The Impact of Politics on Stock Return Dynamics in Emerging Markets

A thesis presented in fulfilment of the requirements for the degree of Doctor of Philosophy in Finance at Massey University

Sireethorn Civilize

School of Economics and Finance

College of Business

Massey University

2012

In dedication to my beloved country and particularly to His Majesty King Bhumibol Adulyadej, the King of Thailand, in celebration of HM the King's 7th Cycle (84th)birthday anniversary in 2011.

ABSTRACT

It is argued that politics plays a vital role in emerging capital markets. This thesis focuses on three specific political aspects and examines how each of these aspects could impact the stock return dynamics in emerging markets.

Firstly, to examine the relationship between political risk and stock returns, political risk ratings from ICRG observed during the period of 1984 – 2007 is employed for the analysis. This thesis finds the magnitude of political risk change to be larger in emerging markets than in developed ones and the presence of global convergence in political risk between these two markets portfolios after the year 1995. Moreover, the influence of political risk is found to be greatest on the aggregated returns of Pacific Basin markets as opposed to other emerging and developed markets. This essay thus provides important implications for international investors that there are differences in political risk exposures among the different types of market and investing in Pacific Basin emerging markets can increase the level of risk and affect the risk-return characteristic of their investment portfolios.

Secondly, an investigation is made on the differences between the stock returns of ten emerging markets under military and civilian regimes. This thesis provides evidence that there is no significant difference in stock returns between military and civilian governments for eight of the ten markets being examined. However, military rule is found to be a stock price factor for two markets being those of Pakistan and Thailand. Such military returns premiums found in these two countries do not appear to be explained by economic cycle fluctuation, extreme stock market slumps, the error term, or returns volatility. The findings are robust to the control of worldwide stock market movements as well as to the test of spurious regression bias and randomisation-bootstrap. The findings provide important information for investors that the shifts from civilian to military government in Pakistan and Thailand do not increase the risk level of their investment portfolios. However, such findings observed in these two countries are country-specific and cannot be applied to all countries under military governments.

Lastly, the relationship among political connectedness, stock returns, and firm values in Thailand is examined. From a newly hand-collected sample of Thai firms observed over the period 1987 to 2008, this thesis finds that there are differences in the stock returns and financial performance of firms with different levels of political connection. The findings suggest that firms which are connected to higher level politicians are associated with higher stock returns. This is particularly prevalent for firms in tightly regulated industries. Highly connected firms are also associated with better financial performance and earnings prospect than those with lower level of connection. Moreover, this thesis finds the incidence of political connections to be higher for firms with long establishment and listed firms seek political affiliations regardless of where their headquarters are located in Thailand. The evidence strongly suggests that the stock market participants do incorporate factors such as political connection into their investment decisions and the level of corporate political connectedness is a stock price factor in Thailand.

ACKNOWLEDGEMENTS

I always thought that PhD is a journey, not a destination. Like any journey, the road can be smooth. Yet, often times, there are also bumpy ones. Therefore, I would like to thank my supervisors, Professor Martin Young and Dr. Udomsak Wongchoti for their guidance and relentless support in helping me to travel through this journey. Thank you for having the confidence in me! Warm thanks go to Fong Mee Chin for her help with the data and her affectionate support for me throughout this journey. Special thanks go to Cameron Rhodes for his assistance whenever I had technical break downs and to Maryke Bublitz for her help in reschedule the meetings whenever I cannot complete the works on time or when I cannot find the flights back from my holidays! And, a big thank you to all of the staff at the School of Economics and Finance who creates a vibrant learning environment and makes the Finance department likes a second home to me!

Lots of love and thanks go to my family who continuously supports me right through this journey, especially to my mother for her unconditional love along with her endless encouragement and for always creating a warm and comfortable home for me to return to during holidays! A million thanks goes to Dr. Suphol Civilize, my father, who is also my greatest mentor and my everything! This PhD would have not been completed without their love, guidance, and motivation! No words can express how much I love both of you!!!

And now some thoughts about those people who have made my life so much fun over these last few years. To Pok Wei Fong, thank you for being such a wonderful officemate. Thanks for all your help whenever I am in doubt, for the fun and laughter both in and out of office, and for everything! To all my PhD mates at the department, thanks for your support and for the time we shared after the conference in Queenstown! To all my Thai friends here in Palmerston North, a warm thanks to all of you for generously supporting me with all your love and care throughout these years! To all instructors at Massey Recreation Centre, thank you for keeping me fit, healthy, and in high spirits which help me to remain sane through the crazy days! Thank you all my friends for travelling through this amazing journey with me!!!

Lastly, I would like to thank Katsuhiko Okada, Frederick Harris, and seminar participants at 2010 Asian Finance Association (AFA) meeting in Hong Kong and 2010 Asian Financial Management Association (FMA Asia) meeting in Singapore for many helpful comments which help to enhance the quality of this thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

This chapter provides an overview of the three essays contained in this thesis. In particular, it outlines the motivations and the need for studying the impact of politics on stock returns dynamic in emerging stock markets. The chapter concludes by outlining a framework for the remainder of the thesis.

1.1 INTRODUCTION

One of the key research questions within the finance discipline is how equity is being priced. Prior studies establish a number of factors that cause stock price movements. These range from firms' specific events, micro- and macro-economic issues, to a number of other factors. It is documented by Adam Smith since the 18th century that economics and politics have significant influence over each other. However, whether politics and equity market could interact and have impact on one another is an interesting issue that numerous researchers have attempted to answer over the past decades. Therefore, the focus of this thesis is on the effect of three particular political aspects on the stock returns of emerging markets.

A number of studies document that politics cause stock price movements[1]. However, it is debatable whether such findings are applicable to all markets since politics at both the domestic and international level are multifaceted in nature. Particularly at the international level, it is arguable that some markets may be more politically sensitive than the others despite the fact that they are located within the same geographical region. Therefore, for testing and comparison purposes, the stock markets are usually being clustered into either emerging or developed market so that each group of market only consists of those belonging to the same economic class.

Accordingly, prior studies such as Bekaert and Harvey (2002) find that politics in emerging markets plays a significantly higher role and appears to be more highly intertwined with public and business administration than in developed markets. Moreover, emerging markets generally possess a less mature political system than developed market. Consequently, the political situation in emerging markets tends to be less stable compared to developed markets. Given such an important role of politics in emerging markets, the primary focus of this thesis is to examine its influences on the stock markets. Specifically, this thesis aims to study the importance of three different political aspects on the stock return dynamics of emerging markets by using three different sets of methodology to carry out the empirical analysis.

[1] See, for example, Niederhoffer, Gibbs, and Bullock (1970) and Herbst and Slinkman (1984).

This thesis therefore consists of three interrelated essays. Each essay investigates the impact of one of the three political aspects on the stock returns of emerging markets. These three political aspects consist of: (1) political risk; (2) political regime; and, (3) political connections. Three essays are written in response to the following three major research questions. Firstly, is political risk a more important determinant of stock returns for emerging markets than for developed markets? Secondly, is there a significant difference in equity returns between periods of military and civilian rule in emerging markets? And, thirdly, does the Thai equity market values political connections?

To answer the first research question, the first essay of this thesis explores the subject of political risk and stock returns. In particular, the essay uses the changes in political risk rating to highlight the difference in the impact of political risk on equity returns between emerging and developed markets. To address the second research question, the second essay investigates whether the type of political regime is a factor in stock pricing in emerging markets. Specifically, the essay examines whether there are differences in the stock returns of emerging markets when military as opposed to civilian governments are ruling a country. Lastly, the third essay answers the last research question by investigating the differences in the stock returns of firms with different levels of political connection in Thailand.

The remainder of this chapter provides an outline for each of the three essays and underlines the important contribution that each provides to the existing body of knowledge. Section 1.2 provides an overview of the effects of political risk on emerging and developed markets. Section 1.3 presents the differences in stock market returns between military and civilian rulings. Section 1.4 offers evidence on the value of political connections in Thailand. Finally, section 1.5 outlines the structure as well as how the thesis is organised.

1.2 ESSAY ONE

The first essay examines the relationship between political risk and stock returns. Particularly, this essay investigates whether there are any differences in the impact of political risk on equity returns between emerging and developed markets.

Political risk as defined by Haendal, West, and Meadow (1975) is the risk that some political events will affect the profitability of a given investment. Given the fact that there can be interventions by the government in the financial market place, a certain degree of political risk is therefore inevitable. Furthermore, political risk can be pervasive and has a market-wide impact such that investors cannot avoid it through diversification. Political risk is thus regarded as a systematic risk as opposed to unsystematic risk. Even for a well diversified portfolio, systematic risk can be a threat. Hence, in making investment decisions, rational investors would consider the risk of political interference and demand a higher return on their investments in compensation for bearing such a risk. It is in this sense that political risk is priced by the market.

However, there can be different levels of political risk exposures among the markets. This provides an opportunity for international investors to diversify their portfolios and balance their risks and returns. Specifically, prior studies such as Diamonte *et al.* (1996), Erb *et al.* (1996), and Bilson *et al.* (2002) find that political risk has a greater explanatory power for the stock returns of emerging markets than those of developed ones. These studies that use political risk ratings to examine the effect of political risk on stock returns were generally conducted up until late 1990s. To the researcher's knowledge, there is not yet any study which uses risk rating to examine emerging and developed markets concurrently for the remaining period, which is from 1990s up until the present.

Furthermore, Diamonte *et al.* (1996) make a prediction that there will be global convergence in political risk in the future. If this prediction proves true then there is going to be very little or no differences in the impact of political risk on stock returns between emerging and

developed markets. Given prior studies find a weak correlation amongst the level of stock returns between these two markets, global convergence in political risk means international investors cannot reduce their overall portfolio risk by diversifying into stocks of emerging markets[2]. Investment in these markets would in this case lose its attractiveness.

Therefore, by examining the impact of political risk on both emerging and developed markets from 1984 to 2007, this essay helps to verify such a prediction by Diamonte *et al.* (1996) and provides an out of sample test. In addition, this essay also adds to the growing literature on the impact of political risk on stock returns by examining specific time periods such as the Asian Financial Crisis and the 9/11 Terrorism Attack as well as investigating specific groupings of markets such as the Asian and Pacific Basin stock markets.

1.3 ESSAY TWO

The second essay examines the impact of political regimes on emerging stock returns. Specifically, this essay investigates whether there are any differences in the stock returns between military and civilian governments.

'Military' or 'de facto' government is a form of government that is commonly believed to suppress economic growth and freedom. Furthermore, according to the PRS Group, 'Military in Politics' is one of the political risk attributes that increase the level of risk for a given country. Hence, such a direct political involvement by the military typically shakes the confidence of both local and foreign investors in the financial markets and leads them to delay or suspend their investments due to the perceived risks and uncertainties. Despite such a traditional view of military rule, there is not yet any direct evidence showing the effect of 'military' rule on stock returns. It is believed that emerging markets provide appropriate settings for conducting this type of research since military interference in political affairs

[2] See, for example, Errunza (1983), Divecha, Drach, and Stefak (1992), Cosset & Suret (1995), Harvey (1995), Bekaert and Harvey (2002), and Gupta and Donleavy (2009).

could be seen more regularly due to the higher frequencies of political upheavals in emerging markets than in developed ones.

This essay provides two important contributions to the existing literature. Firstly, to the researcher's knowledge, this study is the first to examine the effect of military rule on stock markets. It is therefore the first to present evidence as to whether there is some truth in the conventional wisdom concerning military rule on stock returns. Any evidence against the traditional view would bring about new understanding on this matter. More importantly, the evidence would suggest whether military ruling is in fact a factor in stock pricing in emerging markets.

Secondly, this essay focuses particularly on emerging markets. These stock markets are important venues which many international investors diversify and hedge against the country-specific uncertainty of their local stock markets. Given the fact that the stock markets can become more volatile during such a period of military interference and political uncertainty, this can have an impact on investors' portfolio formation and the returns on their investment funds. Therefore, an investigation on the stock markets in which their countries have a history of military interference is essential as this indicates whether such a military rule can affect the stock market and investors' portfolio returns.

1.4 ESSAY THREE

The third essay of this thesis examines the relationships among political connectedness, stock returns, and firm values in Thailand. Particularly, this essay uses a newly hand-collected dataset of Thai firms observed over the period 1987 to 2008 to illustrate the importance of political connections for listed firms in Thailand.

It is well documented that there is a potential link between political patronage and firms in the Asian emerging markets[3]. There is evidence that politically connected firms in Asia benefit from private economic rents in addition to being exempt from certain rules and regulations[4]. These priorities help politically connected firms to gain higher market share and profitability as opposed to non-connected firms. Whilst these facts are well documented, there is still relatively little empirical research that examines the relationships between corporate political connectedness and stock performance on the Asian emerging markets.

This essay therefore aims to fill this gap in the current literature by investigating the effect of levels of political connection on the stock performance and accounting performance of listed firms in Thailand. Particularly, the study categorises the degree of corporate political connectedness into four levels. These consist of the connections to: (1) Prime Minister; (2) Cabinet Members; (3) Members of Parliament within coalition parties; and (4) Members of Parliament within opposition parties. With such an analysis, the study is able to provide important evidence as to whether these different levels of political connection between the Thai executive body and publicly listed firms is fundamental in explaining firms' stock returns and financial performance in Thailand. To the researcher knowledge, this study is the first to carry out such a detailed investigation on the Thai securities market.

Accordingly, the findings from this last essay provide useful reference for both current and prospective investors who seek to invest in the Thai capital markets. More importantly, the findings also provide important implications for the Thai's Securities Exchange Commission (SEC), the legislators, and the Office of the National Anti-Corruption Commission (NACC) since the findings identify whether there are shortcomings in the systems which these organisations need to be aware of and rectify them so as to eliminate or at least reduce political patronage in Thailand.

[3] See, for example, Fisman (2001); Fraser, Zhang, and Derashid (2006); and, Luez and Oberholzer-Gee (2006).
[4] See, for example, Johnson and Mitton (2003) and Imai (2006).

1.5 STRUCTURE OF THE THESIS

The remainder of this thesis is structured as follows. Chapter 2 provides an overview of the three different lines of literature that relate the relationship between each of the three political factors and stock markets. The first essay which examines the relationship between political risk and stock returns is presented in Chapter 3. An appendix to Chapter 3 includes a series of robustness checks which are carried out to test the strength of the results.

Chapter 4 presents the second essay on political regimes and stock market returns, while Chapter 5 presents the third essay which investigates the relationship among political connectedness, stock returns, and firm values in Thailand. An appendix to Chapter 5 includes a different approach to political connections measurement and a number of robustness checks to test the validity of the results.

Chapter 6 outlines the key findings and implications of the three essays and the potential areas for future research.

CHAPTER TWO

LITERATURE REVIEW

This chapter provides an overview of three different lines of literature that relate the relationship between each of the three political factors and stock markets. A detailed discussion and reviews of the literature relating each political factor to the sample markets is provided in Chapters Three, Four, and Five of this thesis.

2.1 INTRODUCTION

This thesis contributes to three different lines of literature which correspond to three political aspects being examined in this thesis. Each of the three sections in this chapter therefore provides an overview on each set of literature. A detailed discussion and reviews of the literature relating specifically to each factor and/or each sample market are to be addressed within Chapter Three, Four, and Five.

Section 2.2 provides a literature review for essay one. It firstly discusses the characteristics of emerging markets followed by the importance of political risk on stock returns. The literature highlights how such a political factor is particularly important for emerging markets.

Section 2.3 explores the literature of essay two which examines the importance of political regimes on stock returns of emerging markets. Particularly, this section provides the literature on the relationship between political cycles and stock returns since essay two is largely motivated by and is built on the empirical works from this area of research. Given that there is still no prior literature that directly examines the effect of military versus civilian ruling on stock market returns, at least to the researcher's knowledge, this section largely discusses how different political parties or types of governance could impact the stock markets.

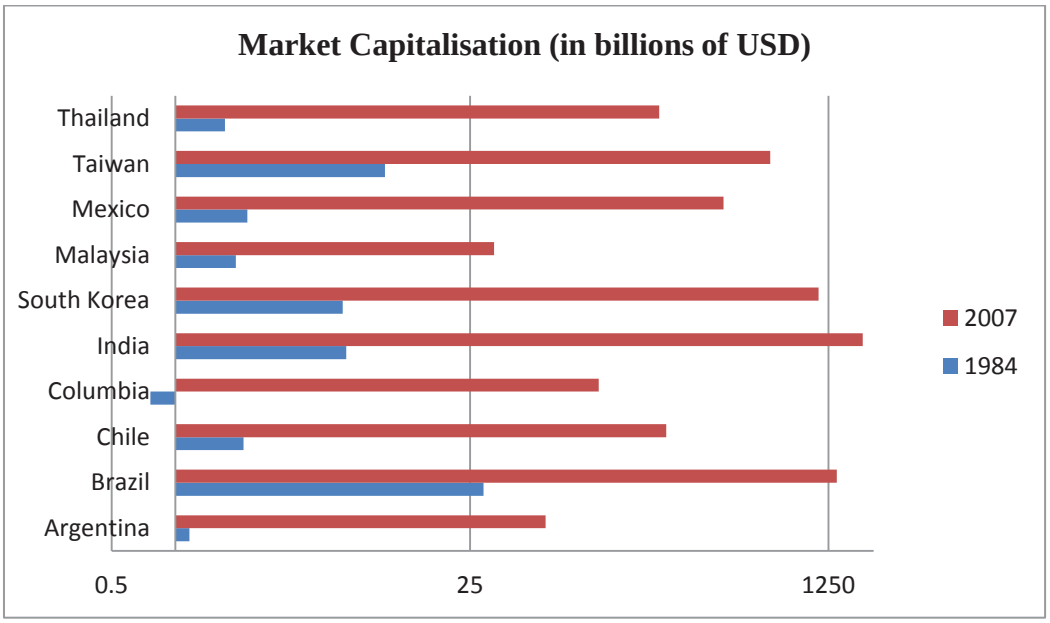
Section 2.4 presents the literature review for essay three regarding the effect of corporate political connections on firm values and stock performance in Thailand. The discussion on both the benefits and drawbacks of political connectedness on firm's stock and accounting performance from multi-country studies are included in this section.

2.2 POLITICAL RISK AND STOCK MARKETS

2.2.1 CHARACTERISTICS OF EMERGING MARKETS

The word ‘emerging markets’ is generally used to describe the financial markets of developing countries that are defined by the World Bank (Errunza, 1983 and Bekaert and Harvey, 2002) . These markets experienced significant growth in the past few decades in terms of market depth, size, and development. Figure 2.1, for example, depicts the market size in selected emerging markets.

Figure 2.1 Market size in selected emerging markets from 1984 – 2007



Stock market capitalisation measures the size or value of the market as a whole. Figure 2.1 illustrates that the stock market capitalisation of emerging markets increased dramatically since 1984. Such an increase in the stock market capitalisation provides a wide array of support that there is a significant growth in the value of emerging markets. This is partly due to the improved economic performance of these markets which induce both domestic and foreign investments into the equity markets. Therefore, the substantial flows of equity capital together with a weak correlation amongst the level of stock returns between emerging and

developed markets have helped emerging markets to develop into important investment venues which many international investors use in diversifying their portfolios[5].

