369	1.1055	1.1214	1.1153	1.0956
Pos 13													0.319	0.333	0.339	0.3488	0.3643	0.3663	0.3643	0.3696	0.3888	0.3823	0.3877	0.388	0.3856
Pos 14														0.4884	0.4904	0.493	0.5109	0.5182	0.5189	0.5286	0.5512	0.5379	0.5433	0.5535	0.5435
Pos 15															0.931	0.9351	0.969	0.9865	0.9998	1.0221	1.0634	1.0415	1.0563	1.068	1.0621
Pos 16																0.8883	0.913	0.9114	0.8986	0.9147	0.9523	0.8965	0.9114	0.9048	0.8882
Pos 17																	0.5709	0.5788	0.5825	0.5974	0.6235	0.6037	0.6166	0.6232	0.6208
Pos 18																		0.9362	0.946	0.9635	1.0024	0.9785	0.9931	1.004	0.9919
Pos 19																			1.0732	1.0982	1.1454	1.1144	1.1318	1.1477	1.1437
Pos 20																				0.604	0.6293	0.6139	0.6256	0.6313	0.6288
Pos 21																					0.3215	0.3199	0.3257	0.3307	0.3278
Pos 22																						1.5887	1.5807	1.5509	1.5236
Pos 23																							0.8138	0.8102	0.8062
Pos 24																								0.8719	0.8707
Pos 25																									1.2827

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.09- Average Beta Estimates for Ireland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.95145	1.0065	1.0524	1.188	0.7991	0.7858	0.8184	0.8736	0.889	0.8604	0.8494	0.8796	0.8518	0.857	0.85116	0.8516	0.8753	0.8763	0.8057	0.6478	0.6534	0.6414	0.6458	0.6457
Pos 2		1.05304	1.111	1.1625	1.312	0.9473	0.9372	0.9925	1.0622	1.083	1.0248	1.0226	1.0627	1.0247	1.0271	1.01527	1.0047	1.0326	1.0296	0.9535	0.754	0.7659	0.7625	0.7634	0.7662
Pos 3			0.8762	0.8984	1.0271	0.7201	0.7074	0.7464	0.7855	0.8092	0.7933	0.7994	0.8316	0.807	0.8231	0.83021	0.8294	0.8569	0.8564	0.8072	0.6418	0.6415	0.6494	0.6457	0.6415
Pos 4				0.8801	0.9935	0.672	0.652	0.7012	0.7463	0.7769	0.7574	0.7719	0.8144	0.793	0.8059	0.81776	0.8261	0.8563	0.8653	0.8209	0.6739	0.6811	0.6801	0.662	0.6624
Pos 5					0.4733	0.3394	0.3537	0.3968	0.4256	0.458	0.4525	0.4713	0.4986	0.4987	0.5199	0.53198	0.5382	0.5585	0.5591	0.5285	0.4362	0.4466	0.4505	0.4528	0.4604
Pos 6						1.8264	1.7863	1.8677	1.9307	1.9396	1.9242	1.8876	1.946	1.7802	1.761	1.74942	1.7244	1.7359	1.7547	1.7734	1.3889	1.3846	1.3443	1.3162	1.2911
Pos 7							0.8808	0.9315	0.9759	1.0129	0.9874	1.0028	1.0613	1.0231	1.043	1.04994	1.0541	1.0822	1.0683	1.0036	0.8298	0.8372	0.8463	0.8361	0.8398
Pos 8								0.4637	0.4904	0.5091	0.4907	0.5036	0.5466	0.5243	0.5494	0.54973	0.5583	0.5869	0.5696	0.5726	0.4916	0.5021	0.5088	0.5301	0.5341
Pos 9									0.4539	0.4714	0.4535	0.469	0.5	0.4642	0.4832	0.51577	0.5216	0.5354	0.531	0.5085	0.444	0.4468	0.4482	0.4548	0.4496
Pos 10										0.623	0.6263	0.6266	0.659	0.6374	0.6636	0.67911	0.6969	0.7226	0.7235	0.6965	0.5855	0.5989	0.6035	0.6106	0.6058
Pos 11											1.111	1.0928	1.1324	1.0903	1.0803	1.05856	1.0517	1.0681	1.0571	0.9831	0.7976	0.8147	0.8288	0.8194	0.821
Pos 12												0.8389	0.87	0.8501	0.8728	0.88091	0.885	0.9021	0.9189	0.8669	0.7222	0.7487	0.7544	0.7438	0.7424
Pos 13													0.384	0.3849	0.4038	0.42034	0.4298	0.4494	0.4467	0.4469	0.3904	0.3945	0.4034	0.3944	0.4017
Pos 14														1.0529	1.0808	1.09803	1.1016	1.1148	1.1272	1.0604	0.7835	0.7979	0.7909	0.7781	0.7765
Pos 15															0.6229	0.6419	0.6391	0.6681	0.683	0.6354	0.5939	0.6076	0.6167	0.6125	0.6271
Pos 16																0.75425	0.768	0.7946	0.7875	0.7591	0.6768	0.6912	0.6871	0.6769	0.6978
Pos 17																	0.7887	0.812	0.8107	0.8051	0.6899	0.6927	0.7145	0.721	0.7215
Pos 18																		0.4775	0.4805	0.4434	0.3654	0.3692	0.3842	0.3866	0.3759
Pos 19																			0.8352	0.8105	0.6564	0.6697	0.6584	0.6388	0.645
Pos 20																				1.5718	1.388	1.3702	1.3734	1.3818	1.3578
Pos 21																					3.7207	3.6902	3.5995	3.5882	3.5308
Pos 22																						0.7861	0.7549	0.7758	0.7553
Pos 23																							0.8495	0.8781	0.8597
Pos 24																								0.9755	0.9837
Pos 25																									0.8322

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.10- Average Beta Estimates for Israel

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9988	1.0074	1.1056	1.1765	1.1603	1.185	1.19585	1.1477	1.1549	1.1442	1.0826	1.1012	1.16131	1.1637	1.155	1.1579	1.1994	1.2403	1.2599	1.2708	1.2897	1.3105	1.3409	1.3491
Pos 2		0.9967	1.0381	1.07	1.1078	1.0807	1.0909	1.09792	1.1063	1.0945	1.0931	1.04787	1.0632	1.12335	1.1189	1.1061	1.102	1.1375	1.1701	1.1792	1.1949	1.2145	1.2363	1.2666	1.27
Pos 3			1.9914	2.1354	2.2176	1.5904	1.6703	1.7041	1.5575	1.4754	1.3917	1.23659	1.193	1.25115	1.252	1.0266	1.0599	1.1002	1.136	1.1585	1.1545	1.1842	1.2348	1.2772	1.2913
Pos 4				0.8763	0.9164	0.8843	0.9217	0.94013	0.9083	0.9115	0.9261	0.85848	0.8769	0.92448	0.927	0.9241	0.9227	0.9562	0.9811	0.9967	1.0096	1.0276	1.0521	1.0716	1.0771
Pos 5					0.8162	0.7625	0.76	0.74936	0.7235	0.7231	0.7296	0.66999	0.6881	0.72634	0.7108	0.7036	0.7039	0.7279	0.7522	0.7583	0.7707	0.7931	0.8141	0.8345	0.8317
Pos 6						1.3023	1.3302	1.37359	1.3343	1.3379	1.3441	1.25685	1.2849	1.34844	1.3559	1.3572	1.3631	1.4127	1.456	1.4836	1.5064	1.5313	1.5681	1.6054	1.6132
Pos 7							0.8639	0.88293	0.8217	0.8036	0.8016	0.71834	0.7292	0.76208	0.7661	0.7517	0.7437	0.7651	0.7792	0.797	0.8046	0.8023	0.826	0.8356	0.8538
Pos 8								0.86262	0.8206	0.8009	0.7864	0.70389	0.7129	0.75089	0.7542	0.7461	0.7388	0.767	0.7826	0.8022	0.8127	0.8286	0.8531	0.8696	0.8727
Pos 9									1.2799	1.2367	1.2162	1.26664	1.2746	1.33354	1.3295	1.2795	1.2613	1.2975	1.3241	1.334	1.3595	1.3816	1.4105	1.4511	1.4548
Pos 10										1.114	1.1074	1.01547	1.0288	1.08138	1.1069	1.0847	1.0943	1.1327	1.1645	1.1833	1.1947	1.2207	1.2394	1.2726	1.284
Pos 11											1.0564	0.96918	0.9852	1.03616	1.0293	1.0115	1.0044	1.0436	1.0651	1.0882	1.1013	1.1358	1.1679	1.1902	1.2004
Pos 12												1.76621	1.6999	1.76432	1.7195	1.6443	1.6165	1.6464	1.6572	1.6469	1.6407	1.66	1.6773	1.7141	1.7057
Pos 13													0.867	0.90866	0.9143	0.9066	0.9106	0.9423	0.9632	0.9761	0.9865	0.9984	1.0246	1.049	1.0708
Pos 14														0.34674	0.3395	0.3263	0.3281	0.3425	0.3512	0.3518	0.3528	0.3677	0.3699	0.3807	0.3809
Pos 15															0.9944	0.9669	0.9595	0.989	1.0297	1.0468	1.0447	1.0047	1.0119	1.0174	1.0168
Pos 16																1.3038	1.3134	1.3615	1.3955	1.4138	1.4332	1.4599	1.4987	1.5311	1.5438
Pos 17																	0.9861	1.007	1.0413	1.0561	1.0531	1.0654	1.0738	1.1032	1.1024
Pos 18																		0.4611	0.4789	0.4823	0.4853	0.5007	0.5278	0.5422	0.5458
Pos 19																			0.5309	0.5345	0.5334	0.5347	0.5495	0.5644	0.5689
Pos 20																				0.6887	0.6959	0.7	0.7117	0.7253	0.7248
Pos 21																					0.7984	0.7943	0.81	0.8257	0.8254
Pos 22																						1.0434	1.0552	1.1039	1.1106
Pos 23																							0.5882	0.6008	0.6032
Pos 24																								0.5037	0.5084
Pos 25																									0.8896

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.11- Average Beta Estimates for Italy

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0416	0.9219	0.9422	0.9726	0.9598	0.9558	0.9634	0.92349	0.9599	0.9433	0.9416	0.9565	0.9977	0.99	1.0102	1.0293	1.0329	1.0494	1.045	1.0558	1.0528	1.064	1.086	1.0944
Pos 2		0.9383	0.9243	0.8285	0.8805	0.9005	0.9213	0.9315	0.93924	0.99469	0.984	1.0099	1.0321	1.0765	1.0522	1.0789	1.0892	1.0803	1.0662	1.0273	1.0439	1.0429	1.0709	1.0887	1.1015
Pos 3			1.1395	0.9982	1.055	1.0805	1.1074	1.1242	1.12754	1.18155	1.1591	1.1803	1.2035	1.2509	1.2238	1.2459	1.2593	1.2471	1.2436	1.2114	1.2258	1.2304	1.26	1.2838	1.2945
Pos 4				1.2131	1.2336	1.2069	1.2004	1.2161	1.16943	1.21797	1.2104	1.21	1.2205	1.2681	1.2668	1.2819	1.2964	1.3116	1.3233	1.3138	1.3335	1.3283	1.3435	1.3679	1.3796
Pos 5					0.8216	0.8863	0.9093	0.9235	0.9171	0.96467	0.94	0.9651	0.994	1.0422	1.017	1.0366	1.0528	1.0372	1.0278	0.9834	0.9972	0.9964	1.0101	1.0267	1.0367
Pos 6						0.9477	0.9907	1.012	1.00412	1.05781	1.0271	1.0521	1.0797	1.1299	1.0962	1.1165	1.1365	1.125	1.1057	1.0606	1.0764	1.0854	1.1049	1.1221	1.1365
Pos 7							0.9102	0.9382	0.94119	0.98951	0.9784	0.9957	1.0244	1.0649	1.0335	1.056	1.0721	1.0543	1.0437	1.0141	1.0345	1.0397	1.0635	1.0801	1.0911
Pos 8								0.874	0.85964	0.90158	0.9383	0.9505	0.976	1.0157	0.9777	0.9969	1.0134	1.0086	0.993	0.9609	0.984	0.9808	1.0006	1.0211	1.0323
Pos 9									1.1104	1.16933	1.1388	1.1651	1.1892	1.2359	1.2019	1.2265	1.2354	1.2246	1.2094	1.1647	1.1824	1.1859	1.2056	1.2277	1.2385
Pos 10										0.52329	0.5088	0.5163	0.5211	0.5396	0.5153	0.5288	0.5364	0.5331	0.5228	0.4942	0.511	0.5127	0.5262	0.5336	0.5476
Pos 11											1.0873	1.1067	1.1326	1.1817	1.1517	1.18	1.1909	1.1747	1.164	1.1246	1.1411	1.1315	1.1485	1.1702	1.1799
Pos 12												0.7787	0.8013	0.8336	0.787	0.807	0.8195	0.8127	0.7816	0.7354	0.7545	0.7547	0.7702	0.7865	0.7928
Pos 13													0.7102	0.7454	0.7135	0.7319	0.7517	0.751	0.7319	0.7016	0.7172	0.719	0.7397	0.7558	0.7687
Pos 14														0.4335	0.4259	0.441	0.4527	0.4459	0.4458	0.431	0.4387	0.4388	0.449	0.461	0.4709
Pos 15															1.2582	1.2805	1.289	1.2699	1.2767	1.2829	1.2954	1.2976	1.316	1.3398	1.3488
Pos 16																0.6429	0.6587	0.6527	0.6451	0.6187	0.6313	0.6259	0.6395	0.6507	0.6723
Pos 17																	0.7726	0.7734	0.7715	0.7565	0.7737	0.7715	0.7915	0.8084	0.8225
Pos 18																		1.1103	1.1136	1.0894	1.1052	1.1044	1.1224	1.1412	1.1534
Pos 19																			1.0969	1.1431	1.1452	1.1375	1.1579	1.1739	1.1786
Pos 20																				1.3105	1.3188	1.317	1.3422	1.363	1.3684
Pos 21																					0.6508	0.6535	0.6626	0.6782	0.6914
Pos 22																						1.0345	1.0493	1.0691	1.0849
Pos 23																							0.637	0.6527	0.6621
Pos 24																								0.4751	0.4841
Pos 25																									0.7156

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.12- Average Beta Estimates for Japan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8913	0.9371	0.9219	0.9497	1.0114	0.9901	1.0045	0.9549	1.0339	1.0105	0.9916	1.0027	1.0225	1.0135	1.0564	1.0273	1.0679	1.0474	1.0294	1.0314	1.0381	1.0234	1.0293	1.0066
Pos 2		1.0937	1.0568	1.0137	0.9626	1.0152	1.0194	1.0354	1.024	1.1059	1.0932	1.0838	1.0775	1.0729	1.0703	1.1088	1.0928	1.1324	1.1057	1.0964	1.0942	1.0987	1.0852	1.0821	1.0649
Pos 3			0.9923	0.9458	0.9231	0.9654	0.9012	0.8998	0.8449	0.8974	0.8576	0.834	0.8382	0.8453	0.8298	0.8631	0.8346	0.8685	0.8447	0.8258	0.8261	0.8364	0.8331	0.8373	0.8131
Pos 4				1.1195	1.1115	1.1851	1.1795	1.2066	1.1505	1.2341	1.1744	1.1679	1.1853	1.1843	1.1878	1.2247	1.2075	1.2495	1.2255	1.213	1.2294	1.2263	1.1978	1.2097	1.1901
Pos 5					1.0511	1.1237	1.0781	1.0742	1.0092	1.0817	1.038	1.0107	1.0346	1.049	1.0356	1.0751	1.0338	1.0734	1.0459	1.025	1.031	1.0345	1.0158	1.0337	1.006
Pos 6						0.7281	0.6757	0.6752	0.637	0.7045	0.6919	0.6662	0.6788	0.6859	0.6691	0.7075	0.6631	0.6965	0.6761	0.6647	0.6674	0.6698	0.6657	0.6715	0.6513
Pos 7							1.1492	1.1783	1.1467	1.2157	1.1797	1.1831	1.1909	1.1831	1.1936	1.2247	1.2288	1.265	1.2481	1.2422	1.2439	1.2386	1.2129	1.2123	1.2019
Pos 8								0.925	0.8963	0.9665	0.9365	0.9387	0.943	0.9487	0.9518	0.987	0.9736	1.008	0.9848	0.9779	0.9797	0.9822	0.965	0.9662	0.9528
Pos 9									1.3148	1.3996	1.3663	1.3662	1.3691	1.3599	1.3631	1.404	1.3839	1.4262	1.3983	1.3927	1.3926	1.3992	1.3819	1.3833	1.3656
Pos 10										0.3856	0.3991	0.3852	0.3855	0.3962	0.3816	0.4322	0.4007	0.4407	0.4196	0.4054	0.4026	0.4081	0.4155	0.4153	0.3977
Pos 11											1.1386	1.112	1.1197	1.1276	1.1085	1.1557	1.1256	1.1717	1.151	1.1321	1.1307	1.1372	1.172	1.1669	1.1405
Pos 12												1.1401	1.1467	1.1437	1.1596	1.1983	1.1875	1.2296	1.2056	1.2103	1.2128	1.2143	1.1946	1.1924	1.1806
Pos 13													0.8988	0.9138	0.8965	0.9307	0.8987	0.9316	0.9044	0.885	0.8892	0.8976	0.8891	0.9056	0.8846
Pos 14														0.9344	0.9204	0.9652	0.9351	0.9768	0.9561	0.9374	0.9366	0.9483	0.9382	0.9479	0.9235
Pos 15															1.0908	1.1218	1.1158	1.1543	1.142	1.1404	1.1454	1.1453	1.1231	1.1219	1.1145
Pos 16																0.4289	0.4025	0.4399	0.4249	0.4091	0.4079	0.4127	0.4159	0.4188	0.4034
Pos 17																	1.3247	1.3585	1.3509	1.3464	1.3455	1.3318	1.3008	1.2926	1.2901
Pos 18																		0.3585	0.3399	0.3279	0.3289	0.3362	0.3379	0.3415	0.3277
Pos 19																			1.3775	1.3616	1.3567	1.3554	1.3443	1.3401	1.3322
Pos 20																				1.2112	1.2092	1.2072	1.1867	1.183	1.1692
Pos 21																					0.9835	0.9894	0.9764	0.9833	0.9643
Pos 22																						0.9417	0.9394	0.9485	0.9237
Pos 23																							1.1323	1.132	1.1012
Pos 24																								0.9367	0.9029
Pos 25																									1.4237

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.13- Average Beta Estimates for Mexico