There is in fact a number of attributes that differentiate emerging markets from developed ones. Arouri, Jawadi, and Nguyen (2010), for example, suggest that the major source of differentiation lies in the institutional infrastructure such as market regulations, capital controls, and capital gains tax. They argue that these factors along with market microstructure and market efficiency can significantly influence trading practice, formation of price, and risk-return characteristics of emerging stock markets.

Furthermore, it is well documented that the stock returns of emerging and developed markets are weakly correlated. Early studies that document this in terms of risk-return trade off are, for example, Levy and Sarnat (1970); Eun and Resnick (1985); Bailey and Lim (1992); Divecha, Drach, and Stefek (1992); and, Speidell and Sappenfield (1992). Such a low correlation among the two types of market demonstrates the opportunity for international diversification for both individual and institutional investors.

Nonetheless, in order to determine the true benefits of international diversification, a number of risk factors need to be brought into attention. Although these risk factors are not specific to emerging markets, their consequences are typically more profound to the extent that they cause hesitation to investment in these markets.

Accordingly, it is well documented that several dimensions of risk are important in emerging markets and the risks to international investment, in particular, are classified into four categories which consist of: (1) currency risk; (2) investment risk; (3) risk related to the country's stage of development, such as the size and liquidity, regulation, information; and (4) political risk (Erunza and Losq, 1987; Bekaert and Harvey, 1995; and, Arouri *et al.*, 2010). The focus of this essay is on the last risk factor. Specifically, an important question

[5] See, for example, Eun and Resnick (1985) and Divecha, Drach, and Stefek (1992).

that this essay aims to address is whether political risk is an important determinant of emerging markets stock returns.

2.2.2 POLITICAL RISK

A number of studies argue that stock markets are segmented. Sharpe (1964), Lintner (1965), and Black (1972) are among those that put forward this argument. In the case of segmented markets, it is asserted by Bekaert and Harvey (1995) that there can be different risk-return characteristics among markets since the sources of risk are different. Accordingly, for emerging markets, studies such as Bilson, Brailsford, and Hooper (2001) argue that it is the local risk factors as opposed to global factors that drive stock price movements in emerging markets. They specifically point out that this local risk factor is political risk. Such a finding contributes to the argument by Errunza (1983) that political risk has an important influence on international portfolio investment decision particularly in emerging markets.

In general, political risk refers to the possibility in which political instability could adversely affect the economic environment such as economic growth outlook and investment stability. More specifically to financial market, Erunza and Losq (1987) indicate that political risk involves the explicit barriers to capital flows, taxes, expropriation, and exchange control.

It is arguable that both developed and emerging markets face political risk. Yet, the difference between these two markets lies in the different degree of severity that this risk poses on the stock markets and its impact on investment portfolios. From the investment perspective, political risk could arise from unexpected political decision such as the change in trade and investment policies by limiting cross-border capital mobility or controlling exchange rate movement. Such political movements can therefore create significant risk to an investment portfolio.

When considering political risk, prior studies, however, primarily relate it to direct foreign investment. Early studies such as Mahajan (1990) and Hashmi and Guvenli (1992), for

example, find that political risk has an impact on the operation and profitability of foreign-owned entities. Jun and Singh (1996) later document that a qualitative index of political risk is a significant determinant of foreign direct investment (FDI). Nordal (2001) and Click (2005) report that political risk plays an important role in determining the valuation of investment projects as well as the return on asset (ROA) of firms with FDI. Harms (2002) concludes that political risk is an important determinant of the sum of FDI and foreign equity investment per capita. Despite this strongly convincing empirical evidence on the impact of political risk on FDI, evidence on the impact of political risk on equity markets remains limited. Besides, the majority of existing studies that could be found are generally conducted using an event studies approach.

2.2.3 EVENT STUDIES

Measuring the exposure to political risk is often difficult. Arouri *et al.* (2010) assert that the results from each measurement method do vary and they typically cannot be generalised to other countries. To counteract such a problem, a vast number of studies choose to investigate the impact of political risk on stock trading by using an event studies approach.

For example, by examining political events in Germany during the period of 1880 to 1940, Bittlingmayer (1998) provides evidence that major political events such as World War I and World War II do create significant impacts on stock prices and stock volatility. Aggarwal, Inclan, and Leal (1999), who investigate the effect of political events on 16 stock markets' volatility worldwide during the period of 1985 to 1995, find that large changes in volatility are attributable to the country-specific political events such as the Marcos-Aquino conflict in the Philippines. Furthermore, Kim and Mei (2001) who focus specifically on the Hong Kong stock market show that stock market returns and volatility are sensitive to political news announcements and the level of political development in Hong Kong. Particularly, they find that bad news has a greater effect on the stock market volatility than good news. More importantly, the large changes in Hong Kong stock market returns are frequently related to major political news.

Vuchelen (2003) further indicates that political events in Belgium such as general elections, the formation of new governments, and the changes in coalitional parties are important determinant of changes in stock prices. Likewise, Chen, Bin, and Chen (2005) find a significant abnormal price performance on the Taiwanese stock market in reaction to the occurrences of political events. Mehdian, Nas, and Perry (2008) also document that the Turkish stock prices systematically adjust below their fundamental values when there are unexpected political events in Turkey.

Overall, the findings from event studies indicate that political risk has some important implications for stock prices. More importantly, these international findings show that political risk could arise from various sources and consist of a number of attributes. For this reason, it is arguable that an event studies approach does not capture the effect of political risk on stock returns on a broad spectrum since it limits the scope of the study to a number of specific political events. Besides, there is the possibility of a selection bias where particular political events are being selected over others. Therefore, despite the fact that such an approach is straightforward and provides a clear-cut statistical result, it can overlook other important political risk components that could equally influence equity returns. Such pitfalls lead researchers to use alternative methods in measuring the impact of political risk on stock returns.

2.2.4 ALTERNATIVE METHOD

One of the statistical techniques that mitigate the drawbacks of an event studies approach is the time-series regression analysis wherein political risk is employed as one of the independent variables uses to explain the changes in stock returns. However, to conduct such an analysis, political risk needs to be measurable in a quantitative manner. Studies using this technique typically rely on political risk rating services that provide risk rating indices. Such an index is constructed by assigning political risk rating according to the risk attributes and the degree of political uncertainties in each country.

However, there are still limited numbers of empirical studies that examine the impact of political risk on equity investment by using political risk ratings in a time-series regression analysis. One of the main concerns is the subjectivity of the ratings which are assigned by the risk rating agencies. Despite this criticism, it is arguable that the political risk rating approach is able to capture a wider spectrum of political risk than an event studies approach since various risk attributes are being considered in the former approach. Moreover, it is believed that the issue of subjective assessment could be mitigated to a certain extent by using the ratings of risk service providers that employ a highly skilled team of analysts. Salisbury (1992) and Howell and Chaddick (1994), for example, provide assessment on a number of risk service providers. They consistently conclude that the International Country Risk Guide (ICRG) of Political Risk Service (PRS) group is the most reliable and the best among them. Accordingly, ICRG is chosen as the risk service provider in this thesis. A more detailed discussion on this selection process is outlined in section 3.2.1 of Chapter 3.

In summary, emerging stock markets have shown significant growth in past few decades. Moreover, the fact that emerging and developed markets are weakly correlated indicates an opportunity for international diversification. Thus, these emerging markets are potential investment venues for both individual and institutional investors. Nevertheless, political risk poses a significant threat to investment in these markets. Prior studies through an event studies approach document that political risk has some implications on stock prices. Yet, there are criticisms that such an approach does not capture the effect of political risk on stock returns on a broad spectrum and there is also a possibility of selection bias on particular political events. Thus, an alternative method such as time-series regression analysis is employed by a number of studies to mitigate such problems. Nevertheless, the credibility of risk rating service providers is a major issue for this alternative method. Section 3.2 of Chapter 3 further reviews and discusses in details on the literature related to political risk rating and stock markets.

2.3 POLITICAL REGIME AND STOCK MARKETS

There are numerous types of governance around the world. These are, for example, anarchy, republic, federation, democracy, dictatorship, military, and so forth. Existing evidence that links the relationship between these political regimes and financial markets remains scant. Prior literature such as Freeman, Hays, and Stix (2000) and Block (2003) document the relationship between democracy and foreign exchange rates wherein they find that democracy reduces the likelihood of a currency crisis in emerging markets. However, Wang and Lin (2009) who examine the Taiwanese stock market during the pre- and post-democratisation period find that there is a significant negative effect of democratisation on stock market returns.

The focus of the second essay of this thesis is on 'Military' regime which is a type of political governance commonly found in emerging markets wherein the government is directed by a committee of military leaders. Despite the existence of some literature on the relationship between democracy and financial markets, no prior literature thus far directly examines the effect of military rule on stock market returns. Nonetheless, there are studies that investigate the link between political parties and stock markets under different government administrations. Specifically, these studies examine the effect of political cycles on stock returns or the differences in stock returns under left- or right-wing governments. Essay two is therefore largely motivated and is built on these empirical works.

2.3.1 POLITICAL BUSINESS CYCLE

The relationship between economics and politics is first analysed and documented by Nordhaus (1975). He develops what is called a 'political business cycle model' which suggests that when an administration is elected, it would at first adopt an opposing policy to that of the old administration in order to combat recession or increase its reputation for economic competence. As the next election approaches, it would adopt an expansionary policy in order to promote economic growth and keep unemployment rates at a low level, gain popularity and be re-elected in the future.

There are a number of existing studies that examine the relationship between economics and elections. Pissarides (1980) and Erikson (1989) are among the first in the United Kingdom and United States, respectively, to model voting intentions and macroeconomic indicators. Both studies find a significant link between voting intention and economic performance. Harrington (1993), Nadeau and Lewis-Beck (2001), and Bloomberg and Hess (2001) later suggest that there is a political business cycle in the U.S. since they find that the economic policy and economic conditions in the U.S. are significantly related to the Presidential election. Further, Julio and Yook (2011) provide international evidence that the uncertainty that arises from general elections reduces firms' investment expenditures and causes an impact upon real economic outcomes.

In financial theory, the efficient market hypothesis (EMH) suggests that an efficient stock market reacts to all known information and news. Vuchelen (2003) asserts that an important source of news concerning future economic policies comes from political decisions, which are made by the government or arise from political events. These events are such as elections, the formation of new governments, changes in the composition of government, and so forth.

There are a number of studies that examine the impact of government economic policy on stock prices. Early studies such as Schwert (1981) and Geske and Roll (1983) consistently find that stock prices react negatively to both expected and unexpected inflation. Patelis (1997) subsequently suggests that monetary policy variables are significant predictors of future stock returns. Pástor and Veronesi (2010) also document negative stock price reaction to changes in the economic policy. This evidence from the U.S. stock market indicate that the market is efficient since it incorporates news and political movements into stock prices in anticipation of an outcome of uncertain economic policies or political events.

Accordingly, a number of empirical works provide insight into the effect of elections on stock markets since elections is one of the most important political events. The findings are, however, inconclusive. For example, Niederhofer, Gibbs, and Bullock (1970) find that there

is a short-term market reaction to the Presidential election. Allvine and O'Neil (1980) offer evidence of presidential election cycle where there is a trend of stock price rising in the two years prior to the general election. Hobbs and Riley (1984) thus propose an optimal trading strategy where a gain of 8% can be made when buying 42 days before the election and selling 13 days after. Herbst and Slinkman (1984), Huang (1985), and Gärtner and Wellershoff (1995), however, argue that there is a four-year political-economic cycle since they consistently find that stock prices fall during the first two years of a presidency and rise during the last two years.

Noticeably, all of the above studies are conducted on the United States stock market. One of the reasons is owing to the fact that the US market is one of the most important equity markets in the world. Another possible reason can be due to the type of political system in the US which is relatively more straightforward than in many other countries. Consequently, this makes it relatively easier to conduct such an analysis.

With regards to the political system, on the one hand, the US has a two-party system where the government is typically dominated by a single-party which has the majority of representatives in the US House of Representatives. On the other hand, several other countries have what is called a proportional representation system, where the government is formed by multi-party coalitions. Such a coalition government makes it difficult to clearly classify whether a government is either left- or right- wing. Hibbs (1977) asserts that parties at different ends of the political spectrum tend to have differing or even opposing policy objectives which correspond to the expectations of their electorates. Therefore, with a mix of parties in a coalition government, it is more difficult to predict future government policies that can have important implications on financial markets. However, such a problem rarely exists in the US due to its single-party government. Vuchelen (2003) strongly asserts that such a political system makes the forecasting of future economic policies clearer in the US than in other countries. Hence, it is easier for market participants to incorporate news about future government policies into their investment decisions. Vuchelen (2003) therefore suggests that the news content of political events also depend on the type of electoral system used in a particular country.

2.3.2 THE 'PRESIDENTIAL PUZZLE'

A number of studies further investigate whether the US stock returns are higher during Republican (right-wing) or Democratic (left-wing) administrations. The findings on this persistent myth of the US stock market are inconclusive and are divided into three different streams of argument. The first stream by Rilley and Lukseitch (1980), Hobbs and Riley (1984), and Snowberg, Wolfers, and Zitzewitz (2007) argues that returns are higher under Republican presidencies. Leblang and Mukherjee (2005) also document that the trading volume as well as the mean and volatility of stock prices typically increase during the tenure of Republican administrations.

The second stream by Huang (1985) and Gärtner and Wellershoff (1995) insists that there is no significant difference in stock returns between Republican and Democratic administrations. Powell, Jing, Smith, and Whaley (2007, 2009) similarly argue that the right- or left-wing premium is merely the result of persistence in dummy variables and spurious regression bias. Moreover, Sy and Al Zaman (2011) assert that such a difference in returns between Democratic and Republican administrations can be resolved when market risk is taken into account.

The third stream by Santa-Clara and Valkanov (2003) conversely argues that stock market returns are higher under Democrat presidential terms. They suggest that this is due to the higher real stock returns and lower real interest rates during Democratic administrations. This result could not be explained by other business-cycle variables that are related to expected returns and it is not concentrated around election dates. Besides, there is no apparent difference in the riskiness of the stock market across presidencies that can help to explain the 'Democrat (left-wing) Premium'. Thus, they term such a result as the 'Presidential Puzzle'.

Such conflicting results motivate academics to examine, in an international context, whether the stock markets would have a clear preference for either left- or right-wing governments

and whether the Presidential Puzzle exists in other countries that have similar two-party systems. In the United Kingdom, Hudson, Keasey, and Dempsey (1998) find that stock market returns are substantially higher under the right-wing Conservative party. Similar evidence is also found in New Zealand by Cahan, Malone, Powell, and Wongchoti (2005). Furthermore, Bohl and Gottschalk (2006) investigate the presidential cycle effect in 15 stock markets. They find that the Democrat (left-wing) Premium which is found in the US only exists in Denmark and Germany. Besides, this anomaly does not exist across all the markets that they examine. Bialkowski, Gottschalk, and Wisnrewski (2006) also investigate this Presidential Puzzle in 24 OECD stock markets. Similar to Bohl and Gottschalk (2006), they find that this anomaly does not exist across all sample markets and is only present in the Czech Republic, France, and Hungary. The results from these studies thus suggest that the Presidential Puzzle is not a global phenomenon.

Despite the fact that two of the 15 countries which are examined by Bohl and Gottschalk (2006) also include Australia and New Zealand, local researchers still doubt the appropriateness of the dataset that they use in their studies. Their main concerns are based on the fact that Bohl and Gottschalk (2006) use too short a sample period (1978-2004) when in fact they could examine the entire time phase in which the distinction between left- and right-wing governments could be established (Anderson, Malone, and Marshall, 2008). Thus, for New Zealand, Anderson *et al.* (2008) re-examine this puzzle by looking at real stock market returns from 1931 to 2005. Despite a longer sample period, the results remain consistent with those of Bohl and Gottschalk (2006) since they do not find the Presidential Puzzle to exist in New Zealand stock market. In fact, they find the contrary wherein stock returns are actually lower under a left-leaning government (Labour Party). In the same vein, Worthington (2006) finds that the Australian stock returns are higher under right-leaning governments. For Germany, Döpke and Pierdzioch (2006) also re-examine the Presidential Puzzle. In contrast to the findings of Bohl and Gottschalk (2006), they do not find any impact of political process on German stock market returns.

In spite of a reasonably large volume of literature, it is noticeable that studies on the Presidential Puzzle are largely concentrated on developed markets. One of the main reasons is because most emerging markets have multi-party coalitions rather than a two-party system.

Vuchelen (2003) stresses that a coalition-based political system has a tendency to be less stable than the two-party system since if there is a withdrawal of one of the coalition parties the government stability is weakened and a new coalition may need to be formed. If this does not occur, the government may have to be dissolved and a new election has to be called. With a mix of parties in government, it is difficult to test for the Presidential Puzzle since a government could not be clearly classified as either a left-wing or right-wing one. Besides, even if such a test is conducted on the emerging markets, the results might not have any implications due to the constant changing of the government's composition and coalition parties. For this reason, previous studies relating to emerging markets generally concentrate on the impact of political events on stock returns and the differential returns under each administration.

In summary, the results for the Presidential Puzzle in the US in addition to other developed countries are inconclusive. In some countries, right-wing administrations tend to have higher stock returns than left-wing administrations and vice versa. This suggests that this puzzle is not truly a global phenomenon. Noticeably, this type of study entirely focuses on developed markets and excludes those of emerging markets. This is mainly due to the differences in political systems where a clearer classification of right- and left-wing governments can be made on the former, but not on the latter. Nevertheless, one common trait amongst emerging markets that is surprisingly overlooked is the alternation between military and civilian administrations. A detailed discussion relating to military governments and emerging markets is outlined in section 4.2, Chapter 4.

2.4 POLITICAL CONNECTIONS AND STOCK MARKETS

Corporate political connections and the stock returns nexus is an interesting topic that is receiving growing attention from academics, researchers as well as practitioners in the financial market. One of the reasons is attributable to the increasing amount of international evidence reporting the impact of political connections on firm value, access to financing, in addition to many other business aspects. Goldman, Rocholl and So (2009) state that corporate political connections are not simply limited to countries where there are weak law

enforcement but they are also important even for countries with strong law enforcement like the United States. In fact, Faccio (2006) who investigates the degree of corporate political connections by examining 20,202 publicly listed firms in 47 countries finds that 541 firms distributed amongst 35 countries are politically connected. This represents almost 8% of the world's market capitalisation. Prior studies find four main factors which help to explain why firms strive to establish political connections. These include economic rents; government control over resources allocation; corruption; and cronyism.

Economic rents as the first factor refer to the economic benefits that firms receive by being politically connected. Studies such as De Soto (1989), Shleifer and Vishny (1993, 1994), and Bertrand, Kramarz, Schoar, and Thesmar (2007) find that connections with politicians not only protects firms from expropriation by the government but also provides firms with tax breaks as well as preferential access to government subsidies and financing opportunities. For example, Adhikari, Derashid, and Zhang (2006) provide evidence that Malaysian firms with political ties are able to pay tax at lower effective rates compared to the non-connected firms.