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9426	1.1482	1.0055	0.9693	0.9822	0.9822	0.9751	1.0701	1.0685	1.1202	1.1274	1.1846	1.1776	1.0948	1.1172	1.139	1.1233	1.1642	1.1927	1.2293	1.1641	1.1901	1.179	1.1444
Pos 2		1.0619	1.3282	1.2236	1.1883	1.2105	1.2214	1.2367	1.3479	1.353	1.4156	1.409	1.4673	1.444	1.3086	1.3425	1.3691	1.3525	1.3995	1.4244	1.4657	1.3846	1.4082	1.4014	1.3816
Pos 3			0.6668	0.5304	0.4474	0.4166	0.411	0.3852	0.4343	0.4465	0.4761	0.4733	0.5039	0.4982	0.4752	0.4835	0.4992	0.4773	0.4996	0.5186	0.5388	0.5122	0.5246	0.5183	0.4605
Pos 4				1.3753	1.3171	1.3376	1.3598	1.3711	1.4992	1.5094	1.5787	1.599	1.6729	1.6701	1.4876	1.5207	1.5508	1.5379	1.5947	1.6319	1.6822	1.5863	1.6172	1.62	1.5806
Pos 5					1.2239	1.2493	1.2684	1.2752	1.3926	1.3954	1.455	1.4722	1.5394	1.5254	1.3949	1.4234	1.4424	1.4356	1.4856	1.5176	1.5617	1.4973	1.5257	1.5178	1.4757
Pos 6						0.9396	0.9422	0.9512	1.0426	1.0567	1.1059	1.0991	1.1477	1.1384	1.014	1.0361	1.0586	1.0395	1.0766	1.0986	1.1313	1.041	1.0571	1.0595	1.009
Pos 7							0.9445	0.9462	1.0378	1.0432	1.0957	1.106	1.1641	1.1672	1.0761	1.0906	1.1138	1.1019	1.1444	1.1703	1.2084	1.137	1.163	1.1668	1.1446
Pos 8								0.9792	1.0791	1.0977	1.1487	1.1497	1.2036	1.1978	1.1284	1.1484	1.1688	1.1398	1.1849	1.2115	1.252	1.2069	1.2282	1.2226	1.1769
Pos 9									0.2862	0.296	0.3209	0.323	0.3485	0.3551	0.3298	0.341	0.3568	0.3598	0.3796	0.3946	0.413	0.3992	0.4126	0.4129	0.3915
Pos 10										0.9118	0.946	0.9134	0.9587	0.9938	0.8152	0.8432	0.8653	0.8562	0.8864	0.8951	0.9215	0.8692	0.8855	0.8906	0.8446
Pos 11											0.4787	0.4631	0.5042	0.5054	0.4879	0.5014	0.5113	0.481	0.5047	0.5226	0.5444	0.5235	0.5374	0.5231	0.4768
Pos 12												1.0256	1.075	1.0799	0.9493	0.9722	0.9843	0.9821	1.0182	1.0465	1.0784	1.0139	1.0377	1.0325	1.0026
Pos 13													0.4411	0.4484	0.3813	0.3992	0.4131	0.4014	0.424	0.4413	0.4624	0.444	0.4604	0.4607	0.4355
Pos 14														0.9938	0.8776	0.9029	0.9139	0.9009	0.931	0.9494	0.9758	0.8956	0.9182	0.9258	0.8529
Pos 15															1.6508	1.6569	1.6964	1.6807	1.7195	1.7444	1.7757	1.6855	1.7057	1.686	1.6485
Pos 16																0.7713	0.7885	0.7811	0.8119	0.834	0.8616	0.8281	0.8489	0.8521	0.8223
Pos 17																	0.6763	0.6583	0.692	0.7152	0.7465	0.7271	0.7465	0.7449	0.707
Pos 18																		1.1379	1.1764	1.1954	1.2291	1.1845	1.2119	1.207	1.1599
Pos 19																			0.3486	0.3642	0.3826	0.3642	0.3759	0.3805	0.3605
Pos 20																				0.5306	0.5534	0.5265	0.5421	0.5474	0.51
Pos 21																					0.3826	0.3642	0.3759	0.3805	0.3605
Pos 22																						1.4815	1.49	1.4566	1.3319
Pos 23																							0.519	0.5227	0.5055
Pos 24																								1.1709	1.1273
Pos 25																									1.9172

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.14- Average Beta Estimates for New Zealand

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.86354	0.8958	0.8163	0.9008	0.964	0.9994	1.0055	1.0283	1.0534	1.0666	1.0866	1.0744	1.1053	1.1171	1.0938	1.0904	1.077	1.0568	1.0634	1.0505	1.0552	1.0555	1.0556	1.0683
Pos 2		1.1562	1.2028	1.1239	1.2186	1.2757	1.3176	1.3192	1.3405	1.3521	1.358	1.372	1.3428	1.3701	1.3781	1.3488	1.3542	1.323	1.2927	1.2964	1.2768	1.2887	1.2933	1.3	1.3237
Pos 3			0.9143	0.772	0.8745	0.9318	0.9757	0.9789	1.005	1.0237	1.0359	1.0511	1.0396	1.0633	1.0781	1.0554	1.0423	1.0136	0.9838	0.995	0.9947	1.0052	1.0121	1.0043	1.0204
Pos 4				1.3936	1.5153	1.6436	1.6923	1.6877	1.7105	1.7189	1.7402	1.7449	1.69	1.7116	1.7266	1.6822	1.6889	1.6496	1.6392	1.6484	1.6446	1.6588	1.6656	1.6795	1.7012
Pos 5					0.6342	0.6843	0.7243	0.7266	0.7536	0.7638	0.7839	0.7954	0.7789	0.8072	0.8334	0.8358	0.8387	0.8292	0.8185	0.8344	0.8432	0.8527	0.8576	0.8562	0.8751
Pos 6						0.6935	0.7338	0.7274	0.748	0.7633	0.7802	0.7847	0.7857	0.8064	0.8163	0.7866	0.7961	0.7862	0.7736	0.7798	0.7792	0.7913	0.7912	0.796	0.8071
Pos 7							0.7366	0.746	0.7738	0.7989	0.8207	0.8381	0.8259	0.8452	0.8556	0.854	0.8522	0.8306	0.8228	0.8345	0.8412	0.8537	0.8575	0.8675	0.8847
Pos 8								0.9529	0.9857	1.0189	1.0363	1.0491	1.0328	1.0652	1.0766	1.0402	1.0428	1.042	1.0123	1.02	1.0226	1.0326	1.0351	1.0471	1.0628
Pos 9									0.7778	0.8016	0.8247	0.8385	0.8218	0.8484	0.862	0.8492	0.8476	0.8452	0.8323	0.8355	0.8449	0.8595	0.8631	0.8624	0.8839
Pos 10										0.8282	0.8549	0.873	0.8645	0.886	0.9009	0.8833	0.881	0.8721	0.8698	0.8784	0.8813	0.8991	0.9058	0.9233	0.9403
Pos 11											0.8154	0.8345	0.8263	0.855	0.872	0.8558	0.8497	0.8354	0.807	0.8207	0.8259	0.8404	0.8427	0.8512	0.866
Pos 12												0.8501	0.8229	0.8459	0.8578	0.8323	0.8433	0.8252	0.8037	0.8127	0.8055	0.8171	0.8263	0.8278	0.8449
Pos 13													1.1959	1.2126	1.2066	1.2112	1.1742	1.1558	1.1453	1.1542	1.1324	1.1359	1.126	1.1355	1.1454
Pos 14														0.6773	0.697	0.6856	0.6855	0.6734	0.6637	0.6712	0.678	0.6812	0.6861	0.6862	0.6974
Pos 15															0.8159	0.8144	0.8182	0.8072	0.7917	0.8018	0.8	0.8185	0.8205	0.8244	0.8412
Pos 16																1.2523	1.2081	1.1769	1.1701	1.1705	1.1616	1.1441	1.1406	1.1153	1.1264
Pos 17																	1.0636	1.0618	1.0433	1.0519	1.0556	1.0717	1.0857	1.0781	1.1
Pos 18																		1.2802	1.2355	1.2403	1.2001	1.1902	1.1926	1.1824	1.1961
Pos 19																			1.2685	1.2791	1.2537	1.2464	1.2465	1.2379	1.2398
Pos 20																				0.8387	0.8265	0.8323	0.833	0.8324	0.8487
Pos 21																					1.0859	1.0979	1.1068	1.0868	1.1071
Pos 22																						0.8153	0.8136	0.8196	0.8278
Pos 23																							0.9256	0.9338	0.949
Pos 24																								0.9563	0.9591
Pos 25																									0.6848

* Pos 1,...,Pos 25 represents the twenty-five positions
** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.15- Average Beta Estimates for South Africa

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9014	0.8923	0.9686	0.9426	0.9137	0.9012	0.8823	0.9068	0.8888	0.8832	0.8913	0.90028	0.8947	0.9031	0.9004	0.9207	0.9112	0.9132	0.9219	0.9183	0.9329	0.9365	0.9446	0.946
Pos 2		1.0905	1.0159	0.9534	0.8214	0.7713	0.7162	0.6526	0.6449	0.883	0.8507	0.8242	0.80194	0.7667	0.7533	0.7325	0.7409	0.7189	0.7132	0.7014	0.6878	0.6973	0.7763	0.7755	0.7674
Pos 3			1.0368	1.0627	1.0113	1.0936	1.0408	0.9928	0.9957	0.9963	0.9842	0.9846	0.98204	0.9685	0.9633	0.9502	0.9556	0.9475	0.9479	0.9445	0.9335	0.9475	0.9611	0.9632	0.9601
Pos 4				0.9372	1.0602	0.9876	1.0745	1.1014	1.0839	1.0322	1.062	1.0864	1.09678	1.1044	1.1177	1.1197	1.1427	1.144	1.1548	1.142	1.1488	1.167	1.1609	1.1746	1.1744
Pos 5					1.0817	1.003	1.0758	1.1096	1.1077	1.0616	1.0875	1.1158	1.1311	1.1415	1.1565	1.1571	1.1791	1.1848	1.1999	1.1866	1.188	1.2079	1.2035	1.2159	1.2199
Pos 6						1.1082	1.0448	0.982	0.9903	0.9942	0.98	0.9754	0.96512	0.9502	0.9449	0.9346	0.9413	0.9281	0.9263	0.9269	0.9188	0.9317	0.9467	0.9496	0.9499
Pos 7							1.0399	1.0694	1.0522	1.0058	1.0399	1.0682	1.08354	1.0928	1.1081	1.1046	1.1283	1.1321	1.1419	1.1291	1.1337	1.1539	1.1493	1.1613	1.1637
Pos 8								1.0862	1.0792	1.0214	1.044	1.0647	1.07933	1.0887	1.1063	1.1089	1.1327	1.1311	1.1429	1.1215	1.124	1.1433	1.1361	1.1463	1.1473
Pos 9									1.0236	1.0071	0.9955	0.9973	1.00045	0.9939	0.9996	0.996	1.0102	1.0038	1.0144	1.0304	1.0184	1.0314	1.0395	1.0482	1.0457
Pos 10										0.9526	0.8955	0.8485	0.81676	0.7708	0.7421	0.7147	0.7233	0.6971	0.6872	0.6668	0.6518	0.6631	0.7614	0.7567	0.7525
Pos 11											1.0142	1.0306	1.04853	1.0481	1.06	1.0501	1.0685	1.0673	1.0777	1.067	1.1237	1.1427	1.141	1.1499	1.1538
Pos 12												0.9532	0.9728	0.983	1.004	1.0042	1.0287	1.0335	1.0445	1.0371	1.0344	1.0529	1.0519	1.0625	1.068
Pos 13													0.96999	0.9719	0.9861	0.9856	1.0078	1.017	1.026	1.0135	1.0189	1.0389	1.0393	1.0484	1.0521
Pos 14														1.0819	1.1028	1.1045	1.1256	1.1323	1.1421	1.1305	1.1317	1.1526	1.1533	1.1654	1.1692
Pos 15															0.9138	0.9154	0.9422	0.9515	0.9683	0.9655	0.9643	0.9839	0.9829	0.9955	1.002
Pos 16																1.0739	1.0958	1.0954	1.1105	1.106	1.1004	1.1183	1.1268	1.1396	1.1442
Pos 17																	0.7105	0.7132	0.7212	0.713	0.711	0.7224	0.7323	0.7416	0.7462
Pos 18																		1.0434	1.0551	1.0411	1.0351	1.0567	1.054	1.0614	1.0677
Pos 19																			0.8538	0.8505	0.8475	0.8646	0.8653	0.8744	0.8741
Pos 20																				1.186	1.1721	1.1909	1.1945	1.1989	1.2014
Pos 21																					1.0158	1.034	1.0371	1.0481	1.0515
Pos 22																						0.6317	0.6372	0.6464	0.6504
Pos 23																							0.8052	0.8059	0.8023
Pos 24																								0.8141	0.8187
Pos 25																									0.9431

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.16- Average Beta Estimates for Singapore

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9689	0.995	1.029	1.0546	1.0847	1.1116	1.0635	1.0263	1.0421	1.0256	1.1214	1.1368	1.1783	1.2221	1.246	1.2583	1.2583	1.2599	1.2379	1.2438	1.211	1.229	1.1989	1.2103
Pos 2		1.0299	1.0353	1.0816	1.1088	1.1522	1.1804	1.1255	1.0896	1.1063	1.092	1.1955	1.2067	1.2556	1.3035	1.329	1.3335	1.321	1.3132	1.2921	1.2848	1.2463	1.2555	1.229	1.238
Pos 3			0.9679	1.0024	1.0379	1.0811	1.114	1.0698	1.0402	1.0613	1.0334	1.1318	1.1464	1.19	1.2391	1.2691	1.2786	1.2807	1.2831	1.2576	1.2575	1.2223	1.2395	1.2138	1.2294
Pos 4				0.875	0.9063	0.9557	0.992	0.9372	0.9023	0.938	0.9386	1.0275	1.0422	1.0845	1.123	1.151	1.1618	1.1627	1.1573	1.1501	1.1543	1.1146	1.1214	1.0996	1.1132
Pos 5					0.8863	0.9148	0.9262	0.8633	0.8239	0.8489	0.8338	0.9186	0.9252	0.9636	1.0076	1.0299	1.0373	1.0285	1.0227	1.0076	1.0118	0.9814	0.9897	0.9795	0.9892
Pos 6						0.7375	0.7519	0.6814	0.6392	0.6536	0.6427	0.7107	0.7189	0.7597	0.7956	0.8219	0.83	0.8318	0.8308	0.8293	0.8337	0.8033	0.8117	0.7962	0.8074
Pos 7							0.8133	0.781	0.7719	0.7965	0.7944	0.8698	0.882	0.9166	0.9507	0.9871	0.9954	0.9932	0.9972	0.9933	0.9948	0.9823	0.9955	0.9961	1.0106
Pos 8								1.3554	1.3749	1.4074	1.3862	1.5159	1.5173	1.5716	1.6329	1.6777	1.6988	1.6955	1.6855	1.6705	1.6741	1.6539	1.6707	1.6381	1.6542
Pos 9									1.2005	1.2309	1.2195	1.3284	1.339	1.3834	1.4349	1.4609	1.488	1.4931	1.4869	1.48	1.4885	1.4933	1.5081	1.4789	1.4883
Pos 10										0.7551	0.7409	0.81	0.8171	0.8519	0.8857	0.9152	0.9174	0.9139	0.9086	0.9098	0.9159	0.8841	0.8903	0.8753	0.8885
Pos 11											1.1394	1.2424	1.2632	1.3205	1.3621	1.3946	1.4174	1.4278	1.43	1.4127	1.4285	1.3963	1.4049	1.386	1.4023
Pos 12												0.0962	0.092	0.0986	0.1025	0.1027	0.0929	0.0892	0.0856	0.0801	0.0788	0.0715	0.0705	0.0654	0.0665
Pos 13													0.8964	0.9273	0.973	1.0047	1.0211	1.0282	1.0247	0.9986	1.0007	0.9738	0.9839	0.9748	0.9797
Pos 14														0.4552	0.473	0.4846	0.4833	0.4852	0.486	0.4814	0.4852	0.4705	0.4735	0.4705	0.4793
Pos 15															0.4303	0.4399	0.4333	0.4345	0.4298	0.4102	0.4081	0.3921	0.3915	0.3746	0.3775
Pos 16																0.6612	0.6659	0.6648	0.6628	0.6548	0.6633	0.6362	0.6429	0.6276	0.6364
Pos 17																	0.8457	0.8503	0.8511	0.8424	0.8589	0.8506	0.8619	0.8493	0.8604
Pos 18																		0.9876	1.0049	0.9898	1.0169	0.9967	1.0076	0.9892	1.0128
Pos 19																			1.0293	1.0187	1.0241	0.9981	1.0047	0.9916	1.0132
Pos 20																				1.1532	1.16	1.1157	1.1214	1.1081	1.1227
Pos 21																					0.8842	0.8647	0.8742	0.8542	0.8737
Pos 22																						1.523	1.5406	1.5144	1.5292
Pos 23																							0.7751	0.7646	0.7713
Pos 24																								1.3051	1.3166
Pos 25																									0.7047

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.17- Average Beta Estimates for South Korea

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9757	1.0829	1.1507	1.1373	1.1751	1.1938	1.1856	1.1568	1.1561	1.1528	1.1553	1.1232	1.0994	1.137	1.1021	1.0509	1.0517	1.0327	1.0545	1.0508	0.9817	0.9756	0.9843	0.9956
Pos 2		1.0122	1.0633	1.1272	1.0536	1.0533	0.9963	0.9973	0.9748	0.9677	0.9699	0.9727	0.9357	0.9165	0.9525	0.9203	0.8719	0.8878	0.8719	0.8889	0.8821	0.8283	0.8219	0.8333	0.8449
Pos 3			0.8399	0.9085	0.8876	0.8791	0.8232	0.8347	0.8169	0.799	0.8045	0.8129	0.7961	0.7883	0.8175	0.7872	0.7471	0.755	0.7452	0.7635	0.7664	0.7356	0.7294	0.7342	0.7436
Pos 4				0.8048	0.7785	0.771	0.7139	0.7325	0.7121	0.6991	0.7053	0.7104	0.6902	0.6826	0.7122	0.6896	0.6548	0.6585	0.6514	0.6686	0.6707	0.6371	0.6314	0.6394	0.6496
Pos 5					1.1428	1.1558	1.0988	1.1198	1.1347	1.123	1.1324	1.1455	1.1357	1.1234	1.159	1.1348	1.0951	1.0987	1.0904	1.1153	1.1161	1.0788	1.0718	1.0777	1.0876
Pos 6						0.9758	0.9427	0.9491	0.9405	0.9532	0.9653	0.9765	0.9561	0.9401	0.9697	0.9441	0.9066	0.9109	0.9013	0.9182	0.9193	0.8787	0.875	0.8855	0.8943
Pos 7							1.2696	1.259	1.2169	1.2235	1.2231	1.2278	1.1969	1.1681	1.1985	1.1639	1.1144	1.1179	1.097	1.116	1.114	1.0574	1.0533	1.0609	1.0721
Pos 8								0.9587	0.9592	0.9392	0.9644	0.9721	1.0108	1.055	1.0909	1.0813	1.0535	1.0518	1.076	1.0959	1.0952	1.0535	1.0426	1.0505	1.0628
Pos 9									0.9969	0.9597	0.9621	0.9682	0.9653	0.9455	0.9793	0.95	0.9104	0.9	0.8856	0.9044	0.9039	0.8686	0.8658	0.8734	0.8823
Pos 10										1.0975	1.0984	1.1069	1.0849	1.0667	1.0994	1.0742	1.0345	1.0391	1.0244	1.0418	1.0425	0.9841	0.9798	0.9878	0.9963
Pos 11											0.9562	0.9682	0.9603	0.9677	0.9973	0.9882	0.9599	0.9621	0.9609	0.9763	0.9758	0.943	0.9353	0.9415	0.9488
Pos 12												0.8881	0.8776	0.8745	0.9027	0.8794	0.8426	0.8467	0.8415	0.8686	0.8778	0.8471	0.8415	0.8646	0.8777
Pos 13													1.1438	1.1757	1.1975	1.1823	1.1667	1.1599	1.176	1.2002	1.1959	1.1725	1.1628	1.1696	1.1774
Pos 14														1.0988	1.13	1.1197	1.0954	1.098	1.1247	1.1456	1.14	1.1089	1.0983	1.1048	1.1138
Pos 15															0.5756	0.5504	0.5206	0.5233	0.5166	0.5313	0.5411	0.5147	0.5077	0.5109	0.5241
Pos 16																1.3313	1.3329	1.3275	1.3291	1.3511	1.3473	1.3136	1.3091	1.3146	1.3251
Pos 17																	1.4944	1.4914	1.4906	1.5147	1.5118	1.4839	1.4794	1.486	1.5
Pos 18																		0.9924	0.9842	1.0045	1.0088	0.9552	0.9553	0.9681	0.9753
Pos 19																			1.0661	1.0907	1.0906	1.0575	1.0481	1.0562	1.0663
Pos 20																				0.6128	0.6157	0.5945	0.59	0.6038	0.6187
Pos 21																					1.021	0.9714	0.9671	0.9751	0.9874
Pos 22																						1.2953	1.2888	1.2906	1.301
Pos 23																							1.1604	1.1716	1.1837
Pos 24																								0.8037	0.8175
Pos 25																									0.6904

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.18- Average Beta Estimates for Spain