A number of other international studies also indicate government favouritism in relation to access to finance. Sapienza (2004), for example, finds that state-owned banks in Italy charge lower interest rates than privately owned banks to firms affiliated with the parties which form the government. Khwaja and Mian (2005) stress that politically connected firms in Pakistan have the ability to borrow more in addition to having higher default rates. Likewise, Luez and Oberholzer-Gee (2006) assert that closely connected firms in Indonesia do not acquire foreign financing since they have access to preferential financing at home. Li, Meng, Wang, and Zhou (2008) also document related evidence of superior financial treatment in China as well as Claessen, Feijen, and Laeven (2008) and Cole (2009) who find similar evidence in Brazil and India, respectively. Using an international dataset, Boubakri, Cosset, and Saffar (2009) similarly indicate that politically connected firms on a global basis have easier access to credit. Consequently, by using more successful channels of financing, firms with political ties are generally in better financial positions. Moreover, they are found to be associated with higher market shares and profitability than non-connected firms (e.g., Faccio, 2010).

Furthermore, it is pointed out by Fisman (2001) that corporate political connections can cause biases during investment decisions particularly in Southeast Asian markets. This is because governments often bail out politically connected firms when they become financially distress (Faccio, Masulis, and McConnell, 2006). Such financing structures create a significant positive impact on firms' value and help politically connected firms to be more attractive to investors when compared to their counterparts.

The second factor concerns the need to secure access to key market resources. According to the resource-based theory of the firm, political connections provide competitive advantages to connected firms by giving access to the resources which are not easily obtained by other firms (Wu *et al*., 2010). For emerging markets, Siegel (2007) asserts that a key explanation for the continual importance of political connections is that the economic liberalisation which takes place does not mean an end to the regulatory powers or allocative budget powers of the state. In other words, governments still have considerable power over resource allocation. For example, Talmud (1992, 1999) and Talmud and Mesh (1997) find that privilege access to resources is given to firms which are connected to the Israeli government. Similarly, it is found by Fan (2002), Fan, Wong, Zhang (2007), and Tan *et al.* (2009) that political participation of entrepreneurs in China allow firms to obtain information on regulatory changes, access to restricted markets, and scared resources under government control. Since it can be difficult to gain access to resources through an 'arm's-length principle' and government officials often use their powers to provide these resources to firms with which they have network ties, political connections become a way in which firms can overcome these market and state failures (Li *et al.,* 2008). For this reason, political connections are a socially desirable alternative.

The third factor is related to corruption which refers to the misuse or abuse of power by government officials for private gain. Corruption, especially in the form of bribery, is a common practice in emerging markets due to their weak legal environments (Transparency International, 2007). Among others, Carroll, Delacroix, and Goodstein (1988), Hannan and Freeman (1977, 1989), Burt (1992), Getz (1997), Pfeffer and Salancik (2003), and Hillman

(2005) provide evidence that bribery is customarily given in exchange for successful business deals in addition to securing the welfare of the business. Fan and Wong (2002) and Faccio (2006) consequently assert that firms seek political connections in order to use the politicians' powers to protect their businesses and to avoid paying bribery to government officials. It is also found by Agrawal and Knoeber (2001) that political connections are sought after so as to prevent unfavourable government actions against firms. Political connections could in this sense help to protect as well as bring significant cost savings for firms.

The fourth factor pertains to cronyism which refers to the practice of favouring one's close friends or relatives. It is the result of abusing power by those politicians in office. Often, politicians who have decision-making power enact or change laws such that it would generate economic rents, give protection, or create less harm for those firms in their network connections. Glaeser, Johnson, and Shleifer (2001), for example, provide evidence of how the Czech government as opposed to the Polish government favours more relaxed financial regulations which allows executives to extract resources out of firms for their own benefits. They specifically term this misconduct as 'tunnelling'. Similarly, Berkman, Cole, and Fu (2010) highlights the importance of political connectedness in China since they find that the effectiveness of new regulations is highest for firms with private controlling block holders but lowest for firms whose controlling block holders have political connections with the government. For these reasons, studies by Hellman, Jones, and Kaufmann (2003) and Faccio (2006) assert that politically connected firms generally have superior financial results and market power over non-connected firms due to holding such competitive advantage. Moreover, connections to high level politicians are important in gaining access to state resources and contracts. For example, Della Porta and Vannuci (1997) document that politically connected firms in Italy are more likely to be granted state concessions or to win tender offers for government projects.

Beyond these four main factors, Chaney, Faccio, and Parsley (2011) stress that political connections are also a source of domestic benefits that can replace other practices which create firm value, such as cross-listing. The value of political connections are substantial such that Faccio and Parsley (2009) document a decline in firms' value upon the announcement of

the politician's unexpected death especially for those firms located in the politician's hometown.

However, there is another side of the argument where a number of studies find that political connections can sometimes have negative consequences for firms. For example, Betrand, Kramarz, Schoar, and Thesmar (2007) document a negative correlation between firm performance and the appointment of a connected CEO in France. Fan, Wong, and Zhang (2007) find that newly privatised politically connected firms in China are associated with poorer accounting performance compared to their non-connected counterparts. Boubakri, Cosset, and Saffar (2008) also show consistent evidence from the 41 countries that they examined and assert that politically connected directors do not have incentives to enhance firm value after privatization. Moreover, Ang *et al.* (2010) find that political connections do not contribute significantly to firm value for a country with low levels of corruption like Singapore. Wu *et al.* (2010) and Chen, Sun, Tang, and Wu (2011) thus come to the conclusion that the mix of results on the effect of political ties on firm value is largely owed to the ownership structure of the firm and institutional factors.

Despite a rich literature on the relationships between political connections and firm values, questions remain whether and how such a political connection can have an effect on firms through its trading in the stock market. There is international evidence that political connections have an impact on the pricing of newly offered shares. For example, Jenkinson and Mayer (1988) and Perotti and Guney (1993) consistently document a greater level of IPO underpricing for state-owned issuers than for privately owned firms in France and United Kingdom. The latter study finds that this evidence also exists in Malaysia, Spain, and Turkey. As for China, Tian and Megginson (2007) show that politically-connected individuals and groups benefit most from the high initial returns. Francis, Hasan and Sun (2009) also indicate that the connected firms have higher offering price, lower underpricing, and lower fixed costs in the IPO process.

A number of literatures further document the relationships between political connectedness and stock prices for the post-IPO period. Among others, Roberts (1990) estimates the value

of political connections in the US and finds that the share prices of firms with ties to Senator Henry Jackson, dropped in reaction to news of his unexpected death. In contrast, the share prices of firms with connections to Sam Nunn, who is his successor, rose after that news announcement. Furthermore, Goldman *et al.* (2009) find that the announcement of the appointment of former politicians to the company's board of directors results in positive abnormal stock returns, even amongst S&P's 500 companies. Besides, Cooper, Gulen, and Ovtchinnikov (2010) subsequently show that there is a significant positive correlation between firm-level contribution and returns in the US.

For Indonesia, Fisman (2001) uses an event study approach to examine the stock returns of firms with different degrees of connection to President Suharto. He finds that the stock returns of firms, which have tighter connections with President Suharto, dropped more than those of less connected firms when there was bad news concerning his health. Similarly, Johnson and Mitton (2003) investigate this issue in a Malaysian context. They find evidence that, after the imposition of capital controls following the Asian Financial Crisis in 1997, firms with political connections to Mahathir Mohamad have significantly higher stock returns than those firms without the connections. Mitchell and Joseph (2010) also subsequently find that political ties still retain their values even during the switch of power from Mahathir to Abdullah Ahmad Badawi. In addition, Ferguson and Voth (2008) document an unusually high stock returns for German firms which have significant links to the Nazi party in 1933. These streams of evidence correspondingly show that the values of politically connected firms are largely derived from their political connections. More importantly, they signify that there is a relationship between political connections and firms' stock performance.

Nonetheless, several empirical studies document a negative relationship between political connections and stock performance, particularly for newly privatised firms. For example, Chueng, Jing, Rau, and Stouraitis (2005) find a negative relationship between the percentage of state ownership and excess returns in Chinese listed companies during 2001-2002. Chen, Fan, and Wong (2004) and Fan, Wong, and Zhang (2007) also show that the three-years post-IPO stock performance of newly privatised politically connected firms in China underperform those of their non-connected peers. These studies consistently draw down on the 'grabbing hand' theory of firm (Shleifer and Vishny, 1994, 1998) as an explanation for such results.

Despite this, existing empirical evidence on the relationship between political connectedness and stock performance in Thailand are still very limited. Existing studies are to be discussed in details in Section 5.2 of Chapter 5. Given such a lack in the number of studies, this essay hereby takes the opportunity to contribute to the current literature by using a novel approach and categorising firms into different levels of political connection. It is believed that Thailand would provide an ideal setting for such an analysis since the political and business environments in Thailand are renowned for being strongly associated with corruption, cronyism, and economic rent-seeking (Winichakul, 2008). These are the environments in which political connections are most valuable and sought after.

In summary, there are various factors that persuade firms around the world to establish political connections. These range from various economic benefits to special resource allocation and preferential treatments that firms receive by having political ties. It is found that all of these help to increase the value of politically connected firms. Nevertheless, it is debatable that the effect of political ties on firm value depends on the ownership structure of the firm and institutional factors. Given the fact that empirical evidence on the impact of political connectedness on stock performance remains limited for Thailand, this essay takes this opportunity to examine such an issue on the Thai equity market.

CHAPTER THREE

ESSAY ONE:

POLITICAL RISK & STOCK RETURNS

This chapter presents the first essay which investigates the impact of political risk on equity returns of emerging markets. A brief overview of the effect of political risk on stock markets is provided in Section 1 of the chapter. This helps to build the case for the importance of political risk on emerging stock markets. Section 2 outlines the selection criteria for the political risk service provider. Section 3 proposes the hypotheses. Section 4 provides data description while section 5 outlines the test methodologies. Section 6 and 7 present the results and conclusion, respectively. The essay's appendix and reference list is presented in the last sections of this thesis.

3.1 INTRODUCTION

Over recent decades, emerging markets have developed into important investment venues for both individual and institutional investors. There are substantial flows of equity capital into these markets and one of the main reasons for this is attributable to the level of potential returns in these markets. By examining the patterns involved in emerging markets, Claessens, Dasgupta, and Glen (1995), and Harvey (1995) find that both the risk exposure and the stock returns are relatively higher in emerging markets than in developed markets. Specifically, the stock returns of emerging markets are found to be more volatile than those of developed ones. Portfolio theory would suggest that the higher returns in emerging markets are compensating for this higher volatility.

Whilst emerging markets exhibit greater volatility, Errunza (1983) and Divecha, Drach, and Stefak (1992) find that there is a weak correlation amongst the level of stock returns for these markets. More importantly, evidence shows that the correlation between the level of returns of emerging and developed markets are relatively weak. These findings imply that investing in emerging equity markets would offer a good opportunity for international investors or fund managers to diversify their portfolios and balance their risks and returns.

There is a major distinction between emerging and developed markets. Bekaert and Harvey (2002) point out that the key difference lies in the significantly higher role of politics in emerging markets. This is where politics highly interferes with public and business administration. Given this, political situations or conflicts tend to have significant impact on the daily life of people in emerging markets. The risk that arises from such political uncertainty also typically affects businesses at large. Therefore, political risk is considered as systematic (non-diversifiable) risk as opposed to unsystematic (diversifiable) risk. It is for this reason that political risk should be priced.

In fact, Haendal, West, and Meadow (1975) define political risk as “the risk or probability of the occurrence of some political events that will change the prospects for the profitability of a

given investment" (p.11). With such an intensive and inseparable relationship between politics and socio-economics, questions arise as to whether political risk does have an impact on equity markets and which markets in particular. This study therefore aims to fill this gap in the current literature. In particular, the study highlights whether there are any differences in the impact of political risk on equity returns between emerging and developed markets. The findings would be particularly helpful to investors and portfolio managers in terms of assisting their investment decisions.

This study is organised as follows. Section 3.2 outlines how the political risk rating service provider is chosen. It also reviews the literature which uses risk rating to examine the impact of political risk on equity investment. Section 3.3 proposes the research objectives and hypotheses. Section 3.4 provides data description and descriptive statistics. Section 3.5 outlines the two methodologies to be used which are the univariate statistical analysis and the pooled regression analysis. Section 3.6 and 3.7 presents the empirical results and conclusion, respectively.

3.2 POLITICAL RISK RATING

Measuring political risk can be difficult since political risk is qualitative in nature. Fortunately, there are a number of risk rating agencies which provide the measurement of political risk in a quantitative manner. However, there are criticisms of such ratings on the grounds of subjectivity and the arbitrary nature of the risk rating assessment provided by these rating agencies. It is therefore important to carefully select an appropriate risk rating service provider that provides a reliable rating to be used for the analysis. This section outlines how the political risk rating service provider is chosen.

3.2.1 RISK RATING AGENCIES

Political risk, as mentioned earlier, is a qualitative factor. In order to include such a risk factor into financial data analysis, some form of quantitative measure needs to be obtained. In this study, the political risk rating provided by the International Country Risk Guide (ICRG) of Political Risk Service (PRS) group is employed. The reasons for this selection are outlined in this section.

There are many risk rating providers. These include The Economist, Fortune, Business Environment Risk Intelligence (BERI), and Institutional Investor Country Credit Rating (IICCR), and ICRG. All of them provide a composite risk index made up of a combination of political, financial, and economic risk indices. However, out of all the mentioned risk rating providers, there are only three that clearly split the political risk index from the composite risk index and present this to the end users. These three are the Economist, BERI, and ICRG. Since this study intends to solely examine the effect of political risk on stock returns, these are the three risk rating providers to be considered. It is thus essential that some assessment is made of them before deciding which of the three risk rating providers is to be chosen. Prior studies such as Salisbury (1992) and Howell and Chaddick (1994) make an evaluation and comparison on the reliability of the above three risk rating providers. They consistently conclude that ICRG provides the most accurate forecast and it is the most reliable one out of these three. There are a number of aspects that contribute to the superiority of ICRG's rating over the others.

Firstly, ICRG covers more countries than any other risk service providers. Up to 2007, it covers up to 150 countries, whilst BERI and the Economist cover 140 and 82 countries, respectively. Secondly, ratings by the ICRG are published on a monthly basis, whilst those of BERI and the Economist are published on a quarterly and annually basis, respectively (see Table 3.1). This is an important aspect in the sense that a constant revision and update of new political circumstances in each country would provide a better forecast of political risk ratings. This is in accordance with Erb *et al.* (1996) who find that risk ratings from ICRG

always lead the other risk rating service providers whose publications are only based on a quarterly or annual basis.

Table 3.1

Comparison of political risk service providers

The table presents comparison among three political risk service providers. It compares the year that they are first published; the publication cycle, the number of risk attributes that use to form a single risk rating; and the number of countries covered by each provider.

Political Risk Service Providers	First published	Publication cycle	Number of risk attributes forming a single risk rating	Number of countries covered
ICRG	1984	Monthly	12	150
BERI	1978	Quarterly	10	140
The Economist	1986	Annually	10	82

Thirdly, with regards to the unique aspect of ICRG's rating system, the projection on each of the variables that makes up political risk rating is adjusted for an alternative future government. Moreover, direct government actions rather than the broader circumstances, such as the degree of political tensions that is used by BERI or The Economist, is being projected for each of the variables (Howell and Chaddick, 1994). Therefore, these methodologies place greater demands on analysts to maintain their superior knowledge and forecasting ability comparing to the others models. More importantly, political risk ratings from ICRG are based on an 18-month forecasting perspective on political risk variables. This helps portfolio investors to approximate their investment planning horizon more precisely (Cosset & Suret, 1995). Thus, under these criteria and with comparison to the others, ICRG appears to be the most appropriate political risk model to be used in this study.

ICRG's political risk index is made up of twelve variables which cover not only political but also social risk attributes. In total, these twelve variables sum to 100 points. The points scored on these variables are then summed up to form a single ICRG risk rating for each country on a monthly basis. The minimum number of points that can be assigned to each variable is zero and the maximum number of points depends on the fixed weight that variable is given in the overall political risk assessment. The lower the number of points means the higher the risk; and, the higher the number of points means the lower the risk. These twelve risk attributes are shown in Table 3.2 as follows:

Table 3.2

Political risk attributes

The table presents the composition of political risk rating, which essentially makes up of 12 political risk attributes. The table also shows the maximum number of points that can be assigned to each of these twelve political risk attributes.

Political Risk variables		
Sequence	**Risk attributes**	**Points (max.)**
1	Government Stability	12
2	Socioeconomic Conditions	12
3	Investment Profile	12
4	Internal Conflict	12
5	External Conflict	12
6	Corruption	6
7	Military in Politics	6
8	Religion in Politics	6
9	Law and Orders	6
10	Ethnic Tensions	6
11	Democratic Accountability	6
12	Bureaucracy Quality	4
Total		100

Source: The PRS Group, 2008

3.2.2 PRIOR EVIDENCES

There are a number of studies in this area of research that use political risk rating to examine political risk effect on stock returns. Erb, Harvey, and Viskanta (1995), as one of the pioneers in this area of study, use a country's risk rating which is a composite risk of political, economic, and financial risk, provided by Institutional Investor's Country Credit Ratings (IICCR). Their study is conducted on 40 national equity markets for the period from March 1980 to December 1993. Out of these 40 markets, 19 are emerging equity markets. They find that higher risk countries are associated with higher expected returns.

As a follow up to their earlier study, Erb, Harvey, and Viskanta (1996) investigate how composite risk ratings provided by both International Country Risk Guide (ICRG) and IICCR can explain the cross-section of expected returns in addition to the fundamental valuation attributes such as the price-to-earnings (P/E) ratio, dividend yield, and the price-to-book value (P/B) ratio. Their sample period ranges from July 1984 to June 1995 and covers 117 equity markets. From a univariate regression analysis, they report that out of the three risk components the economic and financial risks are significant factors in explaining the cross-section of expected returns for developed markets. Political risk is found to have some explanatory power only for emerging markets.

Such findings by Erb *et al.* (1996) complement those of Diamonte, Liew, and Stevens (1996) who specifically use the political risk rating provided by ICRG, as opposed to the composite risk index, to investigate the effect of political risk on stock returns. Their sample period ranges from January 1985 to June 1995 which is almost identical to that of Erb *et al.* (1996). However, their sample size is much smaller, consisting of only 45 sample markets. Out of these, 21 are developed markets and 24 are emerging markets. Yet, through univariate statistical analysis, they find there is a significant difference in the effect of political risk on the stock returns of emerging and developed markets with the former being affected more greatly by political risk than the latter. More importantly, they show that there is a pattern of global convergence in political risk. This is where political risk reduces within emerging

markets and rises in developed markets during the 10 years of their study period. They assert that, if this pattern persists, there might be very little or no difference in the impact of political risk on the stock returns of emerging and developed markets in the future.

Such a finding is of significant importance. If there is very little difference in the impact of political risk on stock market returns, equity investing in emerging markets should lose its attractiveness since investing in these stock markets would no longer help investors to improve the risk-return characteristics of their portfolios or reduce their overall portfolio risk (Cosset and Suret, 1995, and, Gupta and Donleavy, 2009). Yet, we consistently see substantial asset flows into emerging markets and enthusiastic interest among investors. Consequently, this point needs to be reinvestigated especially within a sample period after the study by Diamonte *et al.* (1996). This is given the fact that several significant political events have taken place in both emerging and developed markets after the year 1995. For example, the September 11 (9/11) terrorism attack in the United States, terrorism attack in Spain, the Iraq War, as well as numerous other political conflicts within countries such as Israel, Pakistan, and Thailand. Such facts motivate this study to investigate whether the results found by Diamonte *et al.* (1996) would still hold. To the researcher's knowledge, no study has re-examined this aspect yet. This thesis therefore aims to fill this gap in the current literature by examining this later time period.