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0369	1.0265	1.1158	1.1918	1.261	1.2857	1.2778	1.3025	1.3443	1.4146	1.3949	1.3918	1.3894	1.4124	1.4376	1.4424	1.457	1.4491	1.4634	1.4819	1.4828	1.5115	1.54	1.5628
Pos 2		0.9581	0.9982	1.1163	1.2219	1.3253	1.3755	1.3853	1.4373	1.4936	1.5755	1.5872	1.5962	1.6033	1.6233	1.6652	1.6769	1.6577	1.6507	1.6641	1.683	1.6676	1.6552	1.6931	1.7219
Pos 3			0.9637	1.0743	1.1623	1.2669	1.3203	1.3266	1.3644	1.4132	1.4836	1.487	1.4902	1.4945	1.5092	1.5485	1.5615	1.5539	1.5524	1.5625	1.5784	1.566	1.561	1.5972	1.6263
Pos 4				0.6664	0.7236	0.7957	0.8408	0.8566	0.8863	0.9335	0.9833	0.9762	0.9787	0.9714	0.9648	0.9896	0.987	0.962	0.9599	0.9743	0.989	0.976	0.9511	0.9756	0.9958
Pos 5					0.697	0.8178	0.8511	0.8771	0.9243	0.9611	1.0127	1.0066	1.0314	1.0398	1.0465	1.0759	1.0802	1.0627	1.0539	1.0709	1.0925	1.0766	1.0635	1.0906	1.1122
Pos 6						0.5301	0.55	0.5628	0.5909	0.6136	0.6508	0.6456	0.6685	0.6717	0.6674	0.6906	0.6931	0.6761	0.6679	0.676	0.6879	0.6807	0.661	0.6822	0.6999
Pos 7							0.7555	0.7568	0.79	0.8327	0.8869	0.8868	0.8905	0.8898	0.9042	0.9291	0.9384	0.9293	0.9379	0.9434	0.9611	0.9513	0.9298	0.9537	0.9805
Pos 8								0.9148	0.9475	0.9805	1.0293	1.0319	1.0476	1.0447	1.0548	1.0862	1.0774	1.0581	1.0546	1.0715	1.0913	1.085	1.0615	1.0882	1.1106
Pos 9									0.7317	0.7581	0.8056	0.787	0.798	0.7869	0.7777	0.8088	0.7942	0.7758	0.7677	0.7788	0.7983	0.7819	0.7568	0.7785	0.7983
Pos 10										0.5976	0.637	0.6434	0.6464	0.6503	0.65	0.6765	0.6707	0.6589	0.6669	0.6755	0.6994	0.6833	0.6766	0.6994	0.7245
Pos 11											0.4601	0.4605	0.4582	0.458	0.4623	0.4928	0.4859	0.4802	0.4818	0.4879	0.5046	0.4988	0.4877	0.5102	0.5298
Pos 12												1.0305	1.0267	1.0296	1.0539	1.085	1.0825	1.0586	1.0585	1.0615	1.0758	1.0835	1.0607	1.0908	1.1176
Pos 13													0.9279	0.9314	0.9403	0.9732	0.9642	0.9459	0.9331	0.9447	0.9658	0.9473	0.9244	0.9508	0.972
Pos 14														0.9896	1.0017	1.0346	1.0454	1.0312	1.0268	1.0273	1.0418	1.0241	1.0068	1.035	1.053
Pos 15															0.8766	0.8965	0.8898	0.8886	0.8843	0.8893	0.897	0.8994	0.9057	0.9325	0.9521
Pos 16																0.5101	0.5001	0.4822	0.4918	0.5029	0.5258	0.5135	0.4956	0.5191	0.5373
Pos 17																	1.0189	0.9987	0.9938	0.9928	1.0043	0.994	0.9852	1.0089	1.031
Pos 18																		1.2135	1.2078	1.2043	1.2187	1.2154	1.218	1.2486	1.2733
Pos 19																			1.0152	1.0196	1.0433	1.0371	1.0251	1.0526	1.0847
Pos 20																				0.8621	0.8815	0.8722	0.8594	0.8843	0.9101
Pos 21																					0.6535	0.6338	0.614	0.6361	0.6579
Pos 22																						1.1871	1.1834	1.2123	1.2378
Pos 23																							1.2601	1.2896	1.3163
Pos 24																								0.3299	0.3463
Pos 25																									0.4397

* Pos 1,...,Pos 25 represents the twenty-five positions
** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.19- Average Beta Estimates for Sweden																									
Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.6806	0.8375	0.9322	0.9992	1.0029	1.0444	1.0668	1.0382	1.0474	0.9901	0.9838	1.0062	1.0034	0.9768	0.9828	0.9977	0.9952	1.0165	1.0397	1.0404	1.0507	1.0381	1.0677	1.0853
Pos 2		1.226	1.4518	1.5912	1.6765	1.6566	1.7225	1.7177	1.6881	1.7366	1.6474	1.6427	1.6674	1.7127	1.6698	1.6861	1.72	1.7171	1.7489	1.7877	1.7898	1.8019	1.7787	1.8124	1.8373
Pos 3			0.4799	0.534	0.6027	0.6287	0.6687	0.6755	0.6818	0.6967	0.6568	0.6626	0.6842	0.6836	0.6806	0.6925	0.7102	0.7143	0.7308	0.7489	0.7396	0.7485	0.736	0.7512	0.7624
Pos 4				0.642	0.698	0.7194	0.7499	0.7636	0.7639	0.7719	0.7227	0.7312	0.7471	0.7462	0.738	0.7473	0.7602	0.7728	0.7911	0.8086	0.8047	0.8153	0.8085	0.8254	0.8424
Pos 5					0.6604	0.7125	0.775	0.7775	0.8346	0.8448	0.7863	0.8211	0.8461	0.8392	0.862	0.8815	0.8952	0.909	0.9289	0.9497	0.9281	0.9402	0.9128	0.9306	0.9408
Pos 6						0.8876	0.9445	0.9564	0.9847	0.9918	0.9168	0.9357	0.9658	0.9556	0.9631	0.9832	0.999	1.0094	1.0341	1.0589	1.0461	1.0615	1.0367	1.0555	1.0699
Pos 7							0.6327	0.6263	0.645	0.6571	0.6071	0.6207	0.6384	0.6413	0.6428	0.6708	0.6882	0.6976	0.7128	0.7331	0.7161	0.7275	0.7037	0.7195	0.7278
Pos 8								0.9121	0.8965	0.8973	0.8489	0.842	0.8545	0.8519	0.8335	0.8343	0.8464	0.8561	0.8706	0.8894	0.8893	0.8963	0.8876	0.9124	0.9219
Pos 9									0.9735	0.9819	0.9075	0.9396	0.9649	0.9552	1.0205	1.0378	1.051	1.0673	1.0929	1.119	1.097	1.1122	1.0814	1.1005	1.1133
Pos 10										0.888	0.8452	0.8528	0.8738	0.8878	0.8759	0.8932	0.9148	0.9171	0.9412	0.9663	0.9605	0.9722	0.9584	0.9806	1.0001
Pos 11											1.6126	1.62	1.6536	1.664	1.6343	1.6491	1.6711	1.6779	1.7073	1.7449	1.7465	1.7622	1.7374	1.7709	1.7999
Pos 12												0.866	0.887	0.8833	0.8919	0.907	0.9219	0.939	0.9672	0.9882	0.9748	0.9877	0.9665	0.9855	0.9995
Pos 13													0.7224	0.7211	0.7185	0.7366	0.7493	0.7573	0.7798	0.8026	0.7902	0.8032	0.7834	0.8051	0.8197
Pos 14														0.9601	0.9386	0.9523	0.9749	0.9779	1.0038	1.0296	1.0275	1.0368	1.0226	1.0492	1.0665
Pos 15															1.0691	1.0883	1.1001	1.1158	1.1432	1.17	1.1477	1.1633	1.1303	1.1505	1.1639
Pos 16																0.7601	0.7792	0.7854	0.8062	0.8342	0.8216	0.8316	0.8069	0.8252	0.8367
Pos 17																	0.7182	0.7262	0.743	0.7652	0.7582	0.769	0.7412	0.7612	0.7801
Pos 18																		0.8534	0.884	0.9034	0.8876	0.9013	0.8873	0.9106	0.9253
Pos 19																			0.6153	0.6299	0.627	0.6389	0.6317	0.6496	0.6646
Pos 20																				0.4789	0.4737	0.4803	0.4737	0.4907	0.505
Pos 21																					1.1775	1.1892	1.1812	1.208	1.2339
Pos 22																						0.7177	0.7061	0.7248	0.7436
Pos 23																							1.3886	1.4193	1.4519
Pos 24																								0.4685	0.4845
Pos 25																									0.5323

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.20- Average Beta Estimates for Switzerland

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.018	0.9197	0.9556	0.8138	0.7997	0.7312	0.7416	0.7091	0.7047	0.7072	0.6692	0.6924	0.6603	0.6688	0.6737	0.703	0.6976	0.7209	0.7048	0.7151	0.7356	0.7238	0.7247	0.7464
Pos 2		0.9804	0.8606	0.8788	0.7412	0.7239	0.6598	0.6615	0.6348	0.6349	0.6304	0.6047	0.6266	0.6132	0.6215	0.6252	0.6545	0.6517	0.6743	0.6461	0.6593	0.6793	0.6616	0.6617	0.6856
Pos 3			1.2364	1.2505	1.2058	1.1579	1.0675	1.0825	1.0784	1.0798	1.0839	1.0485	1.0747	1.0426	1.0568	1.0598	1.1078	1.105	1.1361	1.1286	1.1444	1.1726	1.1745	1.1814	1.2111
Pos 4				0.9323	0.8111	0.7782	0.7114	0.7234	0.7008	0.7049	0.7117	0.6782	0.697	0.6738	0.6832	0.685	0.719	0.7168	0.7417	0.7296	0.7429	0.7656	0.7512	0.7558	0.7792
Pos 5					1.4608	1.4016	1.2918	1.3145	1.3056	1.3141	1.3165	1.2715	1.3051	1.256	1.2735	1.2772	1.3307	1.3238	1.3612	1.3505	1.3655	1.398	1.3992	1.4085	1.4455
Pos 6						1.1406	1.0667	1.0668	1.0416	1.0527	1.0551	1.001	1.0346	1.013	1.0195	1.0288	1.0734	1.0627	1.0983	1.0743	1.0947	1.1253	1.1061	1.1102	1.1442
Pos 7							1.4399	1.4534	1.4096	1.4161	1.4211	1.3492	1.3837	1.3416	1.3521	1.356	1.4137	1.4049	1.4491	1.4133	1.4358	1.4786	1.4601	1.4674	1.512
Pos 8								0.9021	0.8788	0.8726	0.8909	0.8344	0.8657	0.8214	0.8356	0.8328	0.8642	0.8557	0.8843	0.881	0.893	0.9185	0.9159	0.9214	0.9473
Pos 9									1.2077	1.2129	1.2222	1.1758	1.2113	1.1856	1.2041	1.1945	1.2517	1.2313	1.2686	1.2717	1.3019	1.3364	1.3321	1.3353	1.3644
Pos 10										0.9663	0.9624	0.9146	0.9399	0.9096	0.9135	0.9135	0.9593	0.9305	0.9513	0.9327	0.9553	0.9812	0.9582	0.9582	0.9849
Pos 11											0.9672	0.9144	0.9437	0.9055	0.9229	0.916	0.9505	0.9425	0.9676	0.9759	0.9942	1.0187	1.01	1.0109	1.0394
Pos 12												1.4542	1.4854	1.4508	1.4506	1.4301	1.5005	1.4816	1.5247	1.4992	1.5233	1.5653	1.5606	1.5647	1.6067
Pos 13													0.6243	0.6038	0.6102	0.606	0.6377	0.628	0.6527	0.6573	0.6773	0.7003	0.6924	0.6984	0.7236
Pos 14														1.3068	1.303	1.2917	1.3411	1.3219	1.3462	1.3265	1.3463	1.3637	1.3306	1.3181	1.3521
Pos 15															0.8822	0.8811	0.9277	0.9177	0.9449	0.9408	0.9544	0.9806	0.9755	0.983	1.0136
Pos 16																0.9866	1.0388	1.0395	1.0777	1.0576	1.0786	1.1118	1.0991	1.1054	1.1417
Pos 17																	0.3114	0.3066	0.321	0.3059	0.3111	0.326	0.3132	0.3155	0.3316
Pos 18																		1.118	1.1604	1.1365	1.1513	1.1895	1.1733	1.1839	1.2209
Pos 19																			0.4495	0.4338	0.4432	0.4613	0.4546	0.4603	0.4793
Pos 20																				1.3494	1.3545	1.3814	1.3872	1.3937	1.4188
Pos 21																					0.6444	0.6618	0.6522	0.6573	0.6798
Pos 22																						0.4653	0.4507	0.4595	0.4778
Pos 23																							1.2302	1.2341	1.2637
Pos 24																								0.9074	0.9378
Pos 25																									0.2949

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.21- Average Beta Estimates for Taiwan

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.1616	1.196	1.2018	1.2586	1.222	1.2016	1.1712	1.104	1.1302	1.13772	1.1185	1.1318	1.1156	1.0799	1.0715	1.0579	1.0569	1.0392	1.0441	1.0295	1.0137	1.0125	1.0031	1.0143
Pos 2		0.8437	0.7969	0.8162	0.8918	0.8843	0.9065	0.9136	0.9084	0.8703	0.89383	0.8971	0.8791	0.8665	0.8643	0.8617	0.8586	0.8645	0.8483	0.8393	0.8428	0.8328	0.8401	0.8355	0.8263
Pos 3			1.0186	1.002	1.0489	1.01	0.9968	0.9651	0.9105	0.9148	0.93162	0.9248	0.9603	0.9572	0.9248	0.909	0.903	0.8956	0.8754	0.87	0.8525	0.8345	0.8309	0.8202	0.8311
Pos 4				0.9905	1.0869	1.1527	1.1365	1.1319	1.0843	1.0571	1.07831	1.0801	1.0686	1.0637	1.0447	1.0471	1.0507	1.0636	1.0521	1.0496	1.0417	1.0366	1.043	1.0404	1.0383
Pos 5					0.7123	0.7137	0.7109	0.7114	0.6851	0.6456	0.67272	0.6826	0.6721	0.6711	0.659	0.6649	0.6667	0.6775	0.6695	0.6601	0.657	0.6574	0.664	0.6663	0.6546
Pos 6						1.0285	1.0053	0.9918	0.9504	0.9126	0.93724	0.9432	0.9282	0.9271	0.9091	0.9162	0.9214	0.9328	0.9183	0.9119	0.9025	0.8985	0.9063	0.9044	0.8983
Pos 7							1.0543	1.0735	1.0735	1.036	1.05825	1.0592	1.0464	1.0418	1.0463	1.0376	1.0345	1.0419	1.0277	1.0208	1.0286	1.0183	1.0227	1.0162	1.0079
Pos 8								1.066	1.0782	1.028	1.04921	1.0522	1.0285	1.0221	1.0353	1.032	1.032	1.0387	1.0253	1.0125	1.0243	1.0162	1.0208	1.0162	1.0052
Pos 9									1.2125	1.1453	1.17724	1.189	1.1592	1.1486	1.1958	1.1927	1.1929	1.2011	1.1784	1.1604	1.1803	1.1667	1.1752	1.1695	1.1513
Pos 10										1.2378	1.2438	1.2231	1.2315	1.2196	1.1863	1.1748	1.1634	1.1586	1.1383	1.1433	1.1295	1.1102	1.108	1.0946	1.1121
Pos 11											0.79868	0.8577	0.84	0.8461	0.8355	0.8457	0.8628	0.8738	0.8535	0.8385	0.8357	0.8288	0.8393	0.8391	0.8268
Pos 12												0.9626	0.9427	0.9495	0.9403	0.9455	0.9647	0.9799	0.965	0.9509	0.9498	0.9445	0.9556	0.9567	0.9441
Pos 13													1.093	1.0935	1.0554	1.0363	1.0308	1.0274	1.0046	0.9992	0.9835	0.9654	0.9632	0.9535	0.9668
Pos 14														1.0696	1.0538	1.0517	1.0757	1.0851	1.0678	1.0562	1.0524	1.0453	1.0518	1.0484	1.0451
Pos 15															1.1479	1.1439	1.1448	1.1544	1.1352	1.1193	1.1425	1.1309	1.1392	1.135	1.1189
Pos 16																1.0602	1.0721	1.0889	1.0756	1.062	1.0567	1.0534	1.0641	1.0639	1.0483
Pos 17																	0.9646	0.9817	0.9687	0.9565	0.9511	0.9473	0.9579	0.9579	0.9479
Pos 18																		0.8834	0.8813	0.8733	0.8681	0.8709	0.8828	0.8914	0.8804
Pos 19																			1.2455	1.2465	1.2425	1.2471	1.2585	1.2647	1.2609
Pos 20																				1.1274	1.1195	1.1128	1.1188	1.1153	1.1202
Pos 21																					1.0582	1.049	1.0552	1.0486	1.0348
Pos 22																						1.1552	1.1676	1.1912	1.1826
Pos 23																							0.8697	0.8769	0.8638
Pos 24																								1.0363	1.0244
Pos 25																									1.129

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.22- Average Beta Estimates for Thailand

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9933	0.859	0.8235	0.8037	0.8654	0.8138	0.8703	0.8318	0.8661	0.8117	0.7774	0.784	0.7453	0.7619	0.732	0.7433	0.7255	0.7276	0.7128	0.7328	0.7449	0.7613	0.7829	0.8068
Pos 2		0.9748	0.8676	0.8105	0.7692	0.8054	0.7503	0.8042	0.7719	0.7995	0.7511	0.7226	0.7265	0.698	0.7173	0.6875	0.6931	0.6779	0.6767	0.656	0.6734	0.6859	0.6963	0.7165	0.7394
Pos 3			1.1971	1.1934	1.1613	1.2007	1.1782	1.2721	1.2749	1.3224	1.2758	1.2551	1.3081	1.2815	1.2974	1.2551	1.2864	1.2734	1.2684	1.2381	1.2731	1.2943	1.3287	1.3606	1.4042
Pos 4				1.0879	1.0718	1.1212	1.1109	1.2073	1.1937	1.2405	1.1988	1.1746	1.1928	1.1643	1.1814	1.1408	1.1679	1.1525	1.1469	1.1196	1.1483	1.1684	1.1918	1.2237	1.2611
Pos 5					1.1171	1.1629	1.1149	1.1976	1.1716	1.2228	1.1687	1.134	1.1367	1.1009	1.1299	1.1019	1.1282	1.1125	1.1111	1.1002	1.1298	1.1494	1.178	1.2113	1.2477
Pos 6						0.7557	0.7085	0.7639	0.7326	0.7592	0.715	0.6877	0.7047	0.6736	0.6857	0.6574	0.6667	0.6495	0.6506	0.63	0.6451	0.6575	0.6748	0.6964	0.72
Pos 7							1.2072	1.3028	1.2915	1.3449	1.2993	1.2832	1.3139	1.2874	1.3022	1.2638	1.2951	1.2847	1.281	1.2552	1.2893	1.3133	1.3463	1.382	1.424
Pos 8								0.3611	0.3333	0.3406	0.3105	0.2928	0.2843	0.2727	0.271	0.2497	0.2596	0.2502	0.2458	0.2368	0.2443	0.2488	0.2561	0.2626	0.2724
Pos 9									1.1301	1.1675	1.12	1.109	1.1281	1.1098	1.1191	1.0827	1.1098	1.1146	1.1058	1.0795	1.1098	1.1282	1.1584	1.1875	1.2256
Pos 10										0.62	0.5874	0.5641	0.5663	0.5499	0.5635	0.5429	0.5516	0.5394	0.5424	0.5336	0.5479	0.5595	0.5748	0.5902	0.6101
Pos 11											1.4733	1.4485	1.4881	1.4596	1.4775	1.4537	1.4872	1.469	1.4677	1.4396	1.477	1.5043	1.5402	1.5786	1.6262
Pos 12												1.2199	1.2474	1.2451	1.2608	1.2199	1.2505	1.2435	1.2402	1.2127	1.2472	1.2691	1.3014	1.3344	1.3749
Pos 13													0.7786	0.7453	0.7497	0.708	0.7243	0.7123	0.7119	0.6982	0.718	0.7305	0.7448	0.7628	0.7863
Pos 14														1.2895	1.2998	1.2582	1.2927	1.2842	1.2769	1.2473	1.2814	1.3036	1.3396	1.3728	1.4186
Pos 15															0.7796	0.759	0.7747	0.7588	0.7617	0.7463	0.7707	0.7849	0.8086	0.8354	0.8594
Pos 16																1.5004	1.5354	1.516	1.515	1.4917	1.5293	1.5631	1.5981	1.6357	1.6844
Pos 17																	0.5589	0.5473	0.5439	0.5298	0.5492	0.5626	0.5774	0.5942	0.6175
Pos 18																		1.1992	1.191	1.1663	1.1956	1.214	1.2447	1.2777	1.3154
Pos 19																			1.0934	1.0799	1.1109	1.1262	1.1518	1.1841	1.2194
Pos 20																				1.4106	1.4475	1.4695	1.504	1.5434	1.588
Pos 21																					0.3439	0.3486	0.3614	0.3726	0.3845
Pos 22																						0.4725	0.487	0.5031	0.5225
Pos 23																							0.4565	0.4707	0.4894
Pos 24																								0.3164	0.3269
Pos 25																									0.2412

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios (Continued)

Table Z1.23- Average Beta Estimates for Turkey

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9625	0.9962	1.0156	1.0021	0.9901	0.9795	0.9672	0.9671	0.9739	0.995	0.9982	1.0211	1.0306	1.0301	1.0331	1.0372	1.0434	1.0404	1.0451	1.0512	1.0536	1.0658	1.0665	1.089
Pos 2		1.0194	1.0527	1.0711	1.0453	1.0256	1.0118	0.9938	0.9916	0.997	1.0179	1.022	1.0447	1.054	1.053	1.056	1.0591	1.0673	1.0642	1.0682	1.0733	1.074	1.0872	1.0883	1.111
Pos 3			0.9295	0.9495	0.9114	0.9098	0.9129	0.8814	0.8894	0.8976	0.9167	0.9175	0.935	0.9439	0.9431	0.9474	0.9499	0.9582	0.9528	0.9572	0.9615	0.9604	0.9714	0.9718	0.9936
Pos 4				0.932	0.9006	0.8966	0.8934	0.8677	0.8705	0.8782	0.9009	0.9067	0.9262	0.9372	0.939	0.9461	0.9534	0.9595	0.9529	0.9589	0.965	0.9659	0.9802	0.9823	1.0035
Pos 5					1.1159	1.0925	1.0792	1.0642	1.058	1.0618	1.0827	1.0853	1.1076	1.1184	1.1191	1.1235	1.1276	1.1364	1.1346	1.1393	1.1469	1.1474	1.1617	1.163	1.1877
Pos 6						1.0082	0.9876	0.947	0.9523	0.9518	0.9643	0.9609	0.984	0.992	0.9838	0.9838	0.9847	0.989	0.9738	0.9758	0.9788	0.9816	0.9922	0.9911	1.0085
Pos 7							1.0514	1.0162	1.0323	1.0409	1.0567	1.0565	1.0732	1.0821	1.0781	1.0844	1.0881	1.0958	1.0871	1.0922	1.0975	1.0993	1.1116	1.1118	1.1351
Pos 8								1.1587	1.1471	1.1492	1.174	1.1748	1.1988	1.2056	1.2026	1.2046	1.2069	1.2123	1.2094	1.2139	1.2193	1.2208	1.2352	1.2355	1.2609
Pos 9									1.0095	1.0162	1.0332	1.035	1.0539	1.0642	1.0619	1.0693	1.0718	1.0805	1.0714	1.0748	1.0806	1.0804	1.0929	1.0939	1.1155
Pos 10										0.9429	0.9587	0.965	0.9861	0.9947	0.9941	1.0022	1.0062	1.0148	1.0098	1.0153	1.021	1.0224	1.034	1.0351	1.0585
Pos 11											0.8267	0.83	0.8464	0.8541	0.8545	0.8601	0.8651	0.8709	0.8669	0.872	0.8784	0.8784	0.8899	0.8921	0.9128
Pos 12												0.9982	1.0184	1.0268	1.0273	1.0342	1.0383	1.0474	1.0431	1.0492	1.0566	1.0583	1.0701	1.0732	1.0966
Pos 13													0.7134	0.718	0.7192	0.7251	0.728	0.7355	0.7345	0.7378	0.7423	0.7456	0.7563	0.7598	0.7769
Pos 14														0.8743	0.8759	0.8845	0.8898	0.897	0.8928	0.8984	0.9041	0.9048	0.9172	0.9192	0.9385
Pos 15															1.0317	1.0397	1.0443	1.0523	1.0481	1.0528	1.0595	1.0593	1.0729	1.0762	1.0984
Pos 16																0.8996	0.9046	0.9132	0.91	0.9168	0.9236	0.9244	0.9369	0.9429	0.9706
Pos 17																	0.9444	0.95	0.9457	0.9521	0.9601	0.9611	0.9737	0.9769	0.9971
Pos 18																		0.8625	0.8575	0.8629	0.8696	0.8725	0.8832	0.8858	0.9053
Pos 19																			1.0865	1.0911	1.0967	1.098	1.1118	1.1145	1.1393
Pos 20																				0.9037	0.9109	0.9111	0.9237	0.9265	0.948
Pos 21																					0.8833	0.8852	0.8972	0.9004	0.9229
Pos 22																						0.9826	0.9959	0.9973	1.0213
Pos 23																							0.682	0.6854	0.7005
Pos 24																								0.9642	0.9871
Pos 25																									0.4997

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Table Z1.24 - Average Beta Estimates for United Kingdom

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.61196	0.6816	0.8521	0.8344	0.885	0.7828	0.79831	0.8298	0.8465	0.8595	0.8179	0.8444	0.82201	0.78646	0.7963	0.7895	0.7642	0.7771	0.7827	0.7977	0.7895	0.7728	0.7529	0.7628
Pos 2		1.3273	1.4725	1.4251	1.4	1.4132	1.4192	1.43074	1.4438	1.4416	1.3965	1.3383	1.3344	1.31878	1.27149	1.2818	1.2984	1.2669	1.2738	1.2709	1.2857	1.2927	1.33	1.3025	1.3107
Pos 3			0.7407	0.7419	0.7494	0.8221	0.7729	0.77263	0.8286	0.8659	0.8487	0.8244	0.837	0.81531	0.79686	0.8169	0.8284	0.824	0.8486	0.8446	0.8641	0.8662	0.8399	0.8332	0.8525
Pos 4				0.8807	0.8579	0.9211	0.8107	0.83691	0.8758	0.904	0.9197	0.8743	0.9055	0.87516	0.83697	0.8515	0.8438	0.8142	0.826	0.8261	0.8417	0.8314	0.8103	0.7901	0.8032
Pos 5					1.0639	1.1348	1.0794	1.11902	1.1667	1.196	1.1973	1.2057	1.2148	1.2385	1.21825	1.2362	1.2467	1.2674	1.2801	1.2841	1.3008	1.3029	1.2895	1.2814	1.2983
Pos 6						0.7225	0.6286	0.64716	0.7232	0.7565	0.7549	0.7293	0.7626	0.73591	0.71126	0.734	0.7646	0.7515	0.7777	0.7806	0.8055	0.7957	0.7659	0.7506	0.7757
Pos 7							1.3365	1.3431	1.3595	1.359	1.3301	1.2863	1.294	1.27442	1.23377	1.2474	1.2662	1.2281	1.2377	1.2279	1.2392	1.2512	1.2732	1.256	1.2708
Pos 8								0.87031	0.9192	0.9219	0.9855	0.9627	0.9575	0.95269	0.91371	0.9257	0.9345	0.9144	0.9263	0.9413	0.9545	0.9599	0.9642	0.9491	0.9622
Pos 9									0.6556	0.6834	0.6577	0.6337	0.6355	0.59282	0.56271	0.5942	0.5918	0.5827	0.6073	0.6163	0.6334	0.6291	0.5898	0.5807	0.604
Pos 10										0.8233	0.8169	0.8032	0.8253	0.78947	0.76745	0.8013	0.8145	0.8091	0.8422	0.852	0.8748	0.8754	0.8422	0.8264	0.8459
Pos 11											1.0419	1.0106	1.0207	1.00215	0.9593	0.9755	0.9799	0.9586	0.964	0.973	0.9888	0.9872	0.9889	0.9696	0.9838
Pos 12												1.2775	1.3012	1.29516	1.28924	1.3143	1.3331	1.3373	1.3584	1.3669	1.3897	1.393	1.3675	1.3679	1.39
Pos 13													0.8413	0.80844	0.77452	0.7999	0.8127	0.7953	0.8193	0.8274	0.8445	0.8336	0.8043	0.7936	0.8139
Pos 14														1.2726	1.25113	1.2581	1.2865	1.2819	1.2937	1.2971	1.3163	1.3207	1.3277	1.3131	1.3333
Pos 15															1.37243	1.3925	1.4134	1.407	1.4255	1.4323	1.4548	1.464	1.4509	1.4523	1.4731
Pos 16																0.7134	0.7126	0.7052	0.7295	0.7345	0.7517	0.7535	0.7205	0.7121	0.738
Pos 17																	0.7968	0.7777	0.785	0.8033	0.813	0.8127	0.8058	0.7964	0.8097
Pos 18																		1.2176	1.2382	1.2442	1.2668	1.2617	1.2287	1.2217	1.2435
Pos 19																			0.6946	0.7042	0.7229	0.7225	0.6999	0.69	0.7108
Pos 20																				0.8868	0.898	0.9033	0.8982	0.8804	0.8916
Pos 21																					0.6622	0.6618	0.6408	0.6317	0.6587
Pos 22																						0.9846	0.9975	0.9846	1.0013
Pos 23																							1.2607	1.2419	1.2459
Pos 24																								1.279	1.299
Pos 25																									0.5891

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z1 - Average Beta Estimates for Domestic Portfolios

Table Z1.25 - Average Beta Estimates for United States

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.8641	1.0511	1.1011	1.119	0.9735	1.0189	1.0312	1.0695	0.9847	1.0362	1.0867	1.1136	1.0411	1.048	1.0935	1.1052	1.1448	1.1509	1.1135	1.1186	1.1303	1.1546	1.185	1.199
Pos 2		1.1274	1.3555	1.3278	1.2654	1.1332	1.1294	1.1642	1.1581	1.1581	1.1976	1.2352	1.2592	1.2148	1.193	1.2276	1.2267	1.2603	1.2459	1.2258	1.2205	1.2266	1.242	1.2493	1.2532
Pos 3			0.5937	0.6166	0.5669	0.416	0.4265	0.4251	0.4332	0.3865	0.4133	0.4381	0.4601	0.4022	0.402	0.4278	0.4343	0.4587	0.4586	0.4197	0.4126	0.4164	0.4253	0.4277	0.4389
Pos 4				0.9571	0.8673	0.6709	0.6905	0.6779	0.693	0.6223	0.7095	0.771	0.7943	0.7052	0.6964	0.7301	0.7747	0.8079	0.7933	0.7447	0.7402	0.7781	0.789	0.8093	0.8371
Pos 5					1.2242	1.0587	1.1023	1.1181	1.1735	1.105	1.1558	1.1986	1.2346	1.1534	1.1613	1.2079	1.2196	1.2608	1.3033	1.2482	1.2534	1.2623	1.2961	1.3211	1.3307
Pos 6						1.671	1.6516	1.6579	1.6483	1.5576	1.5988	1.6377	1.658	1.5792	1.5658	1.6049	1.6035	1.6475	1.6342	1.5861	1.6079	1.6164	1.6199	1.6291	1.6211
Pos 7							0.9022	0.8981	0.931	0.8504	0.8962	0.9366	0.9673	0.8799	0.9225	0.9678	0.9656	0.9975	0.9973	0.9471	0.9524	0.9658	0.9824	1.0065	1.0188
Pos 8								0.955	0.9595	0.9355	0.9686	0.9986	1.0174	0.979	0.9608	0.9857	0.9964	1.0346	1.0315	1.0172	1.008	1.0062	1.0176	1.0298	1.0371
Pos 9									0.8634	0.7905	0.8398	0.8772	0.9032	0.8298	0.8389	0.8794	0.8925	0.9325	0.9531	0.9071	0.9081	0.9198	0.9476	0.9698	0.985
Pos 10										1.5052	1.5602	1.6053	1.6337	1.5929	1.558	1.5994	1.5982	1.6459	1.6371	1.6096	1.5972	1.6007	1.6166	1.6366	1.6422
Pos 11											0.5834	0.6399	0.6636	0.5808	0.5745	0.606	0.6584	0.6919	0.6838	0.6393	0.6297	0.6654	0.6746	0.6945	0.7239
Pos 12												0.5092	0.5227	0.4622	0.4547	0.4857	0.5192	0.5396	0.5312	0.4992	0.4952	0.5195	0.5294	0.5508	0.5762
Pos 13													0.7466	0.6828	0.669	0.7063	0.7124	0.7391	0.7381	0.6972	0.6863	0.6971	0.7151	0.7329	0.7422
Pos 14														1.7229	1.6901	1.7314	1.7229	1.7542	1.7442	1.7415	1.7311	1.7296	1.7472	1.7667	1.7647
Pos 15															1.1282	1.1765	1.1811	1.2191	1.2267	1.1578	1.1678	1.1791	1.2039	1.2284	1.2379
Pos 16																0.4588	0.4659	0.4924	0.4917	0.4526	0.4439	0.4588	0.4687	0.4982	0.5108
Pos 17																	0.8342	0.8751	0.8639	0.8083	0.7942	0.8298	0.8402	0.8616	0.8912
Pos 18																		0.4115	0.4103	0.37	0.3638	0.3767	0.3856	0.3983	0.4078
Pos 19																			1.0224	0.9698	0.9691	0.974	1.01	1.0287	1.0357
Pos 20																				1.7885	1.7791	1.7824	1.7983	1.8119	1.8149
Pos 21																					1.0985	1.1069	1.1189	1.13	1.1332
Pos 22																						0.7335	0.7421	0.7602	0.7843
Pos 23																							0.633	0.654	0.6638
Pos 24																								0.5385	0.5544
Pos 25																									0.7185

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios

Table Z2.01- Average Beta Estimates for Companies with Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.4799	0.5096	0.5216	0.4469	0.5202	0.5282	0.52201	0.54688	0.51725	0.4948	0.5353	0.5202	0.5911	0.5969	0.5863	0.5841	0.5513	0.5355	0.5437	0.546	0.5457	0.5259	0.5261	0.5248
Pos 2		1.564	1.8041	1.8176	1.4828	1.5305	1.5098	1.55689	1.54098	1.52054	1.4264	1.4033	1.454	1.4629	1.4296	1.4138	1.2994	1.2438	1.1603	1.1513	1.1248	1.0958	1.0558	1.0582	1.1057
Pos 3			0.7104	0.7334	0.6562	0.6957	0.7119	0.72448	0.7162	0.7188	0.7084	0.6979	0.7049	0.7271	0.7246	0.7087	0.6754	0.6627	0.6338	0.6338	0.6257	0.6203	0.6082	0.6081	0.6277
Pos 4				0.9545	0.8779	0.931	0.9433	0.94113	0.96233	0.93989	0.9355	0.9356	0.9079	0.9269	0.8973	0.907	0.8305	0.8233	0.8109	0.8459	0.8091	0.7725	0.7043	0.7809	0.7877
Pos 5					1.4726	1.6237	1.5976	1.63221	1.67905	1.67551	1.7659	1.7826	1.7898	1.8361	1.8067	1.7985	1.6996	1.7233	1.6995	1.7367	1.7056	1.6902	1.6425	1.656	1.6942
Pos 6						0.6292	0.675	0.68408	0.71534	0.71766	0.6905	0.7503	0.721	0.7732	0.8052	0.8041	0.8052	0.7506	0.7309	0.733	0.754	0.7666	0.7511	0.7553	0.7594
Pos 7							0.9493	0.96698	0.91098	0.83859	0.7563	0.7461	0.7159	0.738	0.7637	0.7404	0.7147	0.645	0.626	0.6261	0.6428	0.627	0.5792	0.58	0.5694
Pos 8								0.84975	0.78052	0.75101	0.6743	0.678	0.6307	0.618	0.6177	0.5893	0.5617	0.5134	0.4576	0.452	0.464	0.4489	0.3942	0.3863	0.3885
Pos 9									0.99957	0.97309	0.9573	0.9864	0.9545	0.9765	0.9663	0.9543	0.8992	0.8808	0.8697	0.8926	0.8679	0.8426	0.8142	0.8295	0.8382
Pos 10										1.17612	1.128	1.1355	1.0998	1.1062	1.0976	1.0958	1.0117	0.958	0.933	0.9434	0.9136	0.9196	0.8898	0.8951	0.9108
Pos 11											1.2548	1.2532	1.2335	1.259	1.2315	1.2145	1.1337	1.1923	1.1811	1.2166	1.1853	1.1528	1.1265	1.1427	1.169
Pos 12												0.8799	0.8291	0.88	0.8943	0.8773	0.8655	0.7844	0.7663	0.768	0.7952	0.7997	0.7756	0.7766	0.773
Pos 13													1.2504	1.2678	1.2443	1.2317	1.1643	1.1537	1.093	1.1025	1.0802	1.0571	1.0124	1.0204	1.0613
Pos 14														0.6636	0.6874	0.6742	0.6659	0.6178	0.6016	0.6083	0.6249	0.6378	0.5985	0.6113	0.6023
Pos 15															1.0868	1.0741	1.072	1.0035	0.98	0.9782	0.9909	1.0058	0.9803	0.9759	0.9744
Pos 16																1.1885	1.1107	1.0544	1.0253	1.0415	1.0118	0.9988	0.9548	0.9752	0.9958
Pos 17																	1.861	1.747	1.6618	1.6615	1.7545	1.7731	1.7028	1.6928	1.6873
Pos 18																		1.567	1.5489	1.5992	1.562	1.538	1.4971	1.5125	1.534
Pos 19																			1.4552	1.5007	1.4618	1.4308	1.3611	1.3865	1.3941
Pos 20																				0.7083	0.6844	0.6598	0.6195	0.6413	0.6471
Pos 21																					1.0681	1.0835	1.0449	1.0157	1.0018
Pos 22																						1.0693	1.0597	1.0583	1.0459
Pos 23																							1.7208	1.7115	1.705
Pos 24																								0.7631	0.7618
Pos 25																									0.7801

* Pos 1,...,Pos 25 represents the twenty-five positions
** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.02- Average Beta Estimates for Companies with Second Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.3004	0.3264	0.3929	0.4016	0.4635	0.4915	0.4726	0.4908	0.4971	0.4918	0.5319	0.5278	0.5835	0.6124	0.6418	0.6221	0.6044	0.5276	0.536	0.5596	0.5591	0.5493	0.5237	0.5278
Pos 2		1.4494	1.7445	1.8556	1.8905	1.9512	2.0714	2.0664	2.0915	2.1458	2.1113	2.0842	2.1064	2.0852	2.0317	2.0947	1.9736	1.9156	1.6214	1.6518	1.6683	1.6428	1.5733	1.5013	1.5511
Pos 3			0.605	0.6635	0.7047	0.7624	0.8013	0.7983	0.8231	0.8594	0.8587	0.8807	0.916	0.8862	0.8804	0.9107	0.8708	0.8635	0.776	0.7966	0.8186	0.8281	0.7932	0.7788	0.8103
Pos 4				0.5872	0.6333	0.6574	0.6868	0.6684	0.6998	0.7108	0.7457	0.7406	0.7186	0.7342	0.7247	0.7695	0.7275	0.7313	0.6356	0.6606	0.662	0.6511	0.5978	0.5953	0.5969
Pos 5					0.7929	0.8631	0.9388	0.8895	0.9736	1.031	1.1332	1.1492	1.1638	1.1618	1.1522	1.1865	1.1491	1.212	1.1339	1.1923	1.2086	1.2055	1.1377	1.1533	1.1684
Pos 6						0.665	0.7128	0.7411	0.7472	0.787	0.8045	0.8867	0.8829	0.9141	0.9764	0.9844	1.0369	1.0159	0.9085	0.9197	0.9728	1.0086	0.9792	0.9625	0.9702
Pos 7							0.4918	0.4269	0.4272	0.4229	0.4172	0.4225	0.4075	0.3791	0.3871	0.3795	0.3375	0.3185	0.2608	0.2741	0.2815	0.2877	0.2561	0.2471	0.2286
Pos 8								0.9376	0.9393	0.9446	0.9293	0.9428	0.9031	0.934	0.9607	0.9552	0.924	0.8984	0.778	0.7976	0.823	0.8532	0.799	0.7555	0.7458
Pos 9									0.8071	0.8255	0.8784	0.8884	0.8543	0.8642	0.8519	0.8646	0.8075	0.8217	0.7152	0.7633	0.7652	0.7593	0.7341	0.7367	0.7354
Pos 10										0.6605	0.6737	0.6746	0.6981	0.7069	0.7022	0.7093	0.7017	0.6963	0.63	0.6438	0.6542	0.6539	0.6266	0.6227	0.64
Pos 11											0.8987	0.9153	0.9229	0.93	0.9287	0.9548	0.9271	0.9789	0.9086	0.965	0.9759	0.9691	0.9193	0.9386	0.9473
Pos 12												0.8276	0.7877	0.8203	0.8644	0.8714	0.853	0.811	0.7114	0.7337	0.7698	0.7848	0.7532	0.728	0.7204
Pos 13													1.0565	1.0375	1.0168	1.0473	0.9724	0.9702	0.8641	0.8831	0.895	0.8954	0.8442	0.8372	0.8959
Pos 14														0.849	0.8563	0.8992	0.8499	0.8256	0.7089	0.723	0.7384	0.7423	0.709	0.6776	0.6578
Pos 15															0.942	0.9713	0.9545	0.9413	0.8216	0.8409	0.8787	0.9011	0.8837	0.8614	0.8665
Pos 16																0.5973	0.5403	0.5178	0.4206	0.4311	0.4301	0.4254	0.3745	0.333	0.323
Pos 17																	1.5864	1.5507	1.3812	1.405	1.4703	1.5008	1.4401	1.4103	1.4018
Pos 18																		1.248	1.1593	1.2236	1.2333	1.2344	1.1763	1.2023	1.2163
Pos 19																			2.3357	2.4115	2.4311	2.4512	2.308	2.3777	2.4081
Pos 20																				0.3893	0.3805	0.3678	0.3325	0.3518	0.3468
Pos 21																					0.6163	0.634	0.6051	0.5774	0.5791
Pos 22																						0.8161	0.7994	0.7658	0.7675
Pos 23																							1.7713	1.6856	1.6641
Pos 24																								1.3648	1.3833
Pos 25																									0.7814