In addition, Bilson, Brailsford, and Hooper (2002) also investigate the relationship between political risk rating and stock returns. Their sample period ranges from 1985 to 1997 and they aim specifically at 17 emerging markets. Nonetheless, another 18 developed countries are also included for comparison purpose. The main distinction of this study from prior ones is the inclusion of global and local return influences as control variables. They find that political risk is an important factor in equity pricing for emerging markets, particularly those in the Pacific Basin region. However, such price sensitivity could not be found for developed markets, which is consistent with prior studies.

An interesting question is why political risk is more prevalent for emerging markets particularly those in the Pacific Basin region, but not for the others. This point is worth

investigating in itself. Noticeably, Bilson *et al.* (2002) also find that the impact of political risk on emerging equity returns tends to be more pervasive during the 1990s, but not for the earlier years. Given that political unrest is still prevalent, particularly in emerging markets, this study hypothesises that political risk remains a significant factor in the explanation of stock returns in these markets.

Similar to Erb *et al* (1996), Ramcharran (2003) also examines the impact of political, economic, default and credit risks rating on stock returns, P/E ratios, dividend yield, and P/B value ratios of emerging equity markets. However, he uses panel data over a shorter period from1992 to 1999 and only 21 emerging markets are examined. Interestingly, he arrives at the same conclusion as Erb *et al.* (1996) and Diamonte *et al*. (1996). That is, out of the four risks that are being examined, political risk is the only significant variable which has an impact on emerging equity returns. Such a result, where political risk is a more important determinant of stock returns for emerging markets than for developed ones, contributes to the argument of Bekeart and Harvey (1995) that emerging markets tend to be less integrated than developed markets. This is because, in a segmented market, stocks would be priced more by local-specific risk factors than other factors.

Next, Girard and Omran (2007) specifically investigate the effect of political risk on five Arabian emerging markets during the period of 1997 to 2001. These five countries comprise of Egypt, Jordan, Morocco, Saudi Arabia, and Tunisia. They use composite risk ratings provided by ICRG to measure the effect of political risk on stock returns in addition to the company's fundamental valuation attributes such as price-to-earnings (P/E) ratio, dividend yield, and price-to-book value (P/B) ratio. They find that the company's fundamentals and country risk rating factors help to explain Arabian countries' equity returns. In addition, they emphasise that political instability is the major obstacle to investment in Arabian equity markets and risk factors such as political risk would continue to be significant and have strong implications for stock market development in these countries.

For comparison purpose, the following Table 3.3 provides a list of studies that use risk rating to examine the impact of political risk on equity returns:

Table 3.3
Example of literature that examine the impact of political risk on equity returns

The table provides a list of literature that use risk rating to examine the impact of political risk on equity returns. It also compares the sample period; sample size; data type and source; and, the results of each study.

Literature	Sample period	Sample size (countries)	Political Risk Data type & source	Results
Erb *et al*. (1995)	1980 – 1993	40 (21 developed & 19 emerging)	Country risk rating (Composite risk) from IICCR	Higher risk countries are associated with higher expected returns.
Cosset & Suret (1995)	1982 – 1991	36 (18 developed & 18 emerging)	Political risk rating from ICRG	Diversification among politically risky countries improves the risk-return characteristics of optimal portfolio.
Erb *et al*. (1996)	1984 – 1995	117 (The number of developed or emerging countries were not specified)	Composite risk rating from ICRG	Political risk has explanatory power for stock returns, particularly for emerging markets
Diamonte *et al.* (1996)	1985 – 1995	45 (21 developed & 24 emerging)	Political risk rating from ICRG	There is a different effect of political risk on the stock returns of emerging and developed markets. And, there is a global convergence in political risk.
Bilson *et al* (2002)	1985 – 1997	35 (18 developed & 17 emerging)	Political Risk Rating from ICRG	Political risk is an important factor in equity pricing for emerging markets, particularly those in the Pacific Basin region.

Literature	Sample period	Sample size (countries)	Political Risk Data type & source	Results
				And, the impact of political risk on emerging stock returns tends to be more pervasive during the 1990s, but not for the earlier years.
Ramcharran (2003)	1992 – 1999	21 (21 emerging)	Country Risk Data from Euromoney	Political risk is the only significant variable which has an impact on emerging equity returns.
Girard and Omran (2007)	1997 –2001	5 (5 emerging)	Political risk rating from ICRG	Political instability is the major obstacle to investment in Arab equity markets. And, risk factors such as political risk continue to be significant and to have strong implications for stock market development in these countries.

In summary, there are a limited numbers of existing empirical studies that use risk ratings to examine the impact of political risk on equity investment and these studies were generally conducted up to late 1990s. The most recent study found covers the period up to 2001. However, only five specific Arabian countries are examined in this study. The main contributions of this study to the existing literature are twofold. Firstly, by using an up-to-date dataset, this study sheds light as to whether political instability remains a significant price factor for equity investment in emerging markets. Secondly, this study helps to clarify whether equity investment in emerging markets provide diversification benefits for both individual and international investors given Diamonte *et al.* (1996) prediction that there are signs of global convergence in political risk between emerging and developed markets. The answer to this question is of importance as such a convergence would diminish diversification benefits and therefore diminish the interest to invest in emerging markets.

3.3 RESEARCH OBJECTIVES AND HYPOTHESES

It is well established, for example, that politics is one of the most influential factors affecting both the local and global economy (Nordhaus, 1975 and Boix, 1998). Particularly, politics and the risk associated with it are found to play a significantly larger role in emerging markets than in developed markets (Diamonte *et al.*, 1996; Erb *et al.*, 1996; and, Bekaert and Harvey, 2002). Despite this, from the period of 1997 onward, no studies could be found that use political risk rating to examine the impact of political risk on emerging stock markets and comparing this effect to that of developed stock markets.

The major research objective for this study is to investigate the importance of changes in political risk on stock returns. Specifically, this study examines whether political risk continues to be a more important determinant of stock returns for emerging markets than for developed markets for the period after 1997.

Four null hypotheses are developed for testing:

Hypothesis 1: There is no difference in the degree of political risk change between emerging and developed markets over the period of the study from January 1984 to December 2007.

If this hypothesis holds, it indicates that the degree of political risk change in emerging markets is not different from those of developed ones. Erb *et al*. (1996) and Diamonte *et al.* (1996) find that there is a significant difference in the effect of political risk on the stock returns of emerging and developed markets with the former being more greatly affected by political risk than the latter during the year 1984 to 1995. The results from testing this hypothesis provide important knowledge as to whether the degree of political risk change remains larger in emerging markets than in developed ones.

In addition, Diamonte *et al.* (1996) show that there is a pattern of global convergence in political risk since they find that political risk reduced within emerging markets and rose in

developed markets during the 10 years of their study period. Accordingly, Hypothesis 2 tests whether there is any evidence of global convergence in political risk.

Hypothesis 2: There is no evidence of global convergence in political risk subsequent to the year 1995 onward.

If this hypothesis holds, it signifies that there is no pattern of global convergence in political risk. That is, emerging markets do not become politically safer. The differences in the average political risk change between emerging and developed markets do not become smaller after the year 1995. Therefore, such a result would not support the findings by Diamonte *et al.* (1996). This indicates that emerging markets would remain politically riskier than developed markets. In such a case, the findings from testing this hypothesis provide important knowledge that emerging markets still help investors to improve the risk-return characteristics of their portfolios and reduce the overall portfolio risk as suggested by Cosset and Suret (1995) and Gupta and Donleavy (2009).

Furthermore, Bilson *et al.* (2002) finds that political risk is an important factor in equity pricing for emerging markets but not for developed markets during the period of 1985 to 1997. Particularly, they find that the impact of political risk on emerging market tends to be more pervasive during the 1990s, but not for the earlier years. Thus, Hypothesis 3 tests whether political risk continues to be an important factor in equity pricing in emerging market when a longer sample period is used for the analysis compared to that of Bilson *et al.* (2002).

Hypothesis 3: Political risk does not have a more significant impact on equity returns of emerging markets than on equity returns of developed markets.

If this hypothesis holds, there is evidence that the stock returns of emerging markets are not more sensitive than those of developed markets to changes in political risk, after controlling for local returns influences. The findings from this hypothesis provide important knowledge as to whether there continues to be significant differences in political risk exposure between emerging and developed markets at the aggregated portfolio level.

Notably, Bilson *et al.* (2002) find that political risk is an important factor in equity pricing particularly for the Pacific Basin region. Hypothesis 4, therefore, tests whether political risk remains to be a stock price factor for Pacific Basin markets.

Hypothesis 4: Political risk does not have a more significant impact on equity returns of Pacific Basin emerging markets than on equity returns of other emerging and developed markets.

If this hypothesis holds, it indicates that the stock returns of Pacific Basin emerging markets are not more sensitive to changes in political risk when comparing to those of other emerging and developed markets, after controlling for local returns influences. It also suggests that the finding of Bilson *et al.* (2002) cannot be applied to a subsequent sample period or does not hold when a longer sample period is used for the analysis. Overall, the findings from this hypothesis provide important evidence as to whether political uncertainty is an important factor in equity pricing, particularly for the stock markets that are situated on the Pacific Rim region, and help to clarify whether equity investment in these markets can provide diversification benefits for both individuals and international investors.

3.4 DATA DESCRIPTION

The monthly data for each sample stock market, from January 1984 to December 2007, that are needed for analyse in this study consist of: (1) returns on stock market composite (in US dollar); (2) political risk rating; (3) returns on world index; (4) exchange rate; (5) stock market capitalisation; (6) national gross domestic product (GDP); and (7) dividend yields. All of these, except for political risk rating, are obtained from Global Financial Data (GFD). The monthly political risk rating is obtained from the International Country Risk Guide (ICRG) of Political Risk Service (PRS) group.

The returns on world index (R_{wt}), which is used to remove global influence from return series, is proxied by the Morgan Stanley Capital International (MSCI)'s World Price Index. It is believed that MSCI index is a dependable proxy for the World Price Index because it

represents the behaviour of stock returns in both developed and emerging markets. Besides, it represents a very large percentage of total market capitalisation in most countries (Diamonte *et al.*, 1996). Similar to Boutchkova, Doshi, Durnev, and Molchanov (2011), the explanatory variables' values, apart from the political risk rating variable, are winsorised at the 1% and 99% levels in order to avoid the test results being influence by extreme outliers.

3.4.1 CLASSIFICATION OF SAMPLE MARKETS

In order to test the four hypotheses outlined above, each sample market is firstly identified as belonging to either the developed or emerging markets. The classification is based on developed stock markets, which are listed on the Morgan Stanley Capital International (MSCI) Index and the emerging stock markets, which are listed on the International Financial Corporation (IFC) index in 2007 (see Tables 3.4). This method of classification is employed by earlier studies in this area, such as Diamonte *et al.* (1996), Erb *et al.* (1995, 1996), and Bilson *et al.* (2002). In order to obtain reliable statistical analysis, the stock markets in which their data are unavailable for the full sample period are excluded from this study. These include Bahrain, Bangladesh, China, Kuwait, Pakistan, Saudi Arabia, Turkey, United Arab Emirates (UAE), Uruguay, and Venezuela. As a result, there are 23 developed markets and 19 emerging markets included in the study. The sample size, in total, is 42 stock markets.

It is noticeable that the composition of both emerging and developed markets changed considerably since the time that the three above mentioned studies were conducted. Firstly, Greece and Portugal shift from being emerging markets to developed markets. Secondly, a number of countries are added to the IFC index as emerging markets. These include Bahrain, Bangladesh, China, Israel, Kuwait, Morocco, South Africa, and Saudi Arabia. However, Bahrain, Bangladesh, China, Kuwait, and Saudi Arabia are excluded from the analysis due to the lack of data availability.

Table 3.4

List of sample markets

The table presents a list of emerging and developed markets that are included in this study. The sample period is January 1984 – December 2007.

Emerging Markets		Developed Markets	
1) Argentina	14) Peru	1) Australia	14) Netherlands
2) Brazil	15) Philippines	2) Austria	15) New Zealand
3) Chile	16) South Africa	3) Belgium	16) Norway
4) Columbia	17) Sri Lanka	4) Canada	17) Portugal
5) India	18) Taiwan	5) Denmark	18) Singapore
6) Indonesia	19) Thailand	6) Finland	19) Spain
7) Israel		7) France	20) Sweden
8) Jordan		8) Germany	21) Switzerland
9) South Korea		9) Greece	22) United Kingdom
10) Malaysia		10) Hong Kong	23) United States
11) Mexico		11) Ireland	
12) Morocco		12) Italy	
13) Nigeria		13) Japan	

From these 19 emerging markets, six of them are Pacific Basin emerging markets. These are Indonesia, Korea, Taiwan, Malaysia, Philippines, and Thailand. This classification is referenced from various studies that particularly examine Pacific Basin markets[6].

[6] See, for example, Corhay, Rad, and Urbain (1995), Chen, and Zhang (1997), Chui and Wei (1998), Janakiramanan and Lamba (1998), Ng (2000), Hameed and Kusnadi (2002), Phylaktis and Ravazzolo (2005), and Meric, Kim, Coopersmith and Meric (2007).

3.4.2 DESCRIPTIVE AND SUMMARY STATISTICS

Table 3.5

Descriptive statistics of monthly returns for emerging stock markets: January 1984 – December 2007

The table presents the mean, standard deviation, skewness, excess kurtosis, Jacque-Bera statistic, minimum, and maximum of monthly returns for each emerging stock markets. Here, the markets are categorised according to its geographical location. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

	Mean	SD	Skewness	Excess kurtosis	Jacque-Bera	Min	Max
Emerging: Asia							
Sri Lanka	0.45%	0.0801	0.7071	4.9700	67.87***	-17.45%	36.30%
Indonesia	1.03%	0.1692	1.7264	16.5418	2343.66***	-65.47%	117.56%
India	1.02%	0.0913	0.2038	3.2858	2.9737	-25.14%	30.41%
Philippines	1.15%	0.1301	0.6869	6.7000	186.93***	-36.48%	63.14%
Thailand	1.12%	0.1154	0.4419	6.9385	195.52***	-34.91%	61.02%
Malaysia	0.73%	0.1074	2.2783	24.5500	5821.01***	-35.65%	94.64%
Korea	1.42%	0.1130	0.2501	6.1429	121.96***	-43.91%	46.83%
Taiwan	1.73%	0.122	0.5939	5.6267	99.72***	-38.42%	57.91%
Emerging: Latin America							
Peru	-0.45%	0.2156	0.7426	13.6561	1389.11***	-100.00%	135.95%
Colombia	0.45%	0.0982	0.7063	4.9539	69.7549***	-25.59%	46.11%
Brazil	-4.20%	0.2313	-0.2280	5.6515	91.39***	-100.00%	88.43%
Argentina	-1.25%	0.2233	0.1395	7.2936	613.86***	99.99%	118.57%
Chile	0.88%	0.0799	-0.2733	3.6706	9.3259***	-33.23%	22.45%
Mexico	1.42%	0.1326	-1.0566	8.0581	360.60***	-72.76%	41.83%
Emerging: Europe/Mideast/ Africa							
Nigeria	0.73%	0.1685	0.4081	23.2220	405.75***	-91.84%	113.82%
Israel	0.26%	0.0810	-0.4697	3.4787	13.34***	-27.35%	20.61%
Jordan	0.61%	0.0835	0.6350	19.2888	3203.24***	-43.99%	63.59%
Morocco	1.87%	0.0732	0.7369	5.4944	82.24***	-18.54%	38.30%
South Africa	0.63%	0.1091	-0.1569	4.5642	30.54***	-38.69%	34.97%

Table 3.6

Descriptive statistics of monthly returns for developed stock markets: January 1984 – December 2007

The table presents the mean, standard deviation, skewness, excess kurtosis, Jacque-Bera statistic, minimum, and maximum of monthly returns for each developed stock markets. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

	Mean	SD	Skewness	Excess kurtosis	Jacque-Bera	Min	Max
Developed							
Greece	2.59%	0.1139	1.1471	6.2257	188.03***	-23.96%	53.14%
Hong Kong	1.54%	0.0801	-0.3643	7.2039	218.44***	-43.15%	30.20%
Spain	1.91%	0.0787	0.5389	4.7010	48.65***	-21.13%	35.04%
Italy	1.50%	0.0789	0.4712	4.0281	23.34***	-19.42%	36.29%
France	1.47%	0.0723	0.1257	3.6526	5.87	-18.98%	25.95%
Portugal	2.12%	0.1014	1.4206	9.1587	552.02***	-22.28%	64.42%
Belgium	1.41%	0.0680	0.2923	4.3296	25.32***	-20.09%	31.14%
United States	0.84%	0.0412	-0.9725	-0.2263	213.05***	-22.63%	11.58%
Singapore	0.88%	0.0733	0.1024	6.2126	124.35***	-28.29%	30.81%
United Kingdom	1.12%	0.0683	0.3537	4.4587	31.54***	-20.62%	32.94%
Germany	1.28%	0.0727	-0.1182	3.8548	9.3767***	-23.13%	24.75%
Australia	1.11%	0.0862	-0.6840	6.5769	175.99***	-48.32%	27.06%
Japan	1.15%	0.0913	0.7348	4.1008	40.45***	-23.22%	37.74%
Ireland	1.57%	0.0753	0.3755	4.3709	29.32***	-20.03%	32.22%
Canada	0.75%	0.0890	-0.1194	4.3912	23.91***	-37.02%	32.48%
New Zealand	0.84%	0.0912	-0.2460	5.8486	100.28***	-40.43%	30.32%
Austria	1.62%	0.0760	0.3705	4.1729	23.10***	-22.79%	30.08%
Sweden	1.39%	0.0794	-0.0284	3.1262	0.2297	-22.72%	26.63%
Norway	1.66%	0.0811	-0.2415	3.1944	3.2534	-22.78%	22.78%
Denmark	1.41%	0.0691	0.1296	4.2057	18.25***	-19.19%	27.22%
Netherlands	1.33%	0.0650	-0.2421	3.5519	6.4672***	-19.22%	19.89%
Finland	1.83%	0.0860	0.1411	3.8454	9.53***	-28.94%	34.32%
Switzerland	1.40%	0.0686	0.1641	3.2889	2.2944	-18.86%	24.80%

Returns from both emerging and developed markets are significantly nonnormal. The Jarque-Bera test provides evidence to reject the hypothesis of normality in 18 emerging markets and 19 developed markets. The return series predominantly feature positive skewness and are leptokurtic.

Table 3.7

Summary statistics: Political risk and stock returns for emerging markets, monthly, January 1984 – December 2007

The table presents the monthly average political scores, percentage average change, and standard deviation of the percentage change in political risk for each emerging markets. It also presents the average, standard deviation, minimum and maximum monthly returns, in percentage, for each emerging markets. The markets are sorted by average political risk scores, from the most risky to the least risky market.