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.03- Average Beta Estimates for Companies with Third Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0684	1.226	1.2348	1.4241	1.6357	1.185	1.2497	1.3287	1.3433	1.296	1.34	1.4328	1.4836	1.5136	1.5007	1.5362	1.4903	1.4866	1.4517	1.4841	1.4491	1.3838	1.3953	1.4215
Pos 2		0.8442	1.0179	1.1005	1.3019	1.4098	1.1433	1.069	1.0826	1.0781	1.0499	1.0515	1.1243	1.1514	1.0872	1.0888	1.0388	0.9756	0.9355	0.8822	0.8931	0.7507	0.6991	0.6919	0.7084
Pos 3			0.6414	0.6979	0.8	0.8837	0.6329	0.6453	0.6791	0.6781	0.7245	0.7207	0.7832	0.7878	0.7853	0.8105	0.7958	0.8203	0.8197	0.8243	0.8136	0.7673	0.7565	0.7771	0.8151
Pos 4				0.7939	0.9507	1.0323	0.6304	0.6136	0.6497	0.6976	0.7962	0.7907	0.8509	0.8522	0.8397	0.8341	0.804	0.8596	0.8805	0.8952	0.8783	0.8472	0.7716	0.8405	0.8854
Pos 5					0.2435	0.2551	0.1071	0.0919	0.1206	0.121	0.1142	0.1305	0.1257	0.1356	0.1336	0.129	0.1315	0.1262	0.1274	0.1217	0.1133	0.0974	0.0818	0.0793	0.0751
Pos 6						0.4514	0.34	0.3805	0.4094	0.4177	0.4215	0.4529	0.4788	0.5007	0.5519	0.5626	0.5811	0.5832	0.5926	0.5927	0.6041	0.6156	0.5699	0.5704	0.5833
Pos 7							2.0127	1.9935	2.0198	1.9771	1.9156	1.9353	2.0266	2.0199	2.0406	1.996	1.9532	1.885	1.8428	1.7913	1.7976	1.7505	1.6356	1.6358	1.6649
Pos 8								0.9701	1.0132	1.0321	0.9642	0.9715	1.0457	1.1027	1.1662	1.1641	1.1206	1.0717	1.061	1.0029	1.0068	1.018	0.9382	0.9145	0.9311
Pos 9									0.6819	0.6943	0.7095	0.729	0.7531	0.7608	0.768	0.7775	0.7851	0.7833	0.7985	0.7954	0.7932	0.782	0.7504	0.7686	0.7923
Pos 10										2.3707	2.2358	2.2776	2.4153	2.522	2.4286	2.3161	2.2298	2.0599	2.0451	1.9391	1.9023	1.874	1.6498	1.7206	1.7439
Pos 11											1.1652	1.1627	1.2454	1.2523	1.2373	1.2631	1.2354	1.3506	1.3984	1.437	1.4339	1.375	1.3136	1.371	1.4342
Pos 12												0.8224	0.8391	0.8751	0.9025	0.9014	0.9237	0.8644	0.854	0.8181	0.8164	0.7732	0.716	0.7198	0.7216
Pos 13													0.4616	0.4671	0.4602	0.439	0.3893	0.3995	0.4057	0.3967	0.3868	0.3581	0.3378	0.3416	0.3556
Pos 14														0.745	0.7682	0.7695	0.7541	0.7152	0.7096	0.687	0.6845	0.6781	0.6366	0.6434	0.6609
Pos 15															1.008	1.008	1.0003	0.975	0.9804	0.9507	0.9714	0.9993	0.9576	0.9615	0.9829
Pos 16																1.0078	1.0088	0.9895	0.9883	0.9671	0.9755	0.9559	0.9107	0.9145	0.941
Pos 17																	1.2826	1.2476	1.2324	1.2103	1.2439	1.216	1.1842	1.2015	1.2271
Pos 18																		1.2953	1.3441	1.3926	1.3896	1.3551	1.3137	1.3549	1.4101
Pos 19																			0.987	1.0166	1.0152	0.988	0.9472	0.9774	1.0182
Pos 20																				1.2729	1.2758	1.2329	1.1809	1.236	1.2811
Pos 21																					0.8846	0.8942	0.8658	0.8669	0.8792
Pos 22																						1.5685	1.5437	1.5434	1.5913
Pos 23																							1.7566	1.7855	1.8169
Pos 24																								0.6378	0.6755
Pos 25																									0.3135

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.04- Average Beta Estimates for Companies with Fourth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.3197	0.3312	0.3544	0.3559	0.4161	0.427	0.39	0.4283	0.4544	0.4417	0.4726	0.4538	0.4958	0.5108	0.5147	0.5319	0.5468	0.5498	0.5624	0.5771	0.5761	0.5501	0.5541	0.5616
Pos 2		1.6141	1.8741	1.8089	1.8199	1.8596	1.828	1.5668	1.5557	1.5954	1.4705	1.4338	1.4751	1.4174	1.3827	1.3641	1.3439	1.3599	1.299	1.2873	1.2935	1.2538	1.2075	1.1966	1.2374
Pos 3			0.7188	0.7656	0.783	0.836	0.8431	0.7519	0.778	0.8241	0.8082	0.8	0.8403	0.8159	0.8028	0.7927	0.7837	0.8054	0.794	0.8014	0.8216	0.7864	0.7612	0.7641	0.7942
Pos 4				0.9301	1.027	1.0652	1.0857	0.9237	0.9874	1.0402	1.0758	1.0795	1.0709	1.0747	1.055	1.0562	1.0293	1.0954	1.1147	1.1521	1.1453	1.0808	1.0333	1.0652	1.0892
Pos 5					0.8057	0.7869	0.7662	0.6208	0.6806	0.7089	0.7157	0.6734	0.6552	0.6279	0.6236	0.6055	0.5954	0.6455	0.6633	0.7008	0.6909	0.6291	0.5702	0.5968	0.6272
Pos 6						0.8352	0.8887	0.8396	0.9007	0.9388	0.915	0.9637	0.9293	0.9764	1.0305	1.0462	1.0952	1.0972	1.0796	1.0959	1.1423	1.1346	1.1093	1.1093	1.1156
Pos 7							0.9111	0.7893	0.7999	0.8182	0.7196	0.7426	0.6708	0.6844	0.6985	0.6831	0.7053	0.7071	0.6848	0.6856	0.7017	0.6956	0.622	0.6216	0.6311
Pos 8								2.0125	2.0233	2.0379	1.8659	1.8515	1.7473	1.7912	1.8166	1.7758	1.7043	1.7006	1.6261	1.6279	1.6722	1.7023	1.5875	1.584	1.5864
Pos 9									0.7595	0.7879	0.8012	0.812	0.777	0.7867	0.7811	0.7817	0.7818	0.8131	0.8246	0.8559	0.8584	0.8445	0.7949	0.8107	0.8223
Pos 10										0.6642	0.6342	0.6368	0.6489	0.6357	0.6321	0.6301	0.627	0.6415	0.6455	0.6501	0.6421	0.6211	0.6105	0.6122	0.6251
Pos 11											1.3742	1.3731	1.3766	1.3433	1.3241	1.3274	1.3064	1.3718	1.4029	1.4477	1.4478	1.3997	1.3289	1.3416	1.3623
Pos 12												1.0248	0.9621	0.9917	1.0342	1.0319	1.0607	1.0591	1.0658	1.0726	1.113	1.0987	1.045	1.0324	1.032
Pos 13													1.2456	1.2085	1.1833	1.186	1.1603	1.1918	1.1838	1.1852	1.1893	1.1272	1.0958	1.1121	1.1611
Pos 14														1.118	1.1364	1.157	1.1521	1.1586	1.1201	1.1318	1.1422	1.1225	1.0331	1.0097	1.0392
Pos 15															0.9475	0.9362	0.9738	0.9687	0.9657	0.9656	1.005	1.0166	0.9805	0.9765	1.0017
Pos 16																1.1313	1.1302	1.1518	1.1646	1.1947	1.2	1.1698	1.1476	1.1542	1.1574
Pos 17																	1.0587	1.0673	1.0736	1.075	1.1301	1.1154	1.0656	1.0657	1.059
Pos 18																		0.6878	0.702	0.7362	0.7426	0.7136	0.6689	0.7328	0.7563
Pos 19																			1.129	1.1793	1.1814	1.1382	1.0549	1.0829	1.1043
Pos 20																				0.7122	0.7113	0.6862	0.6437	0.6658	0.6868
Pos 21																					0.6808	0.6925	0.6615	0.6483	0.6503
Pos 22																						1.392	1.3663	1.3635	1.369
Pos 23																							1.9052	1.902	1.9194
Pos 24																								0.7825	0.8144
Pos 25																									0.6134

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.05- Average Beta Estimates for Companies with Fifth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.3867	0.4247	0.4312	0.39	0.4486	0.445	0.2871	0.3254	0.3446	0.3455	0.3783	0.3957	0.4422	0.4693	0.4704	0.4789	0.4823	0.4848	0.459	0.4809	0.4964	0.4622	0.4654	0.4597
Pos 2		1.5406	1.7559	1.6486	1.4308	1.4001	1.3865	0.9091	0.9874	1.0553	1.054	1.0602	1.1419	1.1856	1.214	1.2114	1.1651	1.1798	1.1711	1.1272	1.1716	1.135	1.0695	1.047	1.0735
Pos 3			0.6679	0.7178	0.6355	0.6454	0.6727	0.4607	0.4943	0.5224	0.5224	0.5225	0.558	0.58	0.5971	0.5933	0.5879	0.6079	0.604	0.5892	0.613	0.6293	0.6113	0.61	0.6283
Pos 4				1.0654	1.1196	1.1408	1.1758	0.8348	0.9156	0.9846	1.06	1.089	1.1143	1.1652	1.1913	1.2317	1.191	1.2561	1.2967	1.3223	1.3631	1.3468	1.2878	1.3245	1.3435
Pos 5					1.234	1.2291	1.2754	0.9365	1.0264	1.1009	1.1742	1.1902	1.217	1.2707	1.2837	1.3134	1.2587	1.312	1.3314	1.3254	1.3595	1.3409	1.2602	1.2783	1.2929
Pos 6						0.9791	1.0216	0.6115	0.6719	0.7107	0.7077	0.7749	0.7919	0.8348	0.8982	0.9139	0.9737	0.977	0.9883	0.9635	1.0266	1.054	1.0078	1.0032	0.9992
Pos 7							0.787	0.4085	0.4534	0.4825	0.4681	0.4802	0.4781	0.5088	0.536	0.5422	0.5376	0.5459	0.5423	0.5134	0.5313	0.5141	0.4752	0.4688	0.4607
Pos 8								2.6199	2.8512	3.0001	2.9409	2.99	2.9378	3.057	3.0768	2.9617	2.8394	2.8701	2.8133	2.6847	2.7554	2.6367	2.3812	2.3038	2.2612
Pos 9									0.2164	0.2312	0.2379	0.257	0.2568	0.2776	0.2866	0.29	0.286	0.2955	0.2938	0.2777	0.292	0.2885	0.2628	0.2555	0.2509
Pos 10										0.3673	0.3796	0.3877	0.4051	0.4149	0.4206	0.4395	0.4081	0.4164	0.4274	0.4112	0.4195	0.416	0.4083	0.4078	0.407
Pos 11											0.8385	0.8499	0.8721	0.9106	0.9163	0.9276	0.8944	0.9523	0.9739	0.9886	1.0178	0.9948	0.9241	0.9376	0.9495
Pos 12												0.7274	0.725	0.7795	0.8363	0.8498	0.8675	0.8623	0.8628	0.8204	0.8535	0.8624	0.8133	0.8107	0.794
Pos 13													0.8409	0.8808	0.9076	0.9282	0.9115	0.9372	0.9474	0.9253	0.9518	0.933	0.8991	0.8958	0.9515
Pos 14														0.3557	0.375	0.3677	0.3676	0.3709	0.3769	0.3559	0.3688	0.359	0.3193	0.32	0.3169
Pos 15															0.669	0.6616	0.6918	0.6853	0.6775	0.655	0.6981	0.7214	0.712	0.6874	0.6824
Pos 16																1.0014	0.9903	1.0151	1.0359	1.0165	1.0605	1.0526	1.0229	1.0425	1.0456
Pos 17																	1.4086	1.4128	1.4231	1.3517	1.421	1.4408	1.3699	1.3364	1.3236
Pos 18																		0.7305	0.7368	0.731	0.742	0.7346	0.6685	0.6804	0.6893
Pos 19																			0.9555	0.9658	0.9944	0.9805	0.9129	0.93	0.9341
Pos 20																				1.4892	1.5341	1.5359	1.4688	1.503	1.5194
Pos 21																					0.3328	0.3378	0.3368	0.3197	0.3129
Pos 22																						1.2563	1.2211	1.1808	1.1778
Pos 23																							2.0765	2.0433	2.0206
Pos 24																								1.1709	1.1891
Pos 25																									0.9417

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.06- Average Beta Estimates for Companies with Sixth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.574	0.6485	0.5756	0.5945	0.694	0.6547	0.2677	0.2263	0.2396	0.2446	0.2594	0.2687	0.3037	0.3236	0.3428	0.3715	0.3805	0.4061	0.3957	0.4209	0.4422	0.4494	0.456	0.4401
Pos 2		1.3679	1.6308	1.3123	1.2721	1.4406	1.3794	0.4819	0.4431	0.4622	0.4656	0.5036	0.5464	0.5788	0.5849	0.6113	0.6196	0.6577	0.6459	0.6178	0.645	0.679	0.6719	0.682	0.7013
Pos 3			0.6221	0.5358	0.4985	0.5333	0.4939	0.149	0.1378	0.1529	0.1552	0.1547	0.1644	0.1711	0.1789	0.1761	0.1704	0.1701	0.174	0.1741	0.1826	0.192	0.1778	0.1737	0.1743
Pos 4				1.3905	1.4954	1.7396	1.7522	0.7612	0.6395	0.6981	0.7977	0.8519	0.8935	0.9541	0.9872	0.993	1.0008	1.0605	1.1045	1.1721	1.1923	1.209	1.2038	1.2426	1.2629
Pos 5					0.9344	1.087	1.0464	0.4083	0.338	0.3595	0.4052	0.4267	0.4539	0.4833	0.4958	0.5061	0.5145	0.5508	0.5806	0.6014	0.614	0.6142	0.6099	0.6334	0.6441
Pos 6						0.3005	0.2753	0.0707	0.0714	0.0753	0.0853	0.0974	0.0934	0.1014	0.1072	0.1134	0.1218	0.1265	0.1291	0.1333	0.1396	0.1424	0.1356	0.1446	0.1484
Pos 7							0.9979	0.2501	0.2575	0.2807	0.2785	0.29	0.2868	0.3014	0.3059	0.3285	0.3471	0.3552	0.3679	0.3551	0.3637	0.3648	0.3326	0.341	0.3485
Pos 8								4.3274	3.7036	3.8465	3.8599	4.0683	4.1666	4.3638	4.4689	4.5051	4.4809	4.6368	4.5524	4.4702	4.6106	4.6394	4.4389	4.5206	4.361
Pos 9									1.3477	1.3857	1.3921	1.4852	1.52	1.6049	1.6534	1.639	1.6135	1.6814	1.6342	1.5675	1.5922	1.6041	1.5859	1.6127	1.5933
Pos 10										0.5028	0.5264	0.5553	0.5969	0.6207	0.6393	0.6567	0.6839	0.7085	0.7216	0.7047	0.729	0.756	0.7743	0.7802	0.8105
Pos 11											0.5682	0.6004	0.6357	0.6736	0.6927	0.7009	0.6926	0.7448	0.7647	0.8073	0.8229	0.8333	0.7981	0.8261	0.8225
Pos 12												0.29	0.301	0.3252	0.3404	0.3437	0.3476	0.3611	0.3656	0.3634	0.3806	0.3768	0.3639	0.3764	0.3719
Pos 13													0.4428	0.4587	0.4635	0.4678	0.4634	0.4841	0.4894	0.4872	0.4891	0.4876	0.4877	0.4958	0.5494
Pos 14														0.2377	0.2487	0.2522	0.2596	0.2706	0.276	0.2793	0.29	0.307	0.2844	0.2963	0.2793
Pos 15															0.3902	0.3979	0.4184	0.433	0.4278	0.4135	0.4367	0.4543	0.4414	0.4468	0.4454
Pos 16																0.5933	0.622	0.6323	0.6478	0.6257	0.6624	0.6853	0.6491	0.6723	0.6488
Pos 17																	0.7671	0.7822	0.8027	0.7701	0.8216	0.8633	0.8635	0.8704	0.872
Pos 18																		0.2695	0.2745	0.2845	0.2822	0.2805	0.2629	0.2775	0.2808
Pos 19																			0.8428	0.8527	0.8762	0.8887	0.8714	0.889	0.9019
Pos 20																				0.8772	0.8937	0.9043	0.8755	0.908	0.9047
Pos 21																					0.3279	0.3481	0.3504	0.3547	0.3442
Pos 22																						0.5742	0.5738	0.5812	0.5851
Pos 23																							1.4354	1.4452	1.4138
Pos 24																								0.4163	0.3986
Pos 25																									1.1489

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.07- Average Beta Estimates for Companies with Seventh Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	1.0245	0.97102	0.7502	0.7257	0.8387	0.8586	0.596	0.5942	0.6065	0.5789	0.6099	0.6119	0.6514	0.67	0.6514	0.6104	0.6154	0.6108	0.5231	0.5184	0.5155	0.4672	0.4566	0.4611
Pos 2		0.9773	0.97802	0.881	0.7683	0.8584	0.8415	0.5958	0.5814	0.604	0.5775	0.5554	0.5869	0.6292	0.6197	0.6086	0.569	0.57	0.5669	0.5185	0.5179	0.4997	0.4539	0.4389	0.4539
Pos 3			1.04508	0.9484	0.8917	0.995	0.9994	0.6846	0.6934	0.6922	0.6638	0.6501	0.6932	0.7153	0.718	0.7027	0.678	0.6735	0.6779	0.6339	0.6433	0.6476	0.6131	0.613	0.6346
Pos 4				1.4614	1.5394	1.762	1.7949	1.3393	1.3736	1.3942	1.4878	1.4762	1.5606	1.5943	1.6352	1.6331	1.499	1.5727	1.6097	1.5725	1.564	1.531	1.3797	1.4201	1.4614
Pos 5					1.0373	1.1842	1.1589	0.8292	0.834	0.8262	0.8897	0.8321	0.8499	0.8704	0.8926	0.8936	0.8248	0.8812	0.9099	0.8894	0.89	0.8722	0.7956	0.81	0.8345
Pos 6						0.3184	0.308	0.2336	0.2167	0.2329	0.2248	0.2204	0.2213	0.2304	0.2471	0.2384	0.2263	0.2268	0.2237	0.205	0.2051	0.193	0.16	0.1511	0.1521
Pos 7							1.0157	0.5973	0.5389	0.5591	0.5216	0.5309	0.5305	0.5507	0.5473	0.5422	0.5153	0.5025	0.5032	0.4351	0.4478	0.458	0.4116	0.3794	0.3733
Pos 8								2.919	2.7916	2.77	2.5901	2.5159	2.5304	2.5556	2.564	2.4754	2.2434	2.2446	2.1932	1.9944	2.0191	1.9168	1.7303	1.6518	1.6504
Pos 9									1.0724	1.1186	1.0562	1.0384	1.035	1.0734	1.0637	1.0189	0.931	0.9616	0.9634	0.9013	0.9009	0.8525	0.7168	0.7168	0.7118
Pos 10										0.917	0.8486	0.8233	0.8398	0.8505	0.8528	0.8213	0.7118	0.704	0.697	0.5897	0.5827	0.5587	0.495	0.4876	0.4979
Pos 11											1.1601	1.0923	1.1347	1.1721	1.1806	1.1665	1.0796	1.1481	1.1781	1.176	1.1651	1.1271	1.0414	1.0474	1.0881
Pos 12												1.2023	1.2122	1.283	1.3295	1.3049	1.3069	1.2991	1.2918	1.18	1.2265	1.2137	1.1049	1.076	1.0776
Pos 13													0.7269	0.7307	0.7295	0.7252	0.6857	0.7046	0.7113	0.6683	0.6635	0.6296	0.5677	0.5838	0.6305
Pos 14														0.586	0.5859	0.5718	0.5542	0.5589	0.5651	0.5243	0.529	0.5263	0.4814	0.47	0.4747
Pos 15															0.8598	0.8436	0.8474	0.857	0.8531	0.7983	0.8318	0.8373	0.7938	0.7788	0.7713
Pos 16																1.2847	1.2265	1.247	1.2629	1.1734	1.174	1.1426	1.0766	1.0613	1.0846
Pos 17																	2.0705	2.0741	2.0437	1.8976	1.9799	1.9996	1.7731	1.757	1.7719
Pos 18																		0.6773	0.6986	0.7083	0.702	0.6756	0.5967	0.6009	0.6262
Pos 19																			0.9284	0.9159	0.9024	0.8696	0.8183	0.8154	0.8337
Pos 20																				1.9955	1.9702	1.9394	1.8043	1.8184	1.8647
Pos 21																					0.8851	0.8901	0.8399	0.8122	0.8118
Pos 22																						1.4376	1.3704	1.3379	1.3641
Pos 23																							2.2043	2.1054	2.1205
Pos 24																								1.3421	1.3714
Pos 25																									0.6201

* Pos 1,...,Pos 25 represents the twenty-five positions

** Port 1,...,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.08- Average Beta Estimates for Companies with Eighth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.3914	0.4375	0.5123	0.4726	0.5403	0.4872	0.4309	0.4811	0.4762	0.4543	0.4743	0.4546	0.4985	0.4968	0.488	0.4609	0.4714	0.4609	0.4364	0.4361	0.4355	0.3517	0.3599	0.3623
Pos 2		1.6274	1.8619	2.1283	1.9464	2.1191	1.9453	1.7435	1.7832	1.8056	1.6835	1.6572	1.7473	1.7263	1.6028	1.5336	1.4312	1.4499	1.3886	1.3616	1.3897	1.4121	1.2263	1.2402	1.3006
Pos 3			0.7421	0.8616	0.791	0.8651	0.7781	0.7024	0.705	0.7223	0.664	0.6392	0.6938	0.68	0.6394	0.6161	0.5522	0.565	0.5402	0.5377	0.5286	0.5394	0.4545	0.4563	0.4706
Pos 4				0.5669	0.4905	0.5229	0.485	0.3959	0.4323	0.4119	0.3468	0.3233	0.2975	0.3196	0.2685	0.2502	0.1926	0.2179	0.2029	0.1864	0.1696	0.1825	0.0881	0.0849	0.0672
Pos 5					1.3976	1.5239	1.3815	1.1896	1.2459	1.2585	1.3719	1.3327	1.3144	1.3323	1.2502	1.2486	1.1933	1.2697	1.2999	1.3276	1.288	1.2953	1.0945	1.117	1.1537
Pos 6						0.5344	0.4581	0.4207	0.4173	0.424	0.4099	0.4366	0.4153	0.4221	0.4668	0.451	0.4472	0.4448	0.4254	0.4201	0.4325	0.4396	0.388	0.3968	0.402
Pos 7							1.3847	1.2067	1.2073	1.1357	1.0565	1.059	1.0004	1.0373	0.9776	0.9605	0.9009	0.8902	0.8508	0.8256	0.8506	0.8747	0.6891	0.6849	0.6927
Pos 8								1.7558	1.8204	1.752	1.5195	1.5487	1.4778	1.5054	1.4638	1.3945	1.3093	1.2907	1.1779	1.1028	1.1126	1.1286	0.8723	0.8376	0.8044
Pos 9									0.7598	0.7363	0.7124	0.6823	0.6518	0.6721	0.6404	0.6011	0.5377	0.5719	0.5508	0.5373	0.5391	0.5566	0.4388	0.4384	0.4367
Pos 10										1.1086	1.0728	1.0617	1.0701	1.0674	0.9924	0.9767	0.9144	0.917	0.8972	0.8618	0.853	0.8734	0.7294	0.7293	0.745
Pos 11											1.385	1.3738	1.3738	1.3836	1.2968	1.2623	1.1979	1.271	1.2587	1.2546	1.2572	1.2801	1.0994	1.0994	1.1219
Pos 12												1.0538	1.0093	1.0346	1.0539	1.0145	0.9984	0.9989	0.9681	0.9232	0.9496	0.9786	0.8555	0.8437	0.8417
Pos 13													1.1392	1.1294	1.0233	1.0014	0.9159	0.9348	0.9653	0.9493	0.9717	0.9846	0.8387	0.842	0.8909
Pos 14														0.8494	0.8203	0.7982	0.7598	0.7695	0.7513	0.738	0.7494	0.7656	0.6583	0.6585	0.6654
Pos 15															1.7011	1.6503	1.6517	1.6352	1.622	1.6001	1.6506	1.6916	1.472	1.4642	1.4558
Pos 16																1.4799	1.4132	1.4365	1.4332	1.4419	1.4455	1.4828	1.3344	1.341	1.3443
Pos 17																	1.8888	1.8475	1.7656	1.7077	1.7622	1.7869	1.601	1.5707	1.571
Pos 18																		0.7956	0.7921	0.7858	0.7612	0.7731	0.6475	0.6452	0.6612
Pos 19																			1.3096	1.3271	1.3286	1.3744	1.2093	1.203	1.227
Pos 20																				1.3131	1.2965	1.3268	1.1158	1.1377	1.1485
Pos 21																					0.818	0.8373	0.7503	0.7383	0.7345
Pos 22																						0.4862	0.3925	0.3716	0.3517
Pos 23																							3.0429	2.9469	2.9175
Pos 24																								1.2188	1.2397
Pos 25																									0.8403

* Pos 1,…,Pos 25 represents the twenty-five positions

** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios (Continued)

Table Z2.09- Average Beta Estimates for Companies with Ninth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5008	0.5864	0.3874	0.3926	0.4311	0.4655	0.2442	0.2593	0.2591	0.2737	0.2901	0.3036	0.3342	0.3503	0.3572	0.3474	0.3697	0.3644	0.3434	0.3469	0.3726	0.3474	0.3525	0.3592
Pos 2		1.4875	2.0688	1.7893	1.8035	1.796	1.8427	0.8031	0.8533	0.8652	0.9117	0.926	0.9942	1.0276	1.0108	1.0073	0.94	0.9834	0.9668	0.9265	0.9612	0.9178	0.8391	0.8686	0.9011
Pos 3			0.3379	0.1931	0.1968	0.2055	0.215	0.1069	0.1161	0.1252	0.135	0.1438	0.1572	0.1609	0.1689	0.1748	0.1795	0.1873	0.1862	0.1785	0.1808	0.1927	0.1876	0.1967	0.2008
Pos 4				1.3775	1.4332	1.5236	1.6046	0.8434	0.9064	0.9425	1.0187	1.0415	1.1238	1.1704	1.1739	1.2024	1.1692	1.2299	1.2758	1.2952	1.281	1.2707	1.1782	1.2153	1.2606
Pos 5					0.8771	0.9253	0.9902	0.5427	0.59	0.6027	0.6826	0.6745	0.729	0.7653	0.7688	0.7984	0.7761	0.8441	0.8725	0.8551	0.8527	0.856	0.814	0.8433	0.8815
Pos 6						0.8142	0.8826	0.472	0.5048	0.5136	0.544	0.6049	0.643	0.6762	0.7498	0.7669	0.8111	0.8204	0.8273	0.815	0.8585	0.8982	0.8249	0.8382	0.8455
Pos 7							0.6132	0.2914	0.3074	0.2894	0.2969	0.3162	0.3368	0.3566	0.3653	0.3674	0.3639	0.3696	0.3625	0.3365	0.3537	0.3485	0.3136	0.3211	0.3207
Pos 8								3.3906	3.5988	3.6174	3.6191	3.656	3.9168	4.0971	4.1001	4.0664	3.9539	4.0989	3.9819	3.7822	3.8502	3.7401	3.514	3.6272	3.652
Pos 9									0.3382	0.3259	0.3579	0.3606	0.3845	0.4042	0.4049	0.4007	0.3763	0.4033	0.3773	0.367	0.356	0.3582	0.3262	0.3404	0.342
Pos 10										0.7171	0.7262	0.7568	0.8077	0.8385	0.8616	0.8576	0.8614	0.8747	0.8652	0.8326	0.8048	0.8271	0.7846	0.8147	0.826
Pos 11											0.6883	0.6964	0.7487	0.7885	0.8088	0.8369	0.8194	0.8764	0.899	0.9043	0.9068	0.9022	0.8533	0.8829	0.9247
Pos 12												0.6579	0.6985	0.743	0.8115	0.8215	0.8872	0.9016	0.8922	0.8752	0.9263	0.9689	0.9027	0.9195	0.9249
Pos 13													0.122	0.1243	0.1143	0.1086	0.0888	0.0899	0.0891	0.079	0.0875	0.0874	0.0827	0.0876	0.0945
Pos 14														0.237	0.2391	0.2449	0.2425	0.261	0.2715	0.2673	0.2707	0.2838	0.2888	0.3	0.3035
Pos 15															0.8196	0.8343	0.8756	0.9018	0.9151	0.9025	0.927	0.956	0.9332	0.9576	0.9729
Pos 16																0.8607	0.8622	0.8996	0.932	0.9435	0.9292	0.9517	0.9133	0.9599	0.9884
Pos 17																	1.0842	1.1032	1.097	1.0639	1.0903	1.0891	1.0354	1.0444	1.0368
Pos 18																		0.3133	0.3173	0.309	0.2921	0.2885	0.2512	0.2878	0.3045
Pos 19																			1.0071	1.0363	1.0292	1.0277	0.9749	1.0131	1.0482
Pos 20																				1.3529	1.3528	1.3609	1.2842	1.3267	1.3643
Pos 21																					0.6958	0.6999	0.6395	0.6471	0.6488
Pos 22																						1.0104	0.9731	0.9966	1.0017
Pos 23																							1.8493	1.8976	1.9206
Pos 24																								0.2123	0.2221
Pos 25																									0.5186

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z2 - Average Beta Estimates for Foreign Portfolios

Table Z2.10- Average Beta Estimates for Companies with Tenth Highest Market Capitalization

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.5231	0.5663	0.6462	0.6442	0.624	0.5794	0.5622	0.6153	0.6329	0.6632	0.7135	0.7269	0.8006	0.8366	0.8497	0.831	0.8557	0.8488	0.8286	0.8197	0.8336	0.7702	0.784	0.7637
Pos 2		1.4867	1.6527	1.8723	1.803	1.6526	1.5135	1.3426	1.4067	1.4138	1.4743	1.5091	1.5441	1.5697	1.537	1.4641	1.3664	1.3625	1.3081	1.2519	1.2068	1.1801	1.1019	1.093	1.1369
Pos 3			0.7587	0.8604	0.7788	0.6632	0.5524	0.5077	0.5231	0.5232	0.5135	0.5373	0.5225	0.5191	0.5243	0.4728	0.4423	0.4489	0.4416	0.4299	0.4278	0.4474	0.4348	0.4321	0.4285
Pos 4				0.6029	0.7351	0.5913	0.5512	0.4516	0.4795	0.4692	0.5165	0.5617	0.5618	0.5579	0.5495	0.5386	0.4631	0.4925	0.5244	0.5829	0.5339	0.5126	0.4515	0.5294	0.512
Pos 5					0.9827	0.8752	0.7661	0.6442	0.6906	0.6912	0.7638	0.7961	0.7928	0.8071	0.7993	0.7618	0.6728	0.7298	0.7535	0.7686	0.7114	0.7051	0.6557	0.7221	0.7267
Pos 6						1.5242	1.2822	1.2107	1.3025	1.2754	1.3362	1.4048	1.3655	1.4477	1.5093	1.4458	1.5105	1.528	1.5217	1.5203	1.5301	1.5361	1.4109	1.4131	1.3462
Pos 7							1.2541	1.1825	1.2571	1.2624	1.2877	1.3713	1.367	1.3822	1.3732	1.3406	1.2067	1.2264	1.2042	1.1377	1.0851	1.0895	0.98	0.9995	1.0007
Pos 8								1.8347	1.9457	1.9521	1.9575	2.1158	2.1066	2.1824	2.2558	2.192	2.0737	2.0967	2.0814	1.9892	1.9494	2.0176	1.9292	1.9339	1.8857
Pos 9									0.4906	0.483	0.5365	0.5771	0.5724	0.6084	0.6281	0.6552	0.6173	0.6521	0.6392	0.6694	0.6321	0.6326	0.6196	0.6203	0.5803
Pos 10										0.9789	0.9825	1.0544	1.0968	1.1341	1.1584	1.1259	1.0578	1.0597	1.0761	1.0457	0.9918	0.9877	0.903	0.9145	0.9145
Pos 11											0.6371	0.6682	0.671	0.6885	0.6737	0.6724	0.6565	0.6988	0.7056	0.7482	0.7127	0.7077	0.6687	0.6903	0.6736
Pos 12												0.4165	0.3839	0.4079	0.4051	0.4106	0.3792	0.3917	0.3749	0.3916	0.3536	0.3589	0.3414	0.3534	0.3394
Pos 13													0.9864	1.0011	1.0047	0.9388	0.8473	0.8375	0.8147	0.7915	0.7215	0.7282	0.642	0.6437	0.619
Pos 14														0.6239	0.6481	0.6894	0.6703	0.6881	0.6854	0.6628	0.6484	0.6531	0.6236	0.627	0.5962
Pos 15															0.8498	0.8542	0.8404	0.8664	0.8739	0.8281	0.8024	0.8175	0.7978	0.808	0.8178
Pos 16																1.1748	1.03	1.0665	0.9888	0.9501	0.8956	0.8983	0.7157	0.6813	0.5926
Pos 17																	1.9942	2.0383	2.0259	1.9767	2.0394	2.0885	1.9732	1.9653	1.9418
Pos 18																		0.6265	0.6592	0.6663	0.6504	0.6469	0.6054	0.6271	0.6076
Pos 19																			1.1556	1.2235	1.1751	1.1757	1.1383	1.1996	1.2203
Pos 20																				1.2254	1.1449	1.1552	1.0576	1.0854	1.0637
Pos 21																					1.5043	1.5466	1.4591	1.4363	1.3977
Pos 22																						0.8696	0.8204	0.7985	0.7846
Pos 23																							2.1081	2.1568	2.0745
Pos 24																								0.7324	0.7103
Pos 25																									1.3668

* Pos 1,…,Pos 25 represents the twenty-five positions
** Port 1,…,Port 25 represents the twenty-five portfolios

Appendix Z3 - Beta Estimates for Frechet Random Walk Model

Table Z3.01- Beta Estimates for Frechet Random Walk Model

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.4919	0.5747	0.6071	0.6851	0.6376	0.5816	0.35765	0.35939	0.35276	0.1941	0.2213	0.2261	0.2067	0.1419	0.0868	0.1174	0.1439	0.1586	0.1576	0.1168	0.1361	0.1864	0.1216	0.078
Pos 2		1.4866	1.8147	1.9045	1.9008	1.8241	1.8572	1.46426	1.5487	1.57029	1.1404	0.9981	0.6668	0.5938	0.5489	0.5191	0.3426	0.2838	0.2248	0.2354	0.3071	0.2937	0.3048	0.32	0.2706
Pos 3			0.6602	0.75	0.7864	0.6452	0.627	0.56684	0.51061	0.4805	0.3098	0.3615	0.4224	0.4639	0.3603	0.3154	0.3342	0.3636	0.3372	0.3307	0.225	0.2422	0.2148	0.2285	0.2437
Pos 4				0.753	0.7006	0.6931	0.7589	0.62284	0.64043	0.63746	0.4245	0.4069	0.3927	0.4218	0.4092	0.3636	0.368	0.3546	0.359	0.383	0.3401	0.3274	0.2655	0.2404	0.2157
Pos 5					0.9464	0.9435	0.9498	0.73235	0.7733	0.77433	0.6229	0.4899	0.41	0.3819	0.3121	0.2493	0.2705	0.263	0.2899	0.2196	0.2245	0.2136	0.2238	0.189	0.201
Pos 6						1.2697	1.3064	0.97536	0.99195	1.09566	0.9845	0.9316	0.7365	0.714	0.7022	0.6276	0.6285	0.5794	0.5024	0.4756	0.4299	0.4527	0.4787	0.5228	0.5333
Pos 7							0.9322	0.86073	0.82457	0.88464	0.6046	0.5035	0.5204	0.4839	0.481	0.4005	0.3846	0.4576	0.516	0.5182	0.478	0.4382	0.4227	0.4148	0.4355
Pos 8								2.22424	2.29578	2.39597	1.7554	1.7569	1.5729	1.5431	1.548	1.4946	1.3946	1.4744	1.4436	1.4546	1.4198	1.3043	1.2036	1.2789	1.217
Pos 9									0.83905	0.83939	0.7001	0.6064	0.4857	0.4121	0.409	0.3508	0.344	0.3962	0.4488	0.4894	0.4896	0.4935	0.445	0.4385	0.4477
Pos 10										0.75173	0.5661	0.4649	0.4398	0.4613	0.4401	0.4923	0.4806	0.5035	0.4876	0.5044	0.5354	0.5217	0.5505	0.5662	0.6156
Pos 11											3.4452	3.0482	2.1544	2.1195	1.9998	2.1083	2.1438	2.1548	2.1727	2.0396	1.9496	2.0473	1.909	1.8452	1.7147
Pos 12												2.1448	1.7591	1.6811	1.4739	1.2807	1.3923	1.2003	1.2553	1.1731	1.1671	1.1043	1.0588	0.9254	0.8956
Pos 13													2.8888	2.737	2.6094	2.3156	2.0004	1.9964	1.926	1.8627	1.808	1.7797	1.7673	1.8258	1.8365
Pos 14														1.5829	1.4184	1.3689	1.3316	1.3286	1.2809	1.2349	1.2578	1.1929	1.0365	0.9482	0.9163
Pos 15															2.0698	1.8051	1.6156	1.655	1.595	1.7611	1.9629	1.771	1.5823	1.5331	1.4955
Pos 16																2.1519	2.1518	2.0331	1.9363	2.2508	1.9916	1.9821	1.9038	1.9745	1.9815
Pos 17																	1.6323	1.4879	1.5214	1.3119	1.3981	1.4773	1.4222	1.4484	1.5201
Pos 18																		1.2262	1.3411	1.3647	1.0036	0.9617	0.8664	1.0146	1.0996
Pos 19																			1.0828	0.9206	0.8506	0.7443	0.6787	0.6003	0.6576
Pos 20																				1.2641	1.1512	1.0865	1.171	1.1617	1.1433
Pos 21																					1.6921	1.6943	1.4872	1.3261	1.2762
Pos 22																						1.5206	1.5851	1.598	1.6275
Pos 23																							1.9534	1.9899	1.9826
Pos 24																								1.1047	1.2073
Pos 25																									0.969