	Political Risk			Monthly Returns (%)			
Country	**Average Political scores**	**Average Change %**	**Standard Deviation of the Change %**	**Average**	**Standard Deviation**	**Minimum**	**Maximum**
Emerging: Asia							
Sri Lanka	49.42	-0.03	2.94	0.45	8.02	-17.45	36.30
Indonesia	51.94	0.09	2.79	1.03	16.92	-65.47	117.56
India	55.04	0.00	3.15	1.02	9.13	-25.14	30.41
Philippines	56.85	0.15	2.58	1.15	13.01	-36.48	63.14
Thailand	64.18	-0.01	1.71	1.12	11.54	-34.91	61.02
Malaysia	71.28	-0.01	1.24	0.73	10.74	-35.65	94.64
Korea	72.24	0.06	1.55	1.48	11.27	-43.91	46.83
Taiwan	77.17	0.01	1.16	1.73	12.19	-38.42	57.91
Emerging: Latin America							
Peru	53.06	0.12	2.90	-0.45	21.56	-100.00	135.95
Colombia	55.96	-0.02	2.83	0.45	9.82	-25.59	46.11
Brazil	65.88	0.06	1.66	-4.2	23.13	-100.00	88.43
Argentina	66.65	0.10	1.89	-1.25	22.33	-100.00	119.00
Chile	68.80	0.17	1.50	0.88	7.99	-33.23	22.45
Mexico	69.32	0.02	1.43	1.42	13.26	-72.76	41.83
Emerging: Europe/Mideast/Africa							
Nigeria	46.34	-0.02	2.36	0.73	16.85	-91.84	113.82
Israel	57.61	0.11	2.87	0.26	8.10	-27.35	20.61
Jordan	62.05	0.15	2.61	0.61	8.35	-43.99	63.59
Morocco	62.36	0.14	2.16	1.86	7.31	-18.54	38.30
South Africa	64.71	0.04	1.87	0.63	10.91	-38.69	34.97
Average	61.62						

Table 3.8

Summary statistics: Political risk and stock returns for developed markets, monthly, January 1984 – December 2007

The table presents the monthly average political scores, percentage average change, and standard deviation of the percentage change in political risk for each developed markets. It also presents the average, standard deviation, minimum and maximum monthly returns, in percentage, for each developed markets. The markets are sorted by average political risk scores, from the most risky to the least risky market.

	Political Risk			Monthly Returns (%)			
Country	**Average Political scores**	**Average Change %**	**Standard Deviation of the Change %**	**Average**	**Standard Deviation**	**Minimum**	**Maximum**
Developed							
Greece	71.25	0.06	1.39	2.59	11.39	-23.96	53.14
Hong Kong	72.42	0.07	1.55	1.54	8.01	-43.15	30.20
Spain	75.70	0.05	1.28	1.91	7.87	-21.13	35.04
Italy	77.24	-0.01	1.40	1.50	7.89	-19.42	36.29
France	79.01	-0.01	1.31	1.47	7.23	-18.98	25.95
Portugal	79.79	0.04	1.22	2.12	10.14	-22.28	64.42
Belgium	81.36	-0.01	1.04	1.41	6.79	-20.09	31.14
United States	82.36	-0.06	1.33	0.84	4.12	-22.63	11.58
Singapore	82.64	-0.02	0.81	0.88	7.33	-28.29	30.81
United Kingdom	83.12	-0.03	1.35	1.12	6.83	-20.62	32.94
Germany	83.37	0.02	1.08	1.28	7.27	-23.13	24.75
Australia	83.68	0.00	0.99	1.11	8.62	-48.32	27.06
Japan	83.88	-0.06	1.22	1.15	9.13	-23.22	37.74
Ireland	84.31	0.03	1.08	1.57	7.53	-20.03	32.22
Canada	84.55	0.01	0.85	0.75	8.90	-37.02	32.48
New Zealand	86.33	-0.02	0.87	0.83	9.11	-40.43	30.32
Austria	86.62	-0.02	1.24	1.62	7.60	-22.79	30.08
Sweden	86.77	-0.01	0.81	1.39	7.94	-22.72	26.63
Norway	86.88	-0.02	1.23	1.66	8.11	-27.06	22.78
Denmark	87.21	-0.03	0.80	1.41	6.91	-19.19	27.22
Netherlands	88.18	-0.03	0.72	1.33	6.5	-19.22	19.89
Finland	89.87	-0.01	0.80	1.83	8.6	-28.94	34.32
Switzerland	90.04	-0.03	0.66	1.40	6.86	-18.86	24.80
Average	82.89						

Table 3.7 and 3.8 presents descriptive statistics for political risk computed for emerging and developed markets. On average, Morocco and Greece have the highest monthly returns among other emerging and developed markets, respectively. Noticeably, the average monthly returns of developed markets are higher than those of emerging markets. Yet, the end results of these two tables show that emerging markets are on average politically riskier

than developed markets (61.62 vs. 82.89). Among the emerging markets, Nigeria has the highest average political risk of 46.34. For developed markets, Greece has the highest average political risk of 71.25. To further illustrate, only three emerging markets, Malaysia (71.28), Korea (72.24), and Taiwan (77.17) are, on average, politically safer than Greece. The results also show that the political risk measure has more variability in emerging markets than in developed ones. The highest standard deviation for the changes in political risk among developed markets is 1.55% (Hong Kong) comparing to 3.15% (India) of the emerging markets.

Next, Table 3.9 presents the correlation matrix of emerging and developed stock markets returns for the full sample period of January 1984 to December 2007. Abbreviations for each country in Table 3.9, 3.10, and 3.11 are as follows: AR= Argentina; BR= Brazil; CL = Chile; CO= Colombia; IN= India; ID= Indonesia; IL= Israel; JO= Jordan; KR= Korea; MY= Malaysia; MX= Mexico; MA= Morocco; NG= Nigeria; PE= Peru; PH= Philippine; ZA= South Africa; LK= Sri Lanka; TW= Taiwan; TH= Thailand; AU; Australia; AT= Austria; BE= Belgium; CA= Canada; DK= Denmark; FI= Finland; FR= France; DE= Germany; GR= Greece; HK= Hong Kong; IE= Ireland; IT= Italy; JP= Japan; NL= Netherland; NO= Norway; NZ= New Zealand; PT= Portugal; SG= Singapore; ES= Spain; SE= Sweden; CH= Switzerland; UK= United Kingdom; and US= United States.

Table 3.9 shows that the average correlation between emerging and developed market returns is 18.31%. Table 3.10 and 3.11 then illustrate that the average correlation among emerging market returns is 14.68% and the average correlation among developed market returns is 49.12%, respectively. The correlation matrix for emerging and developed stock market returns support the proposition that emerging market returns have low correlations with developed market returns. This implies that including emerging market assets in an international portfolio would provide significant diversification benefits and the opportunity to capture an excess risk premium, which is consistent with what is suggested by prior studies such as Divecha *et al*. (1992), Cosset and Suret (1995), and, Gupta and Donleavy (2009). Moreover, emerging market returns are only weakly correlated with each other since the average correlation among the emerging market returns is only 14.68%, compared with a correlation of 49.12% among the developed market returns.

Table 3.9

Correlation matrix of emerging and developed stock market monthly returns, January 1984 – December 2007

The table presents the correlation matrix of emerging and developed stock market monthly returns for the full sample period.

	AR	BR	CL	CO	IN	ID	IL	JO	KR	MY	MX	MA	NG	PE	PH	ZA	LK	TW	TH	AU	AT	BE	CA	DK	FI	FR	DE	GR	HK	IE	IT	JP	NL	NO	NZ	PT	SG	ES	SE	CH	UK	US
AR	1.00																																									
BR	0.10	1.00																																								
CL	0.10	0.27	1.00																																							
CO	0.12	0.12	0.29	1.00																																						
IN	0.16	0.11	0.27	0.15	1.00																																					
ID	0.10	0.09	0.20	0.15	0.13	1.00																																			
IL	0.22	0.20	0.29	0.21	0.15	0.07	1.00																																		
JO	0.14	0.09	0.10	0.18	0.06	0.07	0.12	1.00																																	
KR	0.02	0.13	0.26	0.20	0.16	0.38	0.13	0.11	1.00																																
MY	0.06	0.09	0.30	0.12	0.19	0.37	0.16	0.07	0.18	1.00																															
MX	0.19	0.13	0.32	0.18	0.12	0.19	0.21	0.05	0.26	0.25	1.00																														
MA	0.01	0.02	0.04	0.15	0.18	0.03	0.14	-0.06	0.00	0.02	-0.08	1.00																													
NG	-0.03	-0.02	-0.10	0.09	0.01	0.06	-0.02	-0.01	-0.04	0.06	0.04	0.00	1.00																												
PE	0.26	0.16	0.19	0.14	0.12	-0.05	0.11	0.01	0.06	0.03	0.12	0.00	-0.05	1.00																											
PH	0.05	0.03	0.27	0.17	0.16	0.35	0.16	0.05	0.25	0.42	0.15	0.02	0.01	0.04	1.00																										
ZA	0.07	0.07	0.33	0.18	0.23	0.21	0.26	0.04	0.29	0.26	0.24	0.19	0.06	0.13	0.35	1.00																									
LK	0.04	0.11	0.13	0.17	0.18	0.12	0.07	0.10	0.04	0.09	0.09	0.09	0.01	-0.01	0.07	0.10	1.00																								
TW	0.02	0.08	0.35	0.16	0.10	0.16	0.12	0.11	0.25	0.35	0.30	0.03	-0.02	0.05	0.20	0.22	-0.06	1.00																							
TH	0.06	0.12	0.36	0.16	0.22	0.50	0.12	0.09	0.42	0.63	0.29	0.05	0.06	0.04	0.54	0.38	0.06	0.42	1.00																						
AU	0.18	0.21	0.28	0.15	0.23	0.20	0.19	0.03	0.32	0.28	0.29	0.11	0.11	0.09	0.17	0.45	0.03	0.27	0.43	1.00																					
AT	-0.01	0.12	0.17	0.12	0.26	0.17	0.24	0.11	0.09	0.17	0.04	0.36	0.07	-0.03	0.28	0.40	0.04	0.18	0.26	0.24	1.00																				
BE	0.09	0.15	0.19	0.15	0.17	0.11	0.31	0.07	0.15	0.16	0.09	0.37	0.00	0.02	0.29	0.39	0.03	0.14	0.23	0.34	0.67	1.00																			
CA	0.19	0.19	0.34	0.21	0.30	0.20	0.26	0.15	0.27	0.36	0.34	0.06	0.10	0.17	0.17	0.42	0.03	0.26	0.38	0.51	0.26	0.22	1.00																		
DK	0.07	0.12	0.21	0.15	0.24	0.10	0.27	0.03	0.16	0.14	-0.03	0.35	0.07	0.02	0.28	0.41	0.06	0.06	0.18	0.32	0.63	0.76	0.26	1.00																	
FI	0.06	0.16	0.24	0.12	0.19	0.12	0.39	0.05	0.30	0.19	0.19	0.15	0.06	0.06	0.21	0.38	0.05	0.17	0.22	0.39	0.47	0.55	0.31	0.55	1.00																
FR	0.14	0.17	0.23	0.07	0.24	0.15	0.35	0.02	0.18	0.17	0.14	0.28	-0.03	0.07	0.26	0.43	0.05	0.18	0.25	0.39	0.66	0.84	0.30	0.74	0.63	1.00															
DE	0.11	0.19	0.24	0.14	0.22	0.15	0.37	0.05	0.15	0.22	0.13	0.31	0.08	0.02	0.28	0.44	0.03	0.18	0.27	0.40	0.72	0.81	0.31	0.76	0.62	0.86	1.00														
GR	0.06	0.09	0.21	0.13	0.21	0.11	0.28	0.15	0.15	0.10	0.09	0.28	-0.02	-0.05	0.22	0.34	0.23	0.12	0.21	0.21	0.49	0.54	0.20	0.48	0.43	0.54	0.51	1.00													
HK	0.09	0.21	0.38	0.14	0.12	0.33	0.20	0.06	0.29	0.50	0.41	-0.05	0.10	0.06	0.34	0.34	0.04	0.37	0.51	0.49	0.26	0.24	0.39	0.21	0.29	0.34	0.34	0.15	1.00												
IE	0.06	0.18	0.27	0.17	0.16	0.06	0.31	0.11	0.22	0.21	0.17	0.28	-0.02	0.08	0.28	0.37	0.04	0.17	0.25	0.39	0.61	0.76	0.30	0.73	0.59	0.74	0.70	0.50	0.35	1.00											
IT	0.12	0.19	0.21	0.09	0.20	0.11	0.37	0.06	0.19	0.12	0.07	0.24	0.04	0.08	0.20	0.35	0.02	0.09	0.19	0.29	0.60	0.73	0.28	0.66	0.60	0.78	0.75	0.46	0.24	0.65	1.00										
JP	0.00	0.09	0.09	0.02	0.05	0.13	0.12	0.07	0.41	0.13	0.08	0.13	-0.02	0.06	0.20	0.35	0.03	0.17	0.25	0.25	0.30	0.40	0.20	0.40	0.39	0.45	0.34	0.22	0.20	0.43	0.40	1.00									
NL	0.12	0.22	0.22	0.18	0.22	0.16	0.36	0.03	0.20	0.24	0.16	0.32	0.03	0.07	0.28	0.41	0.03	0.13	0.28	0.43	0.66	0.84	0.34	0.77	0.64	0.87	0.89	0.50	0.42	0.78	0.76	0.42	1.00								
NO	0.07	0.22	0.33	0.17	0.21	0.21	0.27	0.04	0.24	0.27	0.23	0.23	0.06	0.03	0.25	0.46	0.05	0.22	0.30	0.47	0.57	0.65	0.44	0.66	0.56	0.66	0.67	0.47	0.40	0.65	0.55	0.35	0.71	1.00							
NZ	0.18	0.27	0.23	0.18	0.19	0.27	0.16	0.10	0.28	0.24	0.22	0.13	0.06	0.13	0.25	0.39	0.02	0.23	0.40	0.67	0.34	0.36	0.41	0.32	0.38	0.39	0.39	0.25	0.45	0.42	0.32	0.27	0.44	0.42	1.00						
PT	0.10	0.12	0.17	0.10	0.20	0.09	0.21	0.05	0.13	0.12	0.12	0.26	-0.04	0.07	0.15	0.37	0.06	0.25	0.22	0.28	0.51	0.57	0.27	0.53	0.50	0.58	0.55	0.61	0.22	0.61	0.55	0.36	0.57	0.52	0.41	1.00					
SG	0.08	0.19	0.35	0.20	0.16	0.51	0.23	0.10	0.34	0.71	0.34	0.09	0.07	0.02	0.50	0.43	0.06	0.38	0.69	0.47	0.31	0.33	0.37	0.31	0.33	0.35	0.39	0.21	0.63	0.34	0.28	0.33	0.42	0.48	0.41	0.23	1.00				
ES	0.10	0.20	0.30	0.13	0.21	0.11	0.33	0.06	0.22	0.19	0.18	0.25	0.02	0.07	0.31	0.41	0.05	0.19	0.28	0.41	0.59	0.76	0.28	0.69	0.62	0.79	0.73	0.53	0.36	0.76	0.74	0.45	0.77	0.59	0.40	0.63	0.37	1.00			
SE	0.07	0.27	0.31	0.16	0.23	0.19	0.43	0.02	0.28	0.21	0.23	0.27	0.11	0.04	0.22	0.36	0.04	0.21	0.30	0.48	0.52	0.62	0.40	0.62	0.67	0.70	0.72	0.44	0.40	0.64	0.65	0.39	0.75	0.68	0.46	0.51	0.42	0.68	1.00		
CH	0.08	0.11	0.13	0.10	0.14	0.11	0.25	0.01	0.13	0.13	0.00	0.31	-0.01	0.04	0.25	0.37	0.03	0.04	0.23	0.32	0.65	0.77	0.19	0.76	0.51	0.76	0.75	0.49	0.26	0.71	0.64	0.46	0.80	0.62	0.42	0.57	0.29	0.68	0.63	1.00	
UK	0.06	0.20	0.20	0.13	0.15	0.09	0.30	0.06	0.19	0.23	0.12	0.24	0.05	0.01	0.19	0.38	0.04	0.14	0.22	0.49	0.57	0.69	0.32	0.66	0.54	0.71	0.69	0.41	0.38	0.71	0.57	0.45	0.76	0.64	0.43	0.51	0.42	0.66	0.63	0.68	1.00
US	0.09	0.25	0.34	0.19	0.08	0.23	0.21	0.07	0.26	0.34	0.38	-0.06	0.03	0.11	0.25	0.25	-0.03	0.25	0.35	0.44	0.18	0.35	0.35	0.26	0.28	0.42	0.40	0.17	0.51	0.40	0.28	0.20	0.45	0.42	0.31	0.15	0.49	0.37	0.42	0.31	0.42

Table 3.10

Correlation matrix of emerging stock markets monthly returns, January 1984 – December 2007

The table presents the correlation matrix of emerging stock market monthly returns for the full sample period, which ranges from January 1984 to December 2007.

	AR	*BR*	*CL*	*CO*	*IN*	*ID*	*IL*	*JO*	*KW*	*MY*	*MX*	*MA*	*NG*	*PE*	*PH*	*ZA*	*LK*	*TW*	*TH*
AR	1.00																		
BR	0.10	1.00																	
CL	0.10	0.27	1.00																
CO	0.12	0.12	0.29	1.00															
IN	0.16	0.11	0.27	0.15	1.00														
ID	0.10	0.09	0.20	0.15	0.13	1.00													
IL	0.22	0.20	0.29	0.21	0.15	0.07	1.00												
JO	0.14	0.09	0.10	0.18	0.06	0.07	0.12	1.00											
KR	0.02	0.13	0.26	0.20	0.16	0.38	0.13	0.11	1.00										
MY	0.06	0.09	0.30	0.12	0.19	0.37	0.16	0.07	0.03	1.00									
MX	0.19	0.13	0.32	0.18	0.12	0.19	0.21	0.05	0.16	0.25	1.00								
MA	0.01	0.02	0.04	0.15	0.18	0.03	0.14	-0.06	0.13	0.02	-0.08	1.00							
NG	-0.03	-0.02	-0.10	0.09	0.01	0.06	-0.02	-0.01	0.08	0.06	0.04	0.00	1.00						
PE	0.26	0.16	0.19	0.14	0.12	-0.05	0.11	0.01	0.23	0.03	0.12	0.00	-0.05	1.00					
PH	0.05	0.03	0.27	0.17	0.16	0.35	0.16	0.05	0.07	0.42	0.15	0.02	0.01	0.04	1.00				
ZA	0.07	0.07	0.33	0.18	0.23	0.21	0.26	0.04	0.23	0.26	0.24	0.19	0.06	0.13	0.35	1.00			
LK	0.04	0.11	0.13	0.17	0.18	0.12	0.07	0.10	0.09	0.09	0.09	0.09	0.01	-0.01	0.07	0.10	1.00		
TW	0.02	0.08	0.35	0.16	0.10	0.16	0.12	0.11	0.04	0.35	0.30	0.03	-0.02	0.05	0.20	0.22	-0.06	1.00	
TH	0.06	0.12	0.36	0.16	0.22	0.50	0.12	0.09	0.05	0.63	0.29	0.05	0.06	0.04	0.54	0.38	0.06	0.42	1.00

The average correlation among emerging market returns is 14.68%

Table 3.11

Correlation matrix of developed stock market, monthly returns, January 1984 – December 2007

The table presents the correlation matrix of developed stock market monthly returns for the full sample period, which ranges from January 1984 to December 2007.

	AU	*AT*	*BE*	*CA*	*DK*	*FI*	*FR*	*DE*	*GR*	*HK*	*IE*	*IT*	*JP*	*NL*	*NO*	*NZ*	*PT*	*SG*	*ES*	*SE*	*CH*	*UK*	*US*
AU	1.00																						
AT	0.24	1.00																					
BE	0.34	0.67	1.00																				
CA	0.51	0.26	0.22	1.00																			
DK	0.32	0.63	0.76	0.26	1.00																		
FI	0.39	0.47	0.55	0.31	0.55	1.00																	
FR	0.39	0.66	0.84	0.30	0.74	0.63	1.00																
DE	0.40	0.72	0.81	0.31	0.76	0.62	0.86	1.00															
GR	0.21	0.49	0.54	0.20	0.48	0.43	0.54	0.51	1.00														
HK	0.49	0.26	0.24	0.39	0.21	0.29	0.34	0.34	0.15	1.00													
IE	0.39	0.61	0.76	0.30	0.73	0.59	0.74	0.70	0.50	0.35	1.00												
IT	0.29	0.60	0.73	0.28	0.66	0.60	0.78	0.75	0.46	0.24	0.65	1.00											
JP	0.25	0.30	0.40	0.20	0.40	0.39	0.45	0.34	0.22	0.20	0.43	0.40	1.00										
NL	0.43	0.66	0.84	0.34	0.77	0.64	0.87	0.89	0.50	0.42	0.78	0.76	0.42	1.00									
NO	0.47	0.57	0.65	0.44	0.66	0.56	0.66	0.67	0.47	0.40	0.65	0.55	0.35	0.71	1.00								
NZ	0.67	0.34	0.36	0.41	0.32	0.38	0.39	0.39	0.25	0.45	0.42	0.32	0.27	0.44	0.42	1.00							
PT	0.28	0.51	0.57	0.27	0.53	0.50	0.58	0.55	0.61	0.22	0.61	0.55	0.36	0.57	0.52	0.41	1.00						
SG	0.47	0.31	0.33	0.37	0.31	0.33	0.35	0.39	0.21	0.63	0.34	0.28	0.33	0.42	0.48	0.41	0.23	1.00					
ES	0.41	0.59	0.76	0.28	0.69	0.62	0.79	0.73	0.53	0.36	0.76	0.74	0.45	0.77	0.59	0.40	0.63	0.37	1.00				
SE	0.48	0.52	0.62	0.40	0.62	0.67	0.70	0.72	0.44	0.40	0.64	0.65	0.39	0.75	0.68	0.46	0.51	0.42	0.68	1.00			
CH	0.32	0.65	0.77	0.19	0.76	0.51	0.76	0.75	0.49	0.26	0.71	0.64	0.46	0.80	0.62	0.42	0.57	0.29	0.68	0.63	1.00		
UK	0.49	0.57	0.69	0.32	0.66	0.54	0.71	0.69	0.41	0.38	0.71	0.57	0.45	0.76	0.64	0.43	0.51	0.42	0.66	0.63	0.68	1.00	
US	0.44	0.18	0.35	0.35	0.26	0.28	0.42	0.40	0.17	0.51	0.40	0.28	0.20	0.45	0.42	0.31	0.15	0.49	0.37	0.42	0.31	0.42	1.00

The average correlation among developed market returns is 49.12%

3.5 TEST METHODOLOGIES

3.5.1 UNIVARIATE STATISTICAL ANALYSIS

As ICRG is selected as the most appropriate political risk service provider, the sample period for this study starts from 1984 to correspond to the time when ICRG's political risk ratings are first available.

To test Hypothesis 1 and 2, the study conducts a univariate statistical analysis and strictly follows the methodologies used by Diamonte *et al.* (1996) and Erb *et al.* (1996). The first hypothesis states that there is a difference in the degree of political risk change between emerging and developed markets. To test this hypothesis, the sample markets are firstly divided into two categories: emerging markets and developed markets. Within each category, two portfolios are initially formed. These are the *'upgrade'* and the *'downgrade'* portfolios. The upgrade portfolio consists of markets that experienced a decrease in political risk, while the downgrade portfolio consists of those that experienced an increase in political risk. These two portfolios are rebalanced twice a year. The markets that do not have any changes in risk ratings are kept in their respective portfolios. Erb *et al*. (1996) suggest that this approach helps to minimise turnover which reduces transaction costs.

Following Diamonte *et al.* (1996), the portfolio returns in this study are calculated based on the degree of political risk change that each market experiences in that period. This is carried out by giving a weighting on each market's return based on the absolute value of its contemporaneous percentage political risk change. With this approach, the market with a larger political risk change is given more weight in the portfolios than those with a smaller risk change. This procedure is repeated semi-annually in order to obtain a time series of returns for the two portfolios in each market.

Next, a third portfolio is formed for each market. This is named as the '*upgrade-minus-downgrade'* portfolio. The t-statistics is computed to determine the statistical significance of stock returns within these three portfolios for each market. If the upgrade-minus-downgrade portfolio is significant in the emerging markets but not significant in the developed markets, this would provide evidence that changes in political risk helps to explain the cross-section of country returns in emerging markets but not in developed ones.

The final procedure for testing Hypothesis 1 is to test for the differential impact of changes in political risk between emerging markets and developed ones. This is undertaken by subtracting the developed market portfolio returns from the emerging market portfolio returns for each set of portfolios and then testing for statistical significance. The results provide a comparative effect of political risk change on emerging and developed markets and they also determine whether to accept or reject the first hypothesis.

For Hypothesis 2, the sample is divided into two sub-periods in order to test whether there is evidence of global convergence in political risk after 1995. The first sub-period used is from 1984 to 1995 while the second sub-period is from 1996 to 2007. The same procedures used to test the first hypothesis are carried out for both sub-periods. Evidence of global convergence would be a significantly higher political risk change for emerging markets than for developed ones in the first sub-period; but a decline in political risk change for emerging markets and a rise for developed ones in the second sub-period.

It is arguable that some vital information can be lost by simply basing the analysis on two aggregated portfolios. To formalise the investigation and to take into account other potential influences, ordinary-least square (OLS) regression analyses are performed on each individual sample market. Such an approach provides more meaningful results for market selection decisions. The methodologies and results for this OLS regression analysis are presented in Appendix A1. Nevertheless, Bilson *et al.* (2002) assert that such an analysis on market-specific returns is often affected by noise induced by idiosyncratic factors. To overcome such a constraint, the study performs pooled regression analysis and it is used to test Hypothesis 3 and 4 whether political risk has a more significant impact on emerging markets than on

developed markets, and, whether political risk has a more significant impact on Pacific Basin emerging markets than on any other markets.

3.5.2 POOLED REGRESSION ANALYSIS

Pooled regression analysis is used to test Hypothesis 3 and 4 where the study assesses the impact of political risk on the aggregated stock market returns. To test Hypothesis 3, the study aggregates returns across markets to form three portfolios. These three portfolios contain samples of emerging markets, developed markets, and a combined markets grouping. The study then forms two further portfolios in order to test Hypothesis 4. These two portfolios include the sample of Pacific Basin emerging markets and all other emerging markets.

The study begins by testing a primary regression model, derived from the International Market Model (IMM), which firstly removes the global influence from the return series. According to Aggarwal, Inclan, and Leal (1999), this procedure needs to be carried out since most volatility shocks in emerging markets are due to local market events. Furthermore, Bilson *et al.*, 2002 assert that political risk is more likely to be a local influence and therefore have a greater impact on the local component of stock market returns. Thus, following Bilson *et al.*, 2002, the first regression model specification is as follows:

$R_t = a + b\ R_{wt} + r_t$ where [3.1]

R_t is the pooled monthly return across markets at time *t*;
R_{wt} is the monthly return on world index; and
r_t is the pooled residual local return at time *t*

Once the global influence is removed from the stock return series, the residual term (r_t) can be seen at this point as the pooled 'local stock returns'. This is consistent with the theory

underlying the IMM which assumes that the residual term (r_t) should contain only country-specific influences.

In order to rule out other possible influences on local returns, additional control variables such as exchange rate, dividend yield, and local return volatility are subsequently included into the regression model [3.1]. The choice of these three additional control variables is justified, as follows: According to Adler and Dumas (1983) and Dumas and Solnik (1995), exchange rate risk should be explicitly included in international asset pricing models. They assert that, within the setting of imperfect purchasing power parity (PPP), exchange rate risk could be an important factor in pricing local stock returns. This is due to the different level of pricing when stocks are measured in the same currency and are found to be different from the PPP theoretical values. Such differences pose the real risks to investors and, hence, exchange rate risk should be priced accordingly. Bailey and Chung (1995) also assert that exchange rate risk could be a significant price factors in emerging markets. Accordingly, Harvey (1995) finds that substantial exposures to exchange rate risk on equity returns are primarily negative, particularly for emerging markets. Partly, this is because the depreciation of domestic currency reduces the competitiveness of the country and therefore causes a negative effect on the domestic stock market (Ma and Kao, 1990).

For dividend yield, it is well established by studies such as Fama and French (1988), Kothari and Shanken (1992), and Hodrick (1992) that there is an association between equity returns and dividend yield for developed markets. As for emerging markets, Bekaert and Harvey (1995, 2000) document that dividend yield is one of the main causes of local equity market variation and that it can proxy for capital market liberalization. Harvey (1995) also asserts that the addition of local dividend yield helps to significantly improve the explanatory power of various models conduct on emerging markets. Moreover, Bilson *et al.* (2002) report that dividend yields are negatively related to equity returns. This is because dividend yield does not only forecast the future changes in dividend yield itself when expected returns vary through times but it also forecast the future returns. Hence, the contemporaneous dividend yield is positively related to future returns. However, the shock to expected returns is negatively related to current stock prices. Such evidence points to the need to include dividend yield as one of the control variables.

With regards to local return volatility, Bekaert and Harvey (1995) state that, in completely segmented markets, the expected local stock market returns would be a function of its covariances with local risk factors. However, since this is a cross-country study, it is indeed difficult to identify and capture all the local risk factors as these can vary greatly across markets. In such a case where the study examines stock market-wide returns, Bilson *et al*. (2002) suggest that the covariance between the individual assets and the local risk factors should be aggregated and the resulting variance terms could be proxied by the local return variance. As a result, stock market returns in the following regression model [3.2] are related to local volatility remaining after the risks from global influence, exchange rate, market size, and dividend yields are removed. Thus, the local return variance represents a residual control variable, which in this sense it proxies for omitted factors.

One further control variable in the model is related to the stock market development and the economic integration. Bekaert and Harvey (2000), for example, also control for this factor in their study which examines the impact of foreign speculators in emerging equity markets. The proxy that represents the stock market development is the ratio of stock market capitalization divided by nominal gross domestic product (GDP). This proxy for stock market development, or what other researchers refer to as the stock market size, is used extensively in cross-country studies such as those by Demirguc-Kunt and Levine (1995), Levine and Zervos (1996), Levine (2002), and Fush-Schüdeln and Funke (2003). One of the main reasons for including this control variable is attributable to the fact that the level of stock market development can differ considerably even within the emerging markets portfolio.

Furthermore, it should be noted that a lagged change in political risk variable is used herein this study. Erb *et al.* (1996) also employ such a lagged change in their study. However, their univariate regression analysis does not take into account other possible influences that might affect stock returns. It is asserted by Bilson *et al.* (2002) that the use of contemporaneous changes for exchange rate, dividend yield, and local volatility follows the assumption that these variables are available on a timely basis and have an immediate influence over the returns series. However, they argue that there are very limited empirical studies that support

such an assumption for a political risk variable. More importantly, they point out that political risk rating is futuristic in the sense that it is based on analysts' forecast on the political condition of the next period. This therefore leads to a lagged relationship between political risk rating and stock returns. For that reason, it is believed that the lagged change in political risk rating should be used accordingly.

The pooled regression model to be tested is therefore as follows:

$$r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t \qquad \text{where} \qquad [3.2]$$

r_t is the pooled residual returns from the world regression [3.1] at time *t*

FX_t is the pooled monthly percentage change in the exchange rate at time *t*

DY_t is the pooled monthly percentage change in the dividend yield at time *t*

σ_{rt}^2 is the pooled variance of monthly local market returns at time *t*[7]

SZ_t is the pooled monthly ratio of market capitalization divided by nominal GDP at time *t*

PR_{t-1} is the pooled monthly changes in political risk rating at time *t-1*

e_t is the residual of the pooled local stock returns at time *t*

One of the concerns with regression model [3.2] is the possible presence of multicollinearity. This is where the explanatory variables are highly correlated to each other. The aggregated average correlations across all markets for each local variable pair are presented in bracket as follow: political risk/dividend yield (0.005), political risk/local risk (0.009), political risk/size (0.161), exchange rate/dividend yield (0.008), exchange rate/political risk (0.004), exchange rate/local risk (0.012), dividend yield/local risk (0.014), size/exchange rate (0.166), size/dividend yield (0.175), and size/local risk (0.144). Given that all average correlations are close to zero, this indicates that multicollinearity should not be a concern for this model.

[7] Schwert (1989) asserts that the expected value of the absolute value of residual returns can be less than the standard deviation from a normal distribution. In such a case, the absolute residual returns have to be multiplied by the constant $\sqrt{(\pi/2)}$. Thus, following the suggestions of Schwert (1989, 1990) and Bilson *et al.* (2002) the variance of monthly returns is calculated by $|r_t| * \sqrt{(\pi/2)}$, which is the absolute value of r_t multiplies by the square root of $(\pi/2)$. Schwert (1989) then suggests that the obtained value (returns) from this calculation should be squared, which denotes here as $(x)^2$, in order to obtain the variance of monthly returns.

However, it is debatable that the differences in equity markets across the world do not necessarily result from only the political risk factor. There are a number of other country characteristics that can have a greater impact on the stock market as opposed to how political risk is in that country. These are, for example, economic and legal factors. Nonetheless, it is also very difficult to control for all these factors in a cross-sectional test. One of the ways to mitigate this problem is to correct for country fixed-effects in the pooled regression analysis. Bhattacharya, Daouk, and Welker (2003) suggest that by allowing each market to have a different intercept term in the regression analysis, this procedure allows for the likelihood that the stock returns are affected by country-specific factors that are not captured by the independent variables.

Furthermore, it is possible that political risk and stock markets returns are affected by a third variable which causes a spurious relationship between them. This is known as the endogeneity problem. It is suggested by Himmelberg, Hubbard, and Palia (1999) and Bhattacharya *et al.* (2003) that pooled regression analysis with fixed country effects can effectively help to eliminate such a problem causes by endogeneity. Hence, the method of correcting for country fixed-effects in the pooled regression analysis is applied in all regressions throughout this study.

Moreover, given that the Jarque-Bera test rejects the hypothesis of normality in stock returns for most of the sample markets and that the returns series also feature positive skewness, the issue of persistence in the returns series can be of a concern. Persistence occurs when the returns series are positively autocorrelated. Therefore, to address this issue, the Newey-West (1987) correction is applied in all regressions throughout the study. This procedure corrects for both autocorrelation as well as heteroskedasticity of an unknown form. Studies such as Bilson *et al.* (2002) assert that the use of this procedure yields similar effect and provides highly similar results to that of Cochrane-Orcutt method, which takes the first-difference on both sides of the regression equation in order to eliminate any nonstationary that causes persistence in returns series. Accordingly, the Newey-West (1987) method is applied in all regressions of this study to address this concern.

3.6 EMPIRICAL RESULTS

3.6.1 UNIVARIATE STATISTICAL RESULTS

Table 3.12 presents the evidence from testing Hypothesis 1. The results complement and are in the same direction as those of Diamonte *et al.* (1996) and Erb *et al.* (1996). In theory, risk averse investors should require higher returns for holding higher risk stocks in their portfolios. However, given that it is the contemporaneous returns in response to the contemporaneous changes in political risk rating, the results from Table 3.12 show that the upgrade portfolio is being rewarded by the market for a decline in political risk in that period while this is the opposite for the downgrade portfolio. A possible explanation for this is that, during such a period of political risk rating changes, investors may decide to sell out of these riskier markets since these markets are experiencing higher political uncertainty which can limit or hurt their investments. This selling leads the prices to drop in the downgrade portfolio and thus results in lower contemporaneous returns.

Table 3.12

Political risk and stock returns, semi-annually, January 1984-December 2007

The table presents the results from univariate statistical analysis. It shows semi-annually average returns and average political risk change, in percentage, as well as the t-statistics for the three portfolios of emerging and developed markets. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

	Emerging Markets			**Developed Markets**		
Portfolio	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**
1. Upgrade	1.52**	1.75	0.68	1.86***	4.19	0.32
2. Downgrade	-1.44**	-2.10	-0.61	1.12***	2.96	-0.31
3.Upgrade minus Downgrade	2.96***	2.67	1.29	0.74	1.27	0.63

Specifically, Table 3.12 shows that the average return on the upgrade portfolio exceeds that of the downgrade portfolio for both emerging and developed markets. For emerging markets, returns on the upgrade portfolio exceed those of the downgrade portfolio by almost 3 percent semi-annually. This difference is smaller in developed markets, where returns on the upgrade portfolio exceed those of downgrade portfolio by only 0.74 percent semi-annually. The upgrade minus downgrade portfolio (Portfolio 3) returns is strongly statistically significant in emerging markets but is insignificant in developed markets. This evidence suggests that changes in political risk clearly help to explain the cross-section of country returns in emerging markets but not for developed markets.

There is also evidence that emerging markets have double the average political risk change than developed markets. The difference in the average change in political risk is 1.29% for emerging markets versus 0.63% of developed markets. This shows that the degree of political risk change is larger in emerging markets than in developed ones. Based on this finding, the null Hypothesis 1 can therefore be rejected.

Consequently, such a difference in the degree of political risk change can help to explain the average semi-annually return in Portfolio 3 where emerging market returns (2.96%) are more sensitive than developed market returns (0.74%), to a given change in political risk. By calculating the average semi-annually return per unit of political risk change from Portfolio 3, the result for emerging markets (2.96% / 1.29% = 2.30%) is also greatly exceeding that of developed markets (0.74% / 0.63% = 1.18%).

Next, Table 3.13 presents the results from examining the differential impact of changes in political risk between emerging and developed markets. For this univariate analysis, the developed market portfolio return is being subtracted from the emerging market portfolio return for each set of portfolios in Table 3.12.

The findings indicate that for the set of upgrade (decreasing-risk) portfolios, the average returns of developed markets exceed those of emerging markets by 0.34 percent semi-

annually, although this difference is not statistically significant. For the set of downgrade (increasing-risk) portfolio, the average returns of emerging markets fall below those of developed markets by almost 3 percent semi-annually. This difference is statistically significant at 1% level.

Table 3.13
Comparative effects of changes in political risk on Emerging and Developed stock returns, semi-annually, January 1984 - December 2007

The table presents the differences in the semi-annually average returns between emerging and developed markets for the three portfolios and for the full sample period that ranges from January 1984 to December 2007. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

Portfolio	Difference in Average Returns (Emerging - Developed, %/semi-annually)	t-statistic
1. Upgrade	-0.34	-0.35
2. Downgrade	-2.56***	-3.27
3. Upgrade minus Downgrade	2.22*	1.70

The end result from Table 3.13 shows that the differential impact of political risk change between emerging and developed market stock returns is statistically significant. That is, the average return difference between Portfolio 3 of emerging markets and developed markets is 2.22 percent semi-annually, at 10% significance level. This implies that the effect of political risk change on the stock returns is greater for emerging markets than for developed ones.