* Pos 1,...,Pos 25 represents position

** Port 1,...,Port 25 represents portfolio

Appendix Z3 - Beta Estimates for Geometric Brownian Motion Model

Table Z3.02- Beta Estimates for Geometric Brownian Motion Model

Pos/Port	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12	Port 13	Port 14	Port 15	Port 16	Port 17	Port 18	Port 19	Port 20	Port 21	Port 22	Port 23	Port 24	Port 25
Pos 1	1	0.9285	0.9568	1.0976	1.0647	1.0039	1.0599	1.1071	1.1965	1.2395	1.2546	1.2813	1.2594	1.1975	1.1731	1.3078	1.349	1.3628	1.354	1.3109	1.3112	1.2939	1.3375	1.3009	1.465
Pos 2		1.0602	1.1072	1.0633	1.0455	0.9731	1.0631	1.0339	0.9579	0.94	0.9453	1.101	1.0601	1.1146	1.0288	1.0371	1.0494	1.1328	1.1877	1.2956	1.3761	1.3531	1.3142	1.2941	1.4039
Pos 3			0.9236	0.944	0.9701	0.8987	0.9998	1.0948	1.0583	1.0997	1.0567	1.1102	1.0159	0.9747	1.004	1.0241	0.9724	0.9731	1.0613	0.9643	0.9582	1.0283	1.0061	0.8548	0.7896
Pos 4				0.8877	0.8487	0.837	0.8259	0.8605	0.8228	0.7922	0.8018	0.7522	0.7676	0.7198	0.7468	0.6336	0.6923	0.6659	0.5868	0.5902	0.53	0.5628	0.5859	0.5936	0.5311
Pos 5					1.0585	1.0148	1.0083	0.9746	0.9705	1.0171	0.9746	1.002	1.0625	0.9602	1.0773	0.9991	1.0068	1.0181	0.9416	0.9679	0.9059	0.8654	0.9232	0.9096	0.9431
Pos 6						1.2502	1.3352	1.2722	1.2151	1.2751	1.2196	1.2839	1.2887	1.2943	1.3235	1.3414	1.3228	1.3517	1.2709	1.2491	1.2207	1.2686	1.2935	1.2797	1.2643
Pos 7							0.6831	0.7505	0.7576	0.7014	0.6091	0.5635	0.5153	0.5161	0.5303	0.4631	0.4018	0.3904	0.3897	0.3821	0.4004	0.4605	0.5204	0.4373	0.4325
Pos 8								0.8963	0.8564	0.8714	0.8043	0.8389	0.8817	0.8964	0.7775	0.7681	0.8503	0.8818	0.881	0.787	0.7947	0.786	0.8164	0.7855	0.7955
Pos 9									1.1499	1.2056	1.1855	1.2096	1.223	1.251	1.3515	1.4224	1.4051	1.3411	1.2791	1.2425	1.1035	0.9825	1.0638	1.1051	1.042
Pos 10										0.8368	0.9115	0.9798	0.8646	0.9168	0.8784	0.9519	0.903	0.8518	0.864	0.768	0.759	0.7804	0.7682	0.8888	0.9175
Pos 11											1.2327	1.2232	1.1973	1.1915	1.1952	1.2472	1.1827	1.1345	1.196	1.1764	1.1761	1.1555	1.1159	1.0503	1.0448
Pos 12												0.6317	0.6759	0.7132	0.6819	0.6234	0.6889	0.6567	0.7042	0.727	0.755	0.7678	0.7057	0.7867	0.7539
Pos 13													1.16	1.2051	1.2383	1.1875	1.2867	1.3534	1.4106	1.3533	1.3764	1.236	1.2352	1.2015	1.2034
Pos 14														1.0264	0.9393	0.8902	0.902	0.9332	0.9972	1.046	1.0696	1.0928	1.0524	1.0369	1.0166
Pos 15															1.0133	0.9368	0.9168	0.9581	0.9524	0.907	0.826	0.7794	0.8137	0.867	0.9257
Pos 16																1.1147	1.1127	1.1358	1.1641	1.065	1.0481	1.0389	1.1454	1.0565	1.1038
Pos 17																	0.9212	0.9289	0.9204	0.8971	0.8185	0.7425	0.7734	0.7405	0.7316
Pos 18																		0.8879	0.8754	0.8613	0.902	0.9066	0.8862	0.8835	0.8832
Pos 19																			0.925	1.0226	1.0582	1.0449	1.0661	1.1269	1.2445
Pos 20																				1.3266	1.4082	1.3571	1.4219	1.4474	1.4906
Pos 21																					1.1402	1.1513	1.1693	1.0891	1.2745
Pos 22																						1.2381	1.2711	1.233	1.2005
Pos 23																							0.6029	0.5352	0.5078
Pos 24																								1.4266	1.5441
Pos 25																									0.4444

* Pos 1,…,Pos 25 represents position

** Port 1,…,Port 25 represents portfolio

Appendix AA

Table AA.1 – Summary of Overall Risk Reduction – Domestic Portfolios																									
Portfolio/Case	AU	BR	CL	FR	DE	HK	IN	ID	IE	IL	IT	JP	MX	NZ	SG	SA	SK	ES	SE	CH	TW	TH	TR	UK	US
Absolute Dispersion Reduction - Twenty-Fifth Position Relative to First Position																									
Aggregate Port Std Dev *1	1.55	1.58	2.00	1.50	2.51	1.33	1.96	1.04	1.84	2.07	1.71	1.43	2.12	1.88	1.85	1.74	1.46	2.37	1.86	1.22	1.53	1.51	1.26	1.56	1.61
Port Std Dev/Sum Positions *2	1.62	1.70	2.10	1.60	2.56	1.33	2.08	1.12	2.07	1.96	1.79	1.53	2.30	1.92	1.92	1.80	1.53	2.43	1.94	1.24	1.61	1.56	1.29	1.61	1.66
75th-25th Range/Log-Returns *3	1.57	1.64	1.84	1.58	2.72	1.24	1.67	0.74	1.90	2.40	1.76	1.30	1.84	1.92	1.98	1.68	1.55	2.44	1.70	1.22	1.62	1.27	1.27	1.57	1.59
Maximum Loss	1.80	1.52	1.87	1.61	2.03	1.38	1.46	1.29	1.87	1.69	1.86	1.59	2.12	1.84	1.54	1.51	1.37	2.05	3.58	1.18	1.14	1.94	1.21	1.47	1.86
HVaR@99% *4 CI	1.78	1.54	1.96	1.55	2.45	1.36	1.74	0.99	1.73	1.87	1.55	1.47	1.80	1.86	1.57	1.91	1.49	2.06	1.93	1.33	1.53	1.46	1.27	1.54	1.67
HVaR@98% CI	1.56	1.45	1.98	1.52	2.55	1.38	1.85	0.95	1.74	1.77	1.61	1.45	1.97	1.94	1.80	1.78	1.48	2.10	1.76	1.22	1.58	1.43	1.22	1.56	1.66
HVaR@95% CI	1.52	1.45	1.88	1.41	2.63	1.21	1.85	0.93	1.86	2.06	1.55	1.48	2.09	2.03	1.89	1.84	1.37	2.34	1.57	1.11	1.55	1.41	1.22	1.59	1.54
ES@99% CI *5	1.83	1.51	2.01	1.51	2.05	1.35	1.60	1.16	1.76	1.72	1.76	1.56	2.04	1.74	1.51	1.61	1.44	2.09	2.88	1.24	1.24	1.72	1.24	1.54	1.88
ES@98% CI	1.78	1.50	1.98	1.53	2.17	1.34	1.66	1.08	1.74	1.73	1.65	1.50	2.00	1.78	1.56	1.73	1.47	2.08	2.41	1.24	1.36	1.60	1.23	1.53	1.78
ES@95% CI	1.63	1.47	1.92	1.48	2.37	1.29	1.77	1.00	1.76	1.83	1.61	1.52	2.00	1.87	1.71	1.77	1.42	2.15	1.95	1.21	1.49	1.49	1.22	1.56	1.65
Ratios of Undiversified to Diversified VAR/COV VaR@95% Confidence Level																									
UVaR/ADPVaR *6	1.78	1.89	2.09	1.79	1.98	1.87	1.93	1.98	2.58	2.47	1.77	1.59	2.06	2.29	1.86	1.76	1.53	1.90	1.65	1.80	1.43	1.65	1.28	1.87	1.82
UVaR/DPVaR/SP *7	1.86	2.03	2.21	1.92	2.03	1.87	2.06	2.11	2.93	2.32	1.86	1.71	2.23	2.34	1.92	1.82	1.60	1.95	1.72	1.83	1.50	1.71	1.31	1.93	1.87

Footnotes for Table AA.1

*1 - "Aggregate Port Std Dev" represents aggregate portfolio standard deviation

*2 - "Port Std Dev/Sum Positions" represents the ratio of portfolio standard deviation to sum of individual positions

*3 - "75th-25th Range/Log-Returns" represents the 75th percentile minus the 25th percentile

*4 - HVaR@99%, HVaR@98%, and HVaR@95% represent the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

*5 - ES(99%), ES(98%), and ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*6 - UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

*7 - UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

Appendix AA

Table AA.2 - Summary of Overall Risk Reduction - Simulation Models, Mixed-Foreign Portfolios, and Case Averages																	
Portfolio/Case	GBM	FRW	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10	Ave SM *8	Ave FP *9	Ave DP *10	Ave Dev P *11	Ave Emg P *12
Absolute Dispersion Reduction - Twenty-Fifth Position Relative to First Position																	
Aggregate Port Std Dev *1	4.99	2.32	1.60	1.78	3.12	1.60	1.45	1.70	1.89	1.62	1.66	2.31	3.66	1.87	1.70	1.73	1.66
Port Std Dev/Sum Positions *2	4.98	2.39	1.67	1.96	3.00	1.62	1.54	2.05	2.01	1.74	1.88	2.45	3.68	1.99	1.77	1.80	1.73
75th-25th Range/Log-Returns *3	5.18	2.15	1.60	1.93	3.06	1.52	1.50	1.73	1.52	1.74	1.65	2.02	3.67	1.83	1.68	1.75	1.59
Maximum Loss	4.38	4.10	1.94	1.24	3.07	1.29	1.18	1.31	3.05	1.47	1.65	2.04	4.24	1.82	1.71	1.83	1.56
HVaR@99% *4 CI	4.45	2.36	1.55	1.66	3.01	1.55	1.28	1.39	1.82	1.46	1.40	2.05	3.41	1.72	1.66	1.70	1.60
HVaR@98% CI	4.86	1.94	1.43	1.59	2.98	1.52	1.36	1.50	1.70	1.40	1.46	2.06	3.40	1.70	1.65	1.70	1.59
HVaR@95% CI	4.21	1.25	1.48	1.83	2.92	1.49	1.46	1.59	1.67	1.49	1.59	2.16	2.73	1.77	1.65	1.69	1.60
ES@99% CI *5	4.32	3.33	1.82	1.36	3.09	1.36	1.20	1.34	2.53	1.49	1.42	1.99	3.82	1.76	1.68	1.76	1.57
ES@98% CI	4.47	2.87	1.69	1.47	3.00	1.42	1.24	1.37	2.20	1.46	1.42	2.00	3.67	1.73	1.66	1.72	1.58
ES@95% CI	4.51	2.13	1.56	1.59	2.95	1.48	1.32	1.47	1.92	1.45	1.47	2.05	3.32	1.73	1.65	1.70	1.58
Ratios of Undiversified to Diversified VAR/COV VaR@95% Confidence Level																	
UVaR/ADPVaR *6	4.90	4.51	2.45	2.46	2.94	2.77	2.54	2.58	2.72	2.88	2.70	3.28	4.71	2.73	1.86	1.90	1.82
UVaR/DPVaR/SP *7	4.89	4.63	2.56	2.70	2.77	2.81	2.70	3.09	2.88	3.10	3.06	3.45	4.76	2.91	1.95	1.98	1.90

Footnotes for Table AA.2

*1 - "Aggregate Port Std Dev" represents aggregate portfolio standard deviation

*2 - "Port Std Dev/Sum Positions" represents the ratio of portfolio standard deviation to sum of individual positions

*3 - "75th-25th Range/Log-Returns" represents the 75th percentile minus the 25th percentile

*4 - HVaR@99%, HVaR@98%, and HVaR@95% represent the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level respectively

*5 - ES(99%), ES(98%), and ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level respectively

*6 - UVaR/ADPVaR represents undiversified VaR/aggregate diversified portfolio VaR

*7 - UVaR/DPVaR/SP represents undiversified VaR/diversified portfolio VaR/sum individual positions

*8 Ave DP indicates Average results for the domestic portfolios

*9 Ave Dev P indicates the average results for the only the domestic portfolios classified as developed markets

*10 Ave Emg P indicates the average results for the domestic portfolios classified as emerging markets

*11 Ave FP indicates the average results for the mixed-foreign portfolios

*12 Ave SP indicates the average results for the simulation models

Appendix AA

Table AA.3 – Table Summary Averages over Risk Measurements and Risk Reduction Ratios					
Case	Ave DP*[1]	Ave Dev P*[2]	Ave Emg P*[3]	Mix For P*[4]	Ave Sim*[5]
Sequential Relative Dispersion Reduction (% Arithmetic Averages)					
Aggregate Port Std Dev*[6]	2.30	2.38	2.21	3.13	5.64
Port Std Dev/Sum Positions*[7]	2.48	2.53	2.41	3.33	5.67
75th-25th Range/Log-Returns*[8]	2.27	2.44	2.06	3.09	5.66
Maximum Loss	2.51	2.72	2.25	3.43	8.21
HvaR@99% CI*[9]	2.41	2.51	2.29	3.06	5.79
HvaR@98% CI	2.32	2.45	2.16	2.90	5.39
HvaR@95% CI	2.25	2.34	2.13	3.04	3.95
ES@99% CI*[10]	2.40	2.58	2.17	3.16	6.93
ES@98% CI	2.30	2.44	2.12	3.00	6.25
ES@95% CI	2.20	2.34	2.04	2.85	5.30
Absolute Dispersion Reduction –(% Geometric Averages)					
Aggregate Port Std Dev	2.15	2.23	2.05	2.55	5.25
Port Std Dev/Sum Positions	2.33	2.40	2.23	2.83	5.30
75th-25th Range/Log-Returns	2.06	2.25	1.81	2.45	5.17
Maximum Loss	2.14	2.42	1.79	2.29	6.20
HvaR@99% CI	2.06	2.19	1.90	2.14	5.03
HvaR@98% CI	2.04	2.18	1.86	2.12	4.80
HvaR@95% CI	2.01	2.11	1.88	2.30	3.56
ES@99% CI	2.10	2.31	1.84	2.19	5.71
ES@98% CI	2.06	2.22	1.85	2.15	5.46
ES@95% CI	2.02	2.16	1.85	2.19	4.85
Difference Aggregate and Summed Portfolios (% Arithmetic Averages)					
Maximum Loss	2007.77	2478.38	1408.82	5338.19	-412.59
HvaR@99% CI*	717.95	709.37	728.87	1787.20	125.32
HvaR@98% CI	813.96	623.96	1055.78	1437.31	77.34
HvaR@95% CI	560.17	445.32	706.34	1011.46	42.21
ES@99% CI	1539.38	1864.55	1125.54	4220.17	-486.79
ES@98% CI	1136.18	1266.94	969.77	3000.66	-116.42
ES@95% CI	813.00	749.89	893.33	1107.95	-48.10

Table AA.4 – Summary Averages for Component VaR Forecasts					
Case	Ave DP*[1]	Ave Dev P*[2]	Ave Emg P*[3]	Mix For P*[4]	Ave Sim*[5]
Portfolio Average Estimates of Component VaR @95% CI (Arithmetic Averages)					
CvaR@95% CI*[11]	-5154.74	-4440.88	-6063.30	-3622.99	-973.48
Position VaR@95/Component VaR@95 CI Ratio (Arithmetic Averages over Portfolios)					
Position VaR/CvaR @95% CI*[12]	0.216	0.217	0.216	0.356	0.386
Position VaR@95/Component VaR@95 CI Ratio (% Geometric Averages over Positions)					
Position VaR/CvaR @95% CI	-5.91	-6.18	-5.57	-7.59	4.16

Appendix AA

Table AA.5 – Summary Averages for Component VaR Forecasts					
Case	Ave DP*[1]	Ave Dev P*[2]	Ave Emg P*[3]	Mix For P*[4]	Ave Sim*[5]
IHVaR @95 CI*[13]	57.94	78.81	31.38	111.23	23.93
IHVaR @98 CI	81.50	112.35	42.25	108.01	145.20
IHVaR @99 CI	81.39	110.25	44.64	78.66	67.02
IES @95 CI*[14]	86.32	79.24	95.32	148.59	70.74
IES @98 CI	114.22	91.84	142.70	152.75	80.80
IES @99 CI	155.40	126.60	192.05	157.62	97.29

Footnotes for Tables AA.3 and AA.5

*1 Ave DP indicates Average results for the domestic portfolios

*2 Ave Dev P indicates the average results for the only the domestic portfolios classified as developed markets

*3 Ave Emg P indicates the average results for the domestic portfolios classified as emerging markets

*4 Mix For P indicates the average results for the mixed-foreign portfolios

*5 Ave Sim indicates the average results for the simulation models

*6 – "Aggregate Port Std Dev" represents aggregate portfolio standard deviation

*7 – "Port Std Dev/Sum Positions" represents the ratio of portfolio standard deviation to sum of individual positions

*8 – "75^{th}-25^{th} Range/Log-Returns" represents the 75^{th} percentile minus the 25^{th} percentile

*9 HvaR@99%, HvaR@98%, HvaR@95% represents the historical VaR at 99% confidence level, historical VaR at 98% confidence level and historical VaR at 95% confidence level, respectively

*10 ES(99%), ES(98%), ES(95%) represents the expected shortfall at the 99% confidence level, expected shortfall at 98% confidence level and expected shortfall at 95% confidence level, respectively

*11 CvaR@95% CI indicates the component VaR at 95% confidence level,

*12 Position VaR/CvaR @95% CI indicates the ratio of the position VaR at 95% confidence level, over the component VaR at 95% confidence level,

*13 IHVaR @95 CI indicates the historical incremental VaR at 95% confidence level,

*14IES @95 CI indicates the historical incremental expected shortfall at 95% confidence level,

Appendix AB2 - Average Weighted Factor Betas for Mixed-Foreign Portfolios

Table AB2.01 - Average Weighted Factor Betas: Portfolio Group MC1*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	0.062039	-0.09291	0.144553	0.21851	0.364769	0.062456	0.061549	0.077572	-0.00673	0.248579	0.074759	0.123263	0.136418	0.176832	0.036467
Average/Standard Deviation	0.101355	-0.06946	0.153461	0.187536	0.321817	0.102003	0.101059	0.114005	0.000136	0.226684	0.058964	0.100792	0.074271	0.220034	0.048662
Covariance	-0.60125	-0.16275	0.222134	0.264384	0.787106	-0.60224	-0.60319	-0.59298	0.033553	0.281864	0.236527	0.332057	0.561989	-0.2311	0.010154
Variance	-0.53832	-0.14757	0.211976	0.249569	0.695808	-0.53955	-0.54031	-0.53156	0.030062	0.267132	0.222525	0.312582	0.489878	-0.18938	0.005452
Equal Weighted	-0.47464	-0.12714	0.148751	0.196036	0.597721	-0.47511	-0.47548	-0.46704	0.035553	0.220567	0.190809	0.264455	0.445394	-0.16317	0.016526

* MC1 represents the highest market capitalization securities

Table AB2.02 - Average Weighted Factor Betas: Portfolio Group MC2*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	-0.60752	-0.12289	0.180852	0.25428	1.148205	-0.60708	-0.60928	-0.59794	0.02019	0.320281	0.313703	0.409611	0.678485	-0.3644	-0.01012
Average/Standard Deviation	-0.56292	-0.13285	0.139968	0.254585	1.030319	-0.5627	-0.56384	-0.5529	0.015221	0.297049	0.26766	0.3472	0.617914	-0.31344	-0.00605
Covariance	-0.79076	-0.20188	0.167193	0.259522	1.040146	-0.79044	-0.79221	-0.7821	0.055214	0.301476	0.347219	0.441266	0.740239	-0.35287	-0.00201
Variance	-0.62174	-0.15963	0.20324	0.231874	0.92618	-0.6217	-0.62388	-0.61561	0.038855	0.273275	0.288904	0.381053	0.592399	-0.24765	0.002788
Equal Weighted	-0.47468	-0.11934	0.15063	0.20987	0.685979	-0.47461	-0.47546	-0.46831	0.028611	0.230019	0.223557	0.301719	0.46231	-0.14799	0.009209

* MC2 represents the second highest market capitalization securities

Table AB2.03 - Average Weighted Factor Betas: Portfolio Group MC3*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	0.816077	-0.17712	-0.78922	1.182607	0.398946	0.813766	0.820751	0.844258	-0.33738	0.139684	-0.15478	-0.52114	0.14612	0.839175	-0.38568
Average/Standard Deviation	0.398415	-0.12798	-0.43986	0.628123	0.314588	0.398466	0.403072	0.415403	-0.14916	0.077102	-0.04821	-0.21352	0.08732	0.372413	-0.23572
Covariance	0.205734	-0.2091	-0.44382	0.966766	0.452881	0.203651	0.209347	0.236236	-0.13388	0.235146	0.013558	-0.21302	0.328315	0.448645	-0.28128
Variance	0.503963	-0.18471	-0.57854	1.070506	0.338746	0.501866	0.508311	0.538763	-0.20268	0.221658	-0.06228	-0.34715	0.191873	0.650072	-0.33151
Equal Weighted	-0.2915	-0.11852	0.062831	0.215734	0.432278	-0.29209	-0.29135	-0.2798	0.038853	0.195154	0.130873	0.169758	0.357658	-0.08244	-0.03474