Taken together, Table 3.12 and 3.13 suggest that the degree of political risk change is larger in emerging markets than in developed markets for the period of January 1984 to December 2007. More importantly, there is evidence suggesting that changes in political risk have a greater impact on the stock returns of emerging markets than on those of developed ones.

To test Hypothesis 2, it is necessary to investigate the impact of changes in political risk on both emerging and developed market returns in subsets of periods. The first sub-sample

period ranges from January 1984 to December 1995. This is the period examined by Diamonte *et al.* (1996) and Erb *et al.* (1996). The second sub-sample period then ranges from January 1996 to December 2007. The results for the first and second sub-sample period are presented in Table 3.14 and Table 3.15, respectively.

Table 3.14

Political risk and stock returns, Semi-annually, January 1984 – December 1995 (Sub-sample period 1)

The table presents the results from univariate statistical analysis for sub-sample period 1, which ranges from January 1984 to December 1995. It shows semi-annually average returns and average political risk change, in percentage, as well as the t-statistics for the three portfolios of emerging and developed markets. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

	Emerging Markets			**Developed Markets**		
Portfolio	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**
1. Upgrade	1.50	0.90	0.85	2.61***	3.51	0.34
2. Downgrade	-2.60***	-2.76	-0.71	1.26**	2.26	-0.34
3. Upgrade minus Downgrade	4.10**	2.14	1.56	1.35*	1.65	0.68

Table 3.14 illustrates that for the first sub-sample period, political risk clearly helps to explain the cross-section of country returns in emerging markets but only marginally helps to explain them in developed markets. Such findings are consistent with those of Diamonte *et al.* (1996) and Erb *et al.* (1996), whose sample periods range from the year 1985 to 1995.

Next, Table 3.15 presents the results from the second sub-sample period. The findings suggest that it is in this sub-sample period that political risk could only explain the cross-section of country returns in emerging markets but not in developed markets. Altogether, Table 3.14 and 3.15 shows that there is a decline in the semi-annually average change in

political risk for both emerging and developed markets. For emerging markets, the semi-annually average change in political risk drops from 1.56% in sub-sample period 1 to 1.04% in sub-sample period 2. For developed markets, there is a marginal drop from 0.68% in sub-sample period 1 to 0.58% in sub-sample period 2.

Table 3.15

Political Risk and stock returns, Semi-annually, January 1996 – December 2007 (Sub-sample period 2)

The table presents the results from univariate statistical analysis for sub-sample period 2 which ranges from January 1996 to December 2007. It shows semi-annually average returns and average political risk change, in percentage, as well as the t-statistics for the three portfolios of emerging and developed markets. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

	Emerging Markets			**Developed Markets**		
Portfolio	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**	**Average Returns (%/semi-annual)**	***t-Statistic***	**Average Change in Risk (%/semi-annual)**
1. Upgrade	1.54***	2.73	0.52	1.12**	2.45	0.30
2. Downgrade	-0.28	-0.30	-0.52	0.97**	1.88	-0.28
3. Upgrade minus Downgrade	1.82*	1.63	1.04	0.15	0.22	0.58

A global convergence in political risk as proposed by Diamonte *et al.* (1996) refers to when emerging markets become politically safer and developed markets become politically riskier. In other word, this is when political risk of emerging markets draws closer to that of developed markets and results in less difference in political risk between these two markets. Therefore, to test whether there is global convergence in political risk, the difference in the average change in political risk between emerging and developed markets portfolio in the first sub-sample period is compared to those of the second sub-sample period. The findings do suggest that that there is a smaller difference in the average change in political risk between emerging markets and developed markets portfolios when comparing between these two sub-sample periods.

Specifically, for sub-sample period 1, there is a 0.88% (1.56% - 0.68% = 0.88%) semi-annually difference in the average change of political risk between emerging and developed markets. For sub-sample period 2, this is a 0.46% (1.04% - 0.58% = 0.46%) semi-annually difference. This suggests that the difference in the average change of political risk between emerging and developed markets portfolios is becoming smaller and, thus, indicating a trend for global convergence in political risk. If this pattern persists, it is expected that there is going to be an even smaller difference in political risk between these two portfolios in the future. Given that there is a pattern of global convergence in political risk between emerging and developed markets portfolios subsequent to the year 1995 onward, the null Hypothesis 2 can therefore be rejected.

Lastly, the results from Table 3.14 and 3.15 show that the differential impact of political risk change on stock returns between emerging and developed markets is likewise becoming smaller when comparing between sub-period 1 (4.10% - 1.35% = 2.75%) and sub-period 2 (1.82% - 0.15% = 1.67%). This is not surprising as there is a smaller difference in the average change in political risk between these two markets.

Overall, this section provides univariate statistical analysis which quantifies the importance of political risk in emerging and developed markets. The findings provide useful preliminary results. However, to formalise the investigation and account for other potential influences, regression analysis is carried out in the next section.

3.6.2 POOLED REGRESSION RESULTS

The results from fitting the International Market Model (IMM) as in regression model [3.1] on the pooled returns of emerging, developed, and Pacific Basin markets are presented in Table 3.16. The results show that the coefficient on the world index is significant and positive for all market portfolios. Despite this, the ability of the IMM to explain returns variation in emerging (59%) and Pacific Basin (43%) markets are limited as opposed to developed markets (98%). This strongly suggests that other factors, such as local sources of risk, can help to explain return variation in emerging and Pacific Basin markets.

Table 3.16

The international market model for emerging markets

The table presents the regression results from estimating country fixed-effects pool regression model [3.1], the international market model, on emerging, developed, and Pacific Basin markets for the full sample period: January 1984 – December 2007. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.1]: $R_t = a + b\ R_{wt} + r_t$.

Market Portfolio	MSCI World Index	
	a_i	b_i (R_{wt})
Emerging	0.0007 (0.293)	0.5872 (8.23)***
Developed	-0.0058 (-1.26)	0.9898 (11.38)***
Pacific Basin	-0.0037 (-0.53)	0.4250 (6.15)***

3.6.2.1 EMERGING & DEVELOPED MARKETS

To examine whether changes in the political risk rating have an impact on emerging markets as well as developed markets as a whole, the study estimates pooled regression model [3.2][8]. The results from this country fixed-effects pooled regression analysis are presented in Table 3.17 and they suggest that when pooling the sample markets together the aggregating stock returns of emerging markets as well as developed markets are not statistically sensitive to changes in the political risk rating for both the full sample period (January 1984 – December 2007) and the two sub-sample periods (January 1984 – December 1995, and, January 1996 – December 2007). This implies that political risk is not a more important determinant of stock market returns in emerging markets than in developed ones for the full sample period as well as in each sub-sample period. This is despite the fact that the degree of political risk change is larger in emerging markets than in developed ones.

[8] Stationary tests are conducted before estimating the regression analysis. The results indicate that political risk variable is stationary for all of emerging and developed markets. Based on this stationary test, the problem of spurious regression result does not seem to be a problem in this study.

Table 3.17

Aggregate portfolio tests of the political risk model using pooled regression for emerging and developed markets

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on emerging and developed markets for the full sample period (January 1984 – December 2007), as well as sub-sample period 1 (January 1984 – December 1995) and sub-sample period 2 (January 1996 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Full sample period: January 1984 - December 2007							
Emerging	0.007 (2.22)**	-0.736 (-4.74)***	-0.0602 (-2.28)**	0.4363 (4.55)***	0.000 (1.37)	0.125 (1.05)	0.367
Developed	0.008 (3.72)***	-0.872 (-3.19)***	-0.309 (-3.39)***	0.907 (3.50)***	0.000 (0.68)	0.030 (0.28)	0.261
Sub-sample period 1: January 1984 – December 1995							
Emerging	0.003 (0.65)	-0.577 (-3.15)***	-0.036 (-1.68)*	0.403 (4.78)***	-0.000 (0.51)	0.261 (1.10)	0.381
Developed	0.009 (2.83)***	-0.818 (-3.37)***	-0.250 (-4.68)***	0.901 (3.81)***	-0.000 (-0.35)	0.028 (0.18)	0.238
Sub-sample period 2: January 1996 – December 2007							
Emerging	0.009 (2.72)***	-1.519 (-4.43)***	-0.108 (-3.29)***	0.570 (4.56)***	0.000 (0.93)	-0.055 (-0.73)	0.484
Developed	0.007 (2.58)**	-0.985 (-3.95)***	-0.413 (-2.72)**	0.933 (3.04)***	0.000 (1.41)	0.021 (0.15)	0.321

Hence, the pool regression results from Table 3.17 do not provide enough statistical evidence to reject the null Hypothesis 3 which states that political risk does not have a more significant impact on equity returns of emerging markets than on those of developed ones.

Notably, the result for emerging markets is not statistically significant in the first sub-sample period. This is not in line with those of prior studies such as Diamonte *et al.* (1996), Erb *et al.* (1996) and Bilson *et al.* (2001). There are a number of reasons that could help to explain such a result. Firstly, the markets that constitute emerging markets on the IFC index have changed since the time that the above three mentioned studies are conducted. Secondly, the results from both Diamonte *et al.* (1996) and Erb *et al.* (1996) are from univariate statistical analysis which does not account for any potential influence that could affect stock returns.Thirdly, unlike Bilson *et al.* (2002), the lagged change in political risk is being used herein instead of a contemporaneous one. This is because it is believed that there is a lagged relationship between political risk rating and stock returns since the rating is being assigned based on analysts' forecast of future political condition. Altogether, such a change in the composition of emerging markets and the methodologies employed are believed to cause such a deviation in the results from the previous literature.

Nonetheless, Table 3.17 shows that the control variables appear to be reasonable proxies for the local risk factors since the adjusted R^2 from the model is 37% for emerging markets and 26% for developed markets. Moreover, the coefficients on the exchange rate, dividend yield, and local volatility are all significant for both emerging markets and developed ones. The sign of the coefficients on the exchange rate is negative for both market portfolios. This is consistent with the argument of Harvey (1995) that there is a substantial negative exposure of foreign exchange risk on equity returns, particularly of emerging markets. Likewise, the coefficients on the dividend yield variable are negative as expected, which concurs with the argument by Bilson *et al.* (2002). The coefficients on local variance are also significant for both emerging and developed markets. This indicates that it is a sound proxy for omitted local risk sources. Next, the pooled results across both emerging and developed markets (the combined portfolio) are presented in Table 3.18.

Table 3.18

Aggregate portfolio tests of the political risk model using pooled regression for the combined sample markets

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on the combined sample markets for the full sample period (January 1984 – December 2007), as well as sub-sample period 1 (January 1984 – December 1995) and sub-sample period 2 (January 1996 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Full sample period: January 1984 - December 2007							
Combined Sample	0.009 (3.64)***	-0.748 (-4.67)***	-0.085 (-2.57)**	0.452 (9.51)***	0.000 (1.31)	0.1003 (1.07)	0.303
Sub-sample period 1: January 1984 – December 1995							
Combined Sample	0.0092 (2.61)***	-0.6004 (-4.80)***	-0.0555 (-1.80)*	0.422 (8.99)***	-0.000 (-0.56)	0.199 (1.05)	0.307
Sub-sample period 2: January 1996 – December 2007							
Combined Sample	0.009 (3.09)***	-1.365 (-4.65)***	-0.147 (-3.71)***	0.5613 (9.82)***	0.000 (0.87)	-0.015 (-0.21)	0.391

The findings from Table 3.18 indicate that the combined portfolio returns are also not statistically sensitive to political risk measures. This is not very surprising since Table 3.17 shows that the stock returns of both emerging and developed markets are not statistically sensitive to changes in the political risk rating.

3.6.2.2 PACIFIC BASIN MARKETS

The study then examines the Pacific Basin emerging markets portfolio in addition to the other 13 remaining emerging markets portfolio. The Pacific Basin portfolio consists of 6 markets which are Indonesia, Korea, Malaysia, Philippines, Taiwan, and Thailand. Table 3.19 presents the pooled regression results which suggest that, when pooling the Pacific Basin markets as well as the other 13 remaining emerging markets together, only the Pacific Basin portfolio is statistically sensitive to changes in political risk rating. This relationship between political risk and Pacific Basin portfolio returns is apparent for the full sample period (January 1984 – December 2007) and particularly during sub-sample periods 2 (January 1996 – December 2007). Given that the level of significant becomes much stronger for the second sub-sample period, the study finds that political risk is also an important determinant of Pacific Basin portfolio returns throughout the Asian Financial Crisis period when tests are conducted as part of the robustness checks. However, such a relationship between political risk and the other 13 emerging markets cannot be found[9]. These results suggest that the influence of political risk is greater in Pacific Basin markets than in other emerging or developed markets.

From Table 3.19, it is noticeable that the sign of the coefficient on the political risk variable is negative. This is a correct sign since a decrease in political risk index here means that the country becomes politically riskier. Therefore, according to the risk-return trade-off principle, one would expect a higher return from an increase in political risk. Contrarily, an increase in political risk index would therefore mean that the country is less risky. Given this, one would expect a decrease in stock returns for each increase in political risk index.

Based on the findings, the pooled approach provides enough statistical evidence to reject the null Hypothesis 4 and accept the alternative, which states that political risk is a more important determinant of stock market returns in Pacific Basin emerging markets than in other emerging and developed markets.

[9] The findings are presented in Appendix A2 presents further the findings on Pacific Basin emerging markets during the Asian Financial Crisis period.

Table 3.19

Aggregate portfolio tests of the political risk model using pooled regression for Pacific Basin and the other 13 remaining emerging markets

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on Pacific Basin and the other 13 emerging markets for the full sample period (January 1984 – December 2007), as well as sub-sample period 1 (January 1984 – December 1995) and sub-sample period 2 (January 1996 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_t)	λ (PR_{t-1})	Adj. R^2
Full sample period: January 1984 - December 2007							
Pacific Basin	0.005 (1.66)	-1.876 (-4.26)***	-0.162 (-3.21)***	0.557 (8.00)***	0.000 (1.50)	-0.158 (-1.75)*	0.562
Other 13 emerging markets	0.003 (0.16)	-0.602 (-3.79)***	-0.051 (-3.41)***	0.284 (7.76)***	0.024 (4.27)***	0.054 (0.97)	0.351
Sub-sample period 1: January 1984 – December 1995							
Pacific Basin	0.006 (1.61)	-2.014 (-7.90)***	-0.088 (-2.28)**	0.743 (9.26)***	0.000 (0.47)	0.018 (0.15)	0.382
Other 13 emerging markets	-0.005 (-1.54)	-0.536 (-4.05)***	-0.031 (-3.98)***	0.280 (10.61)***	0.029 (1.99)**	0.091 (0.90)	0.389
Sub-sample period 2: January 1996 – December 2007							
Pacific Basin	-0.001 (-0.08)	-1.813 (-2.53)**	-0.318 (-6.32)***	0.465 (8.63)***	0.000 (2.42)**	-0.367 (-2.68)***	0.727
Other 13 emerging markets	0.002 (0.70)	-1.379 (-6.27)***	-0.094 (-3.46)***	0.755 (5.88)***	0.020 (3.38)***	0.001 (0.01)	0.357

3.6.3 ROBUSTNESS TESTS

To ensure that the results from the preceding sections are robust, three robustness tests are carried out. Firstly, in section 3.6.3.1, the Asian Financial Crisis period is excluded from the sample period. Secondly, any extreme negative outliers in the stock market returns are controlled in section 3.6.3.2. Lastly, an alternative proxy for market size is tested in section 3.6.3.3.

3.6.3.1 THE ASIAN FINANCIAL CRISIS

In this section, we control for the possible effect from the Asian Financial Crisis. The period of Asian Financial Crisis is defined as July 1997 to December 1999[10]. This period is being excluded from the sample for the purpose of ruling out any influences that the crisis might have on the stock returns.

3.6.3.1.1 EMERGING & DEVELOPED MARKETS

The results from estimating country fixed-effects pooled regression model [3.2] on emerging, developed, and the combined sample markets are presented in Table 3.20. The findings show that the main results presented in Table 3.17 and 3.18 are robust to the exclusion of the Asian Financial Crisis period. That is, the aggregating stock returns of emerging, developed, and the combined sample markets are not statistically sensitive to changes in political risk rating. Such results support the decision to reject null Hypothesis 3 as there is not enough statistical evidence that political risk is a more important determinant of stock market returns in emerging markets than in developed markets.

[10] This follows a number of studies that specifically examine the impact of Asian Financial Crisis on stock markets. See, for example, Burnside, Eichenbaum, and Rabelo (2001), Mitton (2002), and Lemmon and Lins (2003).

Table 3.20

Aggregate portfolio tests of the political risk model using pooled regression for emerging, developed, and the combined sample markets (Excluding the Asian Financial Crisis Period)

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on emerging, developed, and the combined sample markets. The sample period excludes the Asian Financial Crisis period and thus ranges from January 1984 - June 1996 and January 2000 - December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_t)	λ (PR_{t-1})	Adj. R^2
Sample period: January 1984 – June 1996 and January 2000 – December 2007							
Emerging	0.008 (3.88)***	-0.616 (-5.63)***	-0.058 (-2.17)**	0.290 (8.38)***	0.000 (1.10)	0.025 (0.38)	0.341
Developed	0.009 (3.84)***	-0.874 (-2.42)**	-0.287 (-6.60)***	0.895 (4.13)***	0.000 (0.26)	0.059 (0.54)	0.251
Combined Sample	0.010 (4.59)***	-0.634 (-4.25)***	-0.078 (-2.41)**	0.297 (8.21)***	0.000 (0.34)	0.012 (0.20)	0.296

3.6.3.1.2 PACIFIC BASIN MARKETS

The study then examines whether the results of the Pacific Basin emerging markets and the other 13 remaining emerging markets are robust to the exclusion of the Asian Financial Crisis period. The results are presented in Table 3.21.

Table 3.21

Aggregate portfolio tests of the political risk model using pooled regression for Pacific Basin markets, the other 13 remaining Emerging markets, and Developed markets (Excluding the Asian Financial Crisis Period)

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on Pacific Basin markets, the other 13 remaining emerging markets, and developed markets. The sample period excludes the Asian Financial Crisis period and thus ranges from January 1984 - June 1996 and January 2000 - December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Sample period: January 1984 – June 1996 and January 2000 – December 2007							
Pacific Basin	0.005 (1.83)*	-2.276 (-7.04)***	-0.123 (-2.98)***	0.725 (9.99)***	0.000 (1.45)	-0.129 (-1.74)*	0.434
Other 13 emerging markets	0.002 (0.69)	-0.590 (-2.95)**	-0.045 (-7.94)***	0.282 (6.40)***	0.023 (4.02)***	0.059 (0.85)	0.359

Table 3.21 shows that the results for Pacific Basin markets and the other 13 remaining emerging markets presented in Table 3.19 are robust to the exclusion of the Asian Financial Crisis period. The findings indicate that only the Pacific Basin emerging markets portfolio is statistically sensitive to changes in political risk rating. Such results therefore support the decision to reject null Hypothesis 4 and accept the alternative, which states that political risk is a more important determinant of stock market returns in Pacific Basin emerging markets than in other emerging and developed markets.