* MC3 represents the third highest market capitalization securities

Table AB2.04 - Average Weighted Factor Betas: Portfolio Group MC4*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	-0.47529	-0.81693	0.413372	0.3889	0.114652	-0.47036	-0.47936	-0.52452	-0.14013	0.208027	-0.20989	-0.03403	-0.98229	0.217071	0.123748
Average/Standard Deviation	-7.3052	11.18523	-3.34242	-0.04566	7.662301	-7.42859	-7.36293	-6.6926	-1.40129	-0.39993	6.336362	4.49709	21.85346	-5.81053	1.148776
Covariance	-0.47836	-0.21883	0.154311	0.245421	0.641465	-0.47896	-0.47861	-0.47034	0.071661	0.262253	0.201716	0.293869	0.464543	-0.13813	-0.01388
Variance	-0.36641	-0.19819	0.194455	0.237411	0.657849	-0.36668	-0.36649	-0.35845	0.08352	0.273255	0.180863	0.271326	0.418257	-0.09659	-0.03068
Equal Weighted	-0.41052	-0.15292	0.132602	0.174728	0.542285	-0.41063	-0.41068	-0.40271	0.055752	0.200128	0.176008	0.252799	0.377788	-0.12442	-0.00547

* MC4 represents the fourth highest market capitalization securities

Appendix AB2 - Averages Weighted Factor Betas for Mixed-Foreign Portfolios (Continued)

Table AB2.05 - Average Weighted Factor Betas: Portfolio Group MC5*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	0.238515	0.959313	0.618527	1.002518	-0.6893	0.251578	0.257144	0.343659	-0.02787	-0.16864	-0.7737	-0.76657	-0.72071	-0.696	-0.25511
Average/Standard Deviation	0.56173	-0.07192	0.174552	-0.51581	-0.09197	0.565906	0.558676	0.541659	-0.27307	-0.03881	-0.05637	0.034504	0.19892	0.416698	-0.07806
Covariance	-0.6945	-0.24268	0.152463	0.323919	0.766753	-0.69628	-0.69621	-0.684	0.08999	0.289469	0.28342	0.38631	0.61937	-0.35159	-0.01694
Variance	-0.53445	-0.17204	0.188657	0.345941	0.623367	-0.53641	-0.53536	-0.52131	0.06343	0.293503	0.218705	0.304568	0.478078	-0.33656	-0.01753
Equal Weighted	-0.46739	-0.16229	0.124853	0.249781	0.566661	-0.46804	-0.4681	-0.45801	0.060961	0.227671	0.194057	0.278423	0.456963	-0.20282	-0.01074

* MC5 represents the fifth highest market capitalization securities

Table AB2.06 - Average Weighted Factor Betas: Portfolio Group MC6*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	0.694219	0.148758	1.943267	2.111347	0.590617	0.668221	0.692092	0.687079	1.204327	0.488025	0.88126	0.648219	0.326668	-1.61455	0.081351
Average/Standard Deviation	-0.03731	0.453072	0.181159	-0.02631	0.042859	-0.0326	-0.03714	-0.02864	-0.40893	0.108187	0.016842	0.025951	0.510453	0.226937	-0.02752
Covariance	-0.58377	-0.21022	0.131318	0.334148	0.518464	-0.58771	-0.58609	-0.57546	0.123835	0.251346	0.302561	0.370351	0.578189	-0.23266	-0.02648
Variance	-0.43243	-0.1425	0.228724	0.349411	0.311962	-0.43801	-0.43651	-0.4272	0.11006	0.256626	0.255926	0.326319	0.559245	-0.14009	-0.03902
Equal Weighted	-0.43009	-0.14173	0.058184	0.179421	0.446389	-0.43051	-0.43052	-0.42306	0.056367	0.182147	0.182446	0.239269	0.38796	-0.14851	-0.01113

* MC6 represents the sixth highest market capitalization securities

Table AB2.07 - Average Weighted Factor Betas: Portfolio Group MC7*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	-2.09007	-0.00268	-1.53571	0.633802	2.699256	-2.11139	-2.1198	-2.12079	0.305781	0.347787	0.590501	1.885608	4.7192	-3.5919	-0.1714
Average/Standard Deviation	-0.31639	0.314332	0.145916	0.289204	0.831955	-0.32063	-0.32226	-0.31683	0.086363	0.310799	0.216157	0.464956	1.059654	-0.48084	0.069214
Covariance	-0.56443	-0.20311	0.159617	0.294866	0.752038	-0.56548	-0.56638	-0.55312	0.080047	0.293071	0.24408	0.326657	0.595373	-0.25364	-0.00965
Variance	-0.40466	-0.14827	0.208949	0.269658	0.694016	-0.40582	-0.40746	-0.39592	0.046602	0.263459	0.19288	0.270197	0.476444	-0.18182	-0.00385
Equal Weighted	-0.36389	-0.09345	0.129701	0.194613	0.495069	-0.36414	-0.36436	-0.35419	0.052512	0.204563	0.158824	0.216168	0.384778	-0.15136	-0.00532

* MC7 represents the seventh highest market capitalization securities

Table AB2.08 - Average Weighted Factor Betas: Portfolio Group MC8*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	-0.83555	-0.55354	-0.20665	-0.15016	0.815502	-0.8309	-0.82887	-0.79824	0.141285	0.045582	0.308052	0.414231	0.638468	-0.35063	-0.09618
Average/Standard Deviation	-1.01997	-0.41221	0.020525	0.078533	1.003864	-1.01831	-1.01794	-1.00056	0.119264	0.190975	0.397242	0.52809	0.727183	-0.44116	-0.0332
Covariance	-0.59754	-0.23458	0.124918	0.237315	0.713875	-0.59838	-0.59878	-0.58599	0.111302	0.283072	0.237524	0.324558	0.479081	-0.22002	-0.03827
Variance	-0.47912	-0.19033	0.098678	0.200275	0.612194	-0.47999	-0.48037	-0.46912	0.091868	0.252596	0.180037	0.257603	0.377897	-0.17129	-0.04363
Equal Weighted	-0.33981	-0.13762	0.086549	0.17448	0.44632	-0.34013	-0.34003	-0.3319	0.062099	0.189544	0.149522	0.209027	0.312509	-0.10514	-0.02398

* MC8 represents the eighth highest market capitalization securities

Appendix AB2 - Average Weighted Factor Betas for Mixed-Foreign Portfolios

Table AB2.09 - Average Weighted Factor Betas: Portfolio Group MC9*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	2.255281	1.290651	2.842911	0.598573	-1.65695	2.265563	2.265318	2.14674	-0.45009	-0.93132	-0.20897	-0.60469	-0.79076	1.119976	-0.02334
Average/Standard Deviation	-0.74028	0.345323	0.436047	0.456594	0.817466	-0.74065	-0.73928	-0.7438	0.026075	0.186877	0.373453	0.442443	0.635739	-0.3527	0.104682
Covariance	-0.57171	-0.27355	0.18943	0.207183	0.66736	-0.57262	-0.57179	-0.55427	0.112657	0.244534	0.203472	0.283576	0.461623	-0.20499	-0.02845
Variance	-0.36445	-0.22843	0.374503	0.156783	0.651303	-0.36535	-0.36534	-0.34572	0.06284	0.19208	0.156842	0.222674	0.365775	-0.18076	-0.04098
Equal Weighted	-0.40583	-0.143	0.128692	0.13359	0.490154	-0.40595	-0.40542	-0.39457	0.069271	0.188413	0.14718	0.203266	0.348942	-0.13224	-0.00831

* MC9 represents the ninth highest market capitalization securities

Table AB2.10 - Average Weighted Factor Betas: Portfolio Group MC10*															
Factor Weighting Scheme	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15
Average Over Entire Series	-0.11313	0.235714	0.953942	-0.1663	0.048829	-0.11633	-0.11645	-0.11689	0.009835	0.158257	0.100839	0.091078	0.247222	0.536902	0.015735
Average/Standard Deviation	0.36696	0.402006	-0.25581	-0.12732	-0.88133	0.367177	0.362694	0.343325	-0.18153	0.036528	-0.25599	-0.35254	-0.32539	0.705134	0.093254
Covariance	-0.50517	-0.10283	0.177321	0.174354	0.517374	-0.5051	-0.50741	-0.50568	0.029895	0.239995	0.255748	0.297729	0.384502	-0.16909	-0.02436
Variance	-0.33188	-0.02538	0.239855	0.14369	0.393114	-0.33225	-0.33435	-0.33385	0.007285	0.201292	0.180436	0.22067	0.29146	-0.01038	-0.01624
Equal Weighted	-0.27603	-0.06253	0.132594	0.126273	0.364088	-0.27619	-0.27684	-0.27118	0.029839	0.14553	0.135345	0.172429	0.25384	-0.04519	-0.01129

* MC10 represents the tenth highest market capitalization securities

Appendix AC2 - Average Risk Measurements for Mixed-Foreign Portfolios

Table AC2.01 - Average Risk Measurements: Portfolio Group MC1							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-15877	-41387.66	-46912.68	-46252.525	-41650.4	-36875.0986	0.3836	0.3384	0.34326721	0.3812	0.430560898
HVAR@98%	-23737.6	-55719.32	-61688.19	-65066.992	-59234.2	-51744.2688	0.426	0.3848	0.36481847	0.40074	0.458749177
HVAR@99%	-27814	-63411.09	-69006.47	-77338.209	-70782.9	-60860.3441	0.4386	0.4031	0.35964166	0.39295	0.457014211
ES(95%)	-22896.5	-55352.38	-61865.35	-64926.17	-59049.7	-51286.6822	0.4136	0.3701	0.35265401	0.38775	0.44644093
ES(98%)	-29633.4	-68832.66	-76130.54	-82745.416	-75463.2	-65819.8348	0.4305	0.3892	0.35812747	0.39269	0.450220008
ES(99%)	-32764.5	-76193.16	-84867.07	-92390.319	-83656.3	-73499.5245	0.43	0.3861	0.35463084	0.39166	0.4457778

Table AC2.02 - Average Risk Measurements: Portfolio Group MC2							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-17369.2	-52837.56	-47728.32	-61352.946	-49270.7	-38185.8204	0.3287	0.3639	0.28310323	0.35253	0.454860384
HVAR@98%	-25285.4	-75942.73	-68473.59	-84541.305	-70957.9	-54098.4149	0.333	0.3693	0.29908932	0.35634	0.467396346
HVAR@99%	-27902.3	-83843.36	-77034.85	-98379.244	-81308.8	-63834.3613	0.3328	0.3622	0.28361932	0.34316	0.437103987
ES(95%)	-24436.6	-74792.44	-67900.58	-84830.797	-69563.1	-54341.4002	0.3267	0.3599	0.28806264	0.35129	0.449686295
ES(98%)	-32558.7	-96843.01	-88502.34	-108166.92	-88304.4	-69460.5887	0.3362	0.3679	0.30100456	0.36871	0.468736826
ES(99%)	-37756.6	-112142.8	-102126.4	-121018.44	-98429	-77523.5017	0.3367	0.3697	0.31199083	0.38359	0.487034805

Table AC2.03 - Average Risk Measurements: Portfolio Group MC3							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-13862.8	-113565.1	-80709.51	-87327.654	-88668.1	-29033.5585	0.1221	0.1718	0.15874442	0.15634	0.4774743
HVAR@98%	-20371	-144932.2	-102737.8	-109557.49	-112020	-39619.414	0.1406	0.1983	0.18593884	0.18185	0.514166956
HVAR@99%	-23104.6	-166220.6	-121960.3	-128490.88	-130211	-47026.7585	0.139	0.1894	0.17981541	0.17744	0.49130838
ES(95%)	-20125.3	-146349.4	-105188.2	-110963.55	-112466	-39524.4746	0.1375	0.1913	0.181369	0.17895	0.50918699
ES(98%)	-26120.9	-176335.3	-129677.7	-134561.64	-134875	-50705.8577	0.1481	0.2014	0.19411836	0.19367	0.51514531
ES(99%)	-29703.5	-191449.1	-143501.3	-146746.56	-145479	-56411.1034	0.1552	0.207	0.20241365	0.20418	0.526554283

* FWS represents factor weighting scheme
** AOES represents average over entire series
*** Avg/SD represents average/standard deviation
**** Eq weighted represents equal weighted
***** MC1,...,MC3 represents the highest market capitalization securities to the third highest market capitalization securities

Appendix AC - Average Risk Measurements for Mixed-Foreign Portfolios (Continued)

Table AC2.04 - Average Risk Measurements: Portfolio Group MC4							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-15441.6	-82688.6	-772762	-40048.705	-35262.2	-32432.9321	0.186744	0.019982	0.38557065	0.437909	0.476108832
HVAR@98%	-21444.8	-101403	-994760	-54572.929	-47761	-45605.8079	0.211481	0.021558	0.3929568	0.449003	0.470220883
HVAR@99%	-25768.6	-117079	-1021496	-68745.892	-60387.1	-55397.4898	0.220096	0.025226	0.37483901	0.426724	0.465159013
ES(95%)	-21337.6	-104257	-1078244	-55335.82	-49293.6	-46342.3282	0.204664	0.019789	0.38560207	0.432868	0.460434504
ES(98%)	-27967.9	-128594	-1397410	-70973.492	-64242	-59894.4875	0.217491	0.020014	0.39406188	0.435353	0.466953616
ES(99%)	-31246.3	-145879	-1778324	-77951.3	-72005.5	-66469.9433	0.214193	0.017571	0.40084385	0.433943	0.470081633

Table AC2.05 - Average Risk Measurements: Portfolio Group MC5							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-17248.9	-201004	-71969.9	-54728.855	-44978.5	-37884.8954	0.085814	0.239669	0.31517092	0.383493	0.455298703
HVAR@98%	-23614.4	-280602	-103582	-74188.401	-59687.9	-51342.9496	0.084156	0.227978	0.3183036	0.395632	0.4599353
HVAR@99%	-28202.1	-370395	-125280	-88909.911	-73046.4	-62505.529	0.076141	0.225113	0.31719893	0.386085	0.451194139
ES(95%)	-23948.5	-288507	-101967	-75492.089	-61636.2	-52872.5383	0.083009	0.234866	0.31723228	0.388547	0.452948322
ES(98%)	-31382.3	-392311	-132214	-95862.592	-78580.3	-67931.5028	0.079994	0.237359	0.32736804	0.399367	0.461970476
ES(99%)	-35768.9	-442490	-145725	-107104.09	-87422.4	-75927.0284	0.080836	0.245455	0.33396411	0.40915	0.471096019

Table AC2.06 - Average Risk Measurements: Portfolio Group MC6							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-18939.5	-190328	-94371.9	-49425.254	-43554.9	-32489.4121	0.09951	0.20069	0.38319463	0.434842	0.582943517
HVAR@98%	-28484	-266818	-135157	-69270.471	-59185.8	-45925.2002	0.106754	0.210747	0.41119971	0.481264	0.620225881
HVAR@99%	-35356.3	-307878	-159634	-80180.144	-69051.1	-54120.0862	0.114839	0.221483	0.44096083	0.512031	0.653293551
ES(95%)	-29881.9	-256260	-135437	-67834.506	-58666.8	-45871.1808	0.116608	0.220633	0.44051124	0.509349	0.651429986
ES(98%)	-42918.7	-320851	-176795	-87251.369	-74803.3	-59372.2057	0.133765	0.242759	0.49189741	0.573754	0.722875666
ES(99%)	-52577.8	-347799	-204204	-96736.354	-82078.8	-66171.3595	0.151173	0.257477	0.54351603	0.640576	0.794569728

* FWS represents factor weighting scheme
** AOES represents average over entire series
*** Avg/SD represents average/standard deviation
**** Eq weighted represents equal weighted
***** MC4,...,MC6 represents the fourth highest market capitalization securities to the sixth highest market capitalization securities

Appendix AC2 - Average Risk Measurements for Mixed-Foreign Portfolios (Continued)

Table AC2.07 - Average Risk Measurements: Portfolio Group MC7							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-14975.4	-229756	-60130.2	-47248.168	-37175.8	-30383.1793	0.06518	0.24905	0.3169522	0.402827	0.492884922
HVAR@98%	-20980.8	-309474	-74124.7	-63904.081	-49722	-41230.1503	0.067795	0.283047	0.32831703	0.421962	0.508870286
HVAR@99%	-25079.2	-389147	-91272.7	-77590.419	-61206.4	-50402.5668	0.064447	0.274772	0.32322513	0.409748	0.497577309
ES(95%)	-21019.6	-332430	-79863.6	-65602.5	-51846.1	-42682.2846	0.06323	0.263193	0.3204079	0.405422	0.49246565
ES(98%)	-27253.6	-472718	-105436	-83625.321	-65968.3	-55315.1088	0.057653	0.258485	0.32590073	0.413131	0.492696365
ES(99%)	-30743.8	-580073	-124085	-94217.246	-74678.4	-62378.0875	0.053	0.247763	0.32630736	0.411683	0.49286187

Table AC2.08 - Average Risk Measurements: Portfolio Group MC8							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-13979.9	-103971	-85691.8	-44785.716	-36410.9	-27240.1884	0.13446	0.163142	0.31215112	0.383948	0.513209066
HVAR@98%	-20604.2	-142373	-118669	-62942.901	-49801.7	-37954.1766	0.14472	0.173627	0.32734712	0.413724	0.542869826
HVAR@99%	-23023.3	-169042	-139087	-75023.367	-60199.1	-46620.9499	0.136199	0.165532	0.30688197	0.382453	0.493840614
ES(95%)	-20182.3	-143195	-118712	-63284.445	-50784.3	-38819.7063	0.140943	0.170011	0.31891427	0.397412	0.519898637
ES(98%)	-25539.2	-184235	-153428	-81004.67	-65572.1	-50346.1619	0.138623	0.166457	0.31528077	0.389483	0.50727233
ES(99%)	-28577.7	-209213	-175206	-90133.035	-72962.4	-55526.8009	0.136597	0.163109	0.31706165	0.391677	0.514665498

Table AC2.09 - Average Risk Measurements: Portfolio Group MC9							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-17316.6	-272790	-92224.2	-41987.225	-31269.7	-30132.732	0.06348	0.187766	0.41242592	0.553783	0.574678068
HVAR@98%	-23998.4	-371058	-126727	-57166.514	-41670.8	-41516.4633	0.064676	0.189371	0.41979866	0.575905	0.578046003
HVAR@99%	-27873.6	-471323	-150840	-69822.1	-50906.5	-49159.2505	0.059139	0.184789	0.39920902	0.547545	0.56700645
ES(95%)	-23997	-368251	-130528	-58387.785	-42851	-41709.3565	0.065165	0.183846	0.41099306	0.560009	0.575337923
ES(98%)	-31280	-484898	-168498	-74746.14	-54885.4	-53553.0388	0.064508	0.18564	0.41848356	0.569915	0.584094419
ES(99%)	-36163.9	-543291	-194402	-83193.973	-63060.4	-59799.9883	0.066565	0.186027	0.43469413	0.573481	0.604748134

* FWS represents factor weighting scheme
** AOES represents average over entire series
*** Avg/SD represents average/standard deviation
**** Eq weighted represents equal weighted
***** MC7,...,MC9 represents the seventh highest market capitalization securities to the ninth highest market capitalization securities

Appendix AC - Average Risk Measurements for Mixed-Foreign Portfolios

Table AC2.10 - Average Risk Measurements: Portfolio Group MC10							Ratio relative to Portfolio with Raw Positions				
FWS	Raw	AOES	Avg/SD	Covariance	Variance	Eq weighted	AOES	Avg/SD	Covariance	Variance	Eq weighted
HVAR@95%	-13261.28	-57731.78	-109589.9	-39693.732	-28389.48	-22650.24163	0.229705	0.121008	0.33408998	0.467119	0.585480648
HVAR@98%	-17546.01	-78910.91	-147110.7	-56127.565	-42101	-32626.88884	0.222352	0.119271	0.31260948	0.41676	0.537777565
HVAR@99%	-21837.1	-96936.04	-181289.4	-67081.242	-47977.11	-38041.14935	0.225273	0.120454	0.32553211	0.455157	0.574038859
ES(95%)	-17904.79	-80835.11	-148070.6	-55140.901	-38706.01	-31587.27493	0.221498	0.120921	0.32470984	0.462584	0.566835634
ES(98%)	-23266.97	-108054.1	-192830.1	-71252.905	-50127.64	-40766.86021	0.215327	0.12066	0.32654063	0.464154	0.570732405
ES(99%)	-25917.18	-124614.9	-213452.5	-77642.5	-53299.28	-44748.54519	0.207978	0.121419	0.33380147	0.486258	0.579173704

* FWS represents factor weighting scheme
** AOES represents average over entire series
*** Avg/SD represents average/standard deviation
**** Eq weighted represents equal weighted
***** MC10 represents the tenth highest market capitalization securities