3.6.3.2 EXTREME OUTLIERS

Since this is a cross-country study with a widespread sample period, it is arguable that there may be other country-specific crisis or events that might cause shocks to each individual stock market. Hence, to control for the influence of any negative extreme outliers in the stock returns, an additional control variable is added into regression model [3.2]. This is a dummy variable which captures the stock returns that fall below three standard deviations from the means. Regression model [3.2] is therefore augmented in the following manner:

$$r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + \rho OUT_t + e_t \qquad \text{where} \quad [3.3]$$

OUT_t is the pooled outliers dummy variable where OUT = 1 if the residual returns (local returns) are above negative three standard deviations at time *t;* OUT = 0 otherwise

3.6.3.2.1 EMERGING & DEVELOPED MARKETS

Table 3.22 presents the results from estimating the country fixed-effects pooled regression model [3.3] on emerging, developed, and the combined sample markets. The findings illustrate that the results are robust to the control of negative extreme outliers in the local returns since they are qualitatively similar to the results presented in Table 3.17 and 3.18. That is, the aggregating stock returns of the three portfolios are not statistically sensitive to changes in political risk rating. This therefore supports the decision to reject null Hypothesis 3 as political risk is not a more important determinant of stock market returns in emerging markets than in developed markets.

Table 3.22

Aggregate portfolio tests of the political risk model using pooled regression for emerging, developed, and the combined sample markets (Controlling for extreme outliers)

The table presents the results from estimating country fixed-effects pooled regression model [3.3] on emerging, developed, and the combined sample markets. The sample period ranges from January 1984 – December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.3]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + \rho OUT_t + e_t$.

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_t)	λ (PR_{t-1})	ρ (OUT_t)	Adj. R^2
Full sample period: January 1984 - December 2007								
Emerging	-0.309 (-3.65)***	-0.577 (-7.74)***	-0.055 (-2.58)**	0.505 (8.96)***	0.000 (1.41)	0.058 (0.74)	0.319 (4.05)***	0.469
Developed	-0.178 (-6.46)***	-0.754 (-3.93)**	-0.253 (-7.76)***	1.226 (7.50)***	0.000 (0.99)	0.025 (0.26)	0.188 (6.53)***	0.372
Combined Sample	-0.229 (-6.28)***	-0.629 (-4.21)***	-0.075 (-2.74)**	0.515 (8.81)***	0.000 (1.36)	0.047 (0.71)	0.242 (6.90)***	0.408
Sub-sample period 1: January 1984 – December 1995								
Emerging	-0.412 (-3.08)***	-0.401 (-6.29)***	-0.035 (-1.98)**	0.471 (9.35)***	-0.000 (-0.57)	0.158 (0.99)	0.419 (5.19)***	0.518
Developed	-0.204 (-3.55)***	-0.655 (-4.09)***	-0.207 (-5.31)***	1.211 (6.51)***	-0.000 (-0.13)	0.060 (0.45)	0.215 (3.53)***	0.374
Combined Sample	-0.264 (-5.82)***	-0.479 (-4.94)***	-0.051 (-1.99)**	0.476 (9.08)***	-0.000 (-0.52)	0.127 (1.02)	0.278 (4.09)***	0.429
Sub-sample period 2: January 1996 – December 2007								
Emerging	-0.199 (-5.95)***	-1.296 (-5.67)***	-0.097 (-3.38)***	0.687 (7.84)***	0.000 (1.01)	-0.065 (-0.90)	0.210 (6.40)***	0.538
Developed	-0.144 (-4.70)***	-0.915 (-3.03)***	-0.343 (-2.86)**	1.347 (5.15)***	0.000 (1.58)	0.002 (0.02)	0.152 (5.02)***	0.389
Combined Sample	-0.182 (-6.42)***	-1.197 (-4.31)***	-0.127 (-3.75)***	0.688 (9.17)***	0.000 (0.95)	-0.034 (-0.50)	0.193 (6.27)***	0.466

3.6.3.2.2 PACIFIC BASIN MARKETS

Similarly, the study tests whether the results of the Pacific Basin markets and the other 13 remaining emerging markets could be driven by any negative extreme outliers in the local returns. The results are presented in Table 3.23.

Table 3.23

Aggregate portfolio tests of the political risk model using pooled regression for Pacific Basin markets and the other 13 remaining emerging markets

(Controlling for extreme outliers)

The table presents the results from estimating country fixed-effects pooled regression model [3.3] on Pacific Basin markets and the other 13 remaining emerging markets. The sample period ranges from January 1984 – December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.3]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + \rho OUT_t + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**ρ (OUT_t)**	**Adj. R^2**
Full sample period: January 1984 - December 2007								
Pacific Basin	-0.225 (-3.51)***	-1.485 (-2.02)**	-0.138 (-3.15)***	0.631 (6.98)***	0.000 (1.75)*	-0.220 (-2.09)**	0.231 (4.91)***	0.619
Other 13 emerging markets	-0.293 (-4.03)***	-0.514 (-5.82)***	-0.048 (-9.30)***	0.392 (5.11)***	0.020 (3.60)***	0.056 (1.05)	0.297 (3.61)***	0.416
Sub-sample period 1: January 1984 – December 1995								
Pacific Basin	-0.373 (-2.19)**	-1.436 (-4.73)***	-0.068 (-2.27)**	1.166 (8.88)***	0.000 (0.64)	0.075 (0.55)	0.379 (3.37)***	0.454
Other 13 emerging markets	-0.379 (-3.26)***	-0.414 (-6.95)***	-0.032 (-4.20)***	0.392 (7.92)***	0.012 (0.82)	0.102 (1.05)	0.378 (3.46)***	0.468

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_t)	λ (PR_{t-1})	ρ (OUT_t)	Adj. R^2
Sub-sample period 2: January 1996 – December 2007								
Pacific Basin	-0.144 (-5.36)***	-1.572 (-3.24)***	-0.286 (-6.52)***	0.535 (8.10)***	0.000 (2.39)**	-0.464 (-3.32)***	0.146 (5.66)***	0.748
Other 13 emerging markets	-0.205 (-7.62)***	-1.242 (3.79)***	-0.085 (-2.84)**	0.961 (5.70)***	0.019 (3.45)***	0.014 (0.27)	0.207 (3.20)***	0.424

Table 3.23 illustrates that the results presented in Table 3.19 are robust to the control of negative extreme outliers in the local returns. That is, only the Pacific Basin emerging markets portfolio is statistically sensitive to changes in political risk rating. This relationship is particularly apparent for the full sample period and, especially, during sub-sample period 2 (January 1996 – December 2007). Consequently, such a finding supports the decision to reject the null Hypothesis 4 and accept the alternative as political risk is a more important determinant of stock market returns in Pacific Basin emerging markets than in other emerging and developed markets.

3.6.3.3 ALTERNATIVE PROXY FOR MARKET SIZE

To ensure that the results are not specific to the choice of proxy, the size of trade measured as export plus import in relation to GDP is employed herein as an alternative proxy for market size instead of market capitalization in relation to GDP.

3.6.3.3.1 EMERGING & DEVELOPED MARKETS

Table 3.24 presents the results of this change in proxy for market size for emerging, developed, and the combined sample markets portfolios.

Table 3.24

Aggregating portfolio tests of the political risk model using pooled regression for emerging, developed, and the combined sample markets with size of trade as an alternative proxy for market size

The table presents the results from estimating pooled regression model [3.2] on emerging, developed, and the combined sample markets for the full sample period (January 1984 – December 2007), sub-sample period 1 (January 1984 – December 1995), and sub-sample period 2 (January 1996 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ_Rbt_t denotes market size which is the size of trade measured as the ratio of export and import in relation to GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ\_Rbt_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_Rbt_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Full sample period: January 1984 - December 2007							
Emerging	0.016 (5.54)***	-0.659 (-5.55)***	-0.071 (-2.26)**	0.304 (4.13)***	-0.166 (-3.12)***	0.027 (0.51)	0.356
Developed	0.005 (0.99)	-0.872 (-3.23)***	-0.309 (-3.39)***	0.909 (4.52)***	0.046 (0.86)	0.029 (0.27)	0.261
Combined Sample	0.014 (4.05)***	-0.676 (-4.22)***	-0.092 (-2.52)**	0.310 (7.97)***	-0.059 (-1.25)	0.034 (0.66)	0.307
Sub-sample period 1: January 1984 – December 1995							
Emerging	0.012 (2.41)**	-0.547 (-5.99)***	-0.040 (-1.53)	0.289 (8.48)***	-0.2175 (-1.83)*	0.113 (1.13)	0.367
Developed	0.007 (0.91)	-0.818 (-4.38)***	-0.250 (-4.68)***	0.902 (3.81)***	0.017 (0.17)	0.029 (0.18)	0.234
Combined Sample	0.003 (0.48)	-0.568 (-3.49)***	-0.059 (-1.73)*	0.294 (8.40)***	0.084 (0.72)	0.099 (1.05)	0.324

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_Rbt_t)	λ (PR_{t-1})	Adj. R^2
Sub-sample period 2: January 1996 – December 2007							
Emerging	0.017 (4.76)***	-1.506 (-5.39)***	-0.130 (4.76)***	-1.506 (-6.39)***	-0.135 (-2.59)***	-0.073 (-1.46)	0.472
Developed	0.003 (0.37)	-0.984 (-3.93)***	-0.413 (-2.75)**	0.939 (3.04)***	0.067 (0.94)	0.021 (0.15)	0.311
Combined Sample	0.016 (4.22)***	-1.367 (-4.64)***	-0.163 (-3.79)***	0.561 (9.85)***	-0.094 (-2.38)**	-0.043 (-0.90)	0.389

Table 3.24 illustrates that, despite the change in proxy for market size, emerging, developed, and the combined sample markets returns remain statistically insensitive to changes in political risk for both the full sample period (January 1984 – December 2007) and the two sub-sample periods (January 1984 – December 1995, and, January 1996 – December 2007). Again, such results robustly support the decision to reject the null Hypothesis 3 as political risk is not a more important determinant of stock market returns in emerging markets than in developed markets for the full sample period as well as in each sub-sample period.

3.6.3.3.2 PACIFIC BASIN MARKETS

The study then examines whether the results for the Pacific Basin markets and the other 13 remaining emerging markets would remain robust with such a change in proxy for market size. The findings are presented in Table 3.25 and they suggest that the results presented in Table 3.19 are strongly robust since only the Pacific Basin emerging markets portfolio is statistically sensitive to changes in political risk rating. Political risk is therefore a more important determinant of stock market returns for Pacific Basin emerging markets than for other emerging and developed markets regardless of the change in proxy for market size. This strongly supports the decision to reject the null Hypothesis 4 and accept the alternative.

Table 3.25

Aggregating portfolio tests of the political risk model using pooled regression for Pacific Basin markets and the other 13 remaining emerging markets with size of trade as an alternative proxy for market size

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on Pacific Basin markets and the other 13 remaining emerging markets for the full sample period (January 1984 – December 2007), sub-sample period 1 (January 1984 – December 1995), and sub-sample period 2 (January 1996 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ_Rbt_t denotes market size which is the size of trade measured as the ratio of export and import in relation to GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ\_Rbt_t + \lambda PR_{t-1} + e_t$.

Markets	α	β (FX_t)	θ (DY_t)	γ ($local_t$)	δ (SZ_Rbt_t)	λ (PR_{t-1})	Adj. R^2
Full sample period: January 1984 - December 2007							
Pacific Basin	0.017 (2.94)***	-1.856 (-3.24)***	-0.163 (-3.24)***	0.514 (7.23)***	-0.080 (-1.91)*	-0.175 (-1.79)*	0.562
Other 13 emerging markets	0.002 (0.53)	-0.607 (-4.70)***	-0.052 (-1.98)**	0.284 (8.45)***	0.154 (1.76)*	0.051 (0.90)	0.349
Sub-sample period 1: January 1984 – December 1995							
Pacific Basin	0.003 (0.19)	-2.132 (-4.00)***	-0.087 (-2.25)**	0.734 (4.10)***	0.053 (0.30)	0.087 (0.61)	0.305
Other 13 emerging markets	-0.005 (-0.84)	-0.541 (-4.97)***	-0.031 (-1.29)	0.279 (8.53)***	0.153 (0.82)	0.089 (0.76)	0.388
Sub-sample period 2: January 1996 – December 2007							
Pacific Basin	0.018 (2.84)***	-1.785 (-2.19)**	-0.3188 (-6.29)***	0.469 (8.28)***	-0.073 (-2.08)**	-0.423 (-2.96)***	0.726
Other 13 emerging markets	-0.004 (-0.81)	-1.388 (-4.16)***	-0.094 (-3.03)***	0.759 (4.69)***	0.372 (2.77)***	0.002 (0.04)	0.357

Overall, this section shows that the results of the aggregate portfolio are robust to the control of Asian Financial Crisis, extreme negative outliers, and to the change in proxy for market size. These results are qualitatively similarly to the results presented in Table 3.17, 3.18, and 3.19. Moreover, when comparing the adjusted R^2, Akaike info criterion, and Schwarz criterion between the models, the original model that uses market capitalisation in relation to GDP as a proxy for market size has a much higher adjusted R^2 and smaller Akaike and Schwarz criterion than the model which uses the size of trade as an alternative proxy for market size. This indicates that the former model is superior in fitting the data than the latter model. Consequently, the original model provides satisfactory in terms of the ability of the chosen explanatory variables in explaining the stock returns and, hence, the reliability of its results.

3.6.4 ADDITIONAL FINDINGS

Since there are major financially- and politically-related events occurring at some point in time during the sample period, it is worth examining as a plausibility check whether political risk is an important determinant of stock returns when such an event is examined independently. Two additional analyses are carried out. The first set of analysis on specific sample periods is presented in section 3.6.4.1. The second set of analysis on specific sample markets is then presents in section 3.6.4.2.

3.6.4.1 SPECIFIC SAMPLE PERIOD

There are two specific time periods to be examined herein. These periods are: (1) Asian Financial Crisis; (2) September 11, 2001 (9/11 Terrorism Attack). These are to some extent politically-related events and it is therefore of interest to observe whether the changes in political risk during these specific time periods would have any significant impact on stock market returns.

3.6.4.1.1 ASIAN FINANCIAL CRISIS

First of all, the study examines the Asian Financial Crisis period which ranges from July 1997 to December 1999. Prior studies such as Pempel (1999), Haggard (2000), Robison, Beeson, Jayasuriya, and Kim (2000), and MacIntyre (2001) consistently establish that the Asian Financial Crisis brings about political interferences in the financial sector. That is, there is government intervention on financial industry policy. MacIntyre (2001) asserts that, particularly during the time of crisis, investors require stability and control over economic and financial policies. The government's manner in handling these issues could therefore have an effect on investors' confidence and their investments accordingly. For example, MacIntyre (2001) finds that investors' confidence in Thailand dampens down after a collapse in the political situation at the onset of the crisis, which is when the Finance Minister, Dr. Thanong Bidaya, resigns from his position. To make the situation even worse, General Chavalit Yonchaiyudh also later resigns from the Prime Minister position. Therefore, it is of interest to examine whether the increase in political uncertainty and the risk associated with it during the Asian Financial Crisis period would have any significant influence on the stock returns of the Asian emerging markets, in particular.

In order to test whether the Asian emerging stock markets are sensitive to political risk change, particularly during the Asian Financial Crisis period, an Asian emerging market portfolio is being formed. There are 8 Asian markets in the sample study. These consist of India, Indonesia, South Korea, Malaysia, Philippines, Sri Lanka, Taiwan, and Thailand. A country fixed-effects pooled regression model [3.2] is estimated on this markets portfolio and the findings are presented in Table 3.26.

Table 3.26 shows that the Asian emerging markets portfolio is not statistically sensitive to changes in political risk during the full sample period (January 1984 – December 2007) and sub-sample period 1 (January 1984 – December 1995). However, this portfolio is statistically sensitive to changes in political risk during sub-sample period 2 (January 1996 – December 2007) and particularly during the period of the Asian Financial Crisis (July 1997 – December 2000). Such a finding therefore contributes to the argument by MacIntyre (2001) that political

interferences and the risk associated with it have an impact on investors' confidence and their investment decisions.

Table 3.26

Aggregate portfolio tests of the political risk model using regression for Asian emerging markets

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on Asian emerging markets for the full sample period (January 1984 – December 2007), sub-sample period 1 (January 1984 – December 1995), sub-sample period 2 (January 1996 – December 2007), and Asian Financial Crisis period (July 1997 – December 1999). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Full sample period: January 1984 - December 2007							
Asian emerging	0.009 (4.04)***	-1.798 (-2.36)**	-0.150 (-4.56)***	0.444 (9.87)***	0.000 (1.48)	-0.085 (-1.34)	0.531
Sub-sample period 1: January 1984 – December 1995							
Asian emerging	0.011 (3.79)***	-1.599 (-2.23)**	-0.116 (-2.44)**	0.432 (9.18)***	-0.000 (-0.01)	-0.002 (-0.02)	0.459
Sub-sample period 2: January 1996 – December 2007							
Asian emerging	0.002 (0.59)	-1.880 (-3.25)***	-0.176 (-4.98)***	0.496 (7.49)***	0.000 (2.84)***	-0.189 (-2.04)**	0.610
Asian Financial Crisis period: July 1997 – December 1999							
Asian emerging	-0.021 (-2.28)**	-1.747 (-3.22)***	-0.279 (-5.20)***	0.490 (9.16)***	0.001 (1.91)*	-0.373 (-2.23)**	0.740

3.6.4.1.2 SEPTEMBER 11, 2001 (9/11 TERRORISM ATTACK)

It is widely believed that the 9/11 Terrorism Attack heightens both political and financial uncertainty. That is, it caused disruption to equity trading and affected the stock market returns in the months following the attack. Prior studies such as Karolyi (2006) and Karolyi and Martell (2006) particularly find that there is a negative stock price reaction in the US after the 9/11 event. It is therefore of interest to investigate whether the changes in political risk rating particularly during such a terrorist attack period would have any significant impact on the aggregated stock returns of emerging and developed markets. The period to be investigated ranges from the start of the 9/11 event toward the end of sampling period (September 2001 – December 2007). The results are presented in Table 3.27.

Table 3.27

Aggregate portfolio tests of the political risk model using pooled regression for the 9/11 Terrorism Attack period

The table presents the results from estimating country fixed-effects pooled regression model [3.2] on emerging, developed, and the combined sample markets for the period that ranges from the 9/11 Terrorism Attack to the end of sampling period (September 2001 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [3.2]: $r_{t=} \alpha_{+} \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + e_t$.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
9/11 Terrorism Attack: September 2001 – December 2007							
Emerging	0.013 (3.50)***	-1.278 (-3.25)***	-0.079 (-2.83)**	0.871 (4.22)***	0.000 (1.65)*	-0.179 (-1.91)*	0.367
Developed	0.010 (2.75)**	-0.926 (-9.77)***	-0.427 (-9.39)***	1.658 (2.61)***	0.000 (2.07)**	-0.071 (-0.43)	0.332
Combined Sample	0.013 (3.27)***	-1.183 (-4.36)***	-0.102 (-2.92)**	0.861 (4.80)***	0.000 (1.64)*	-0.166 (-2.04)**	0.305

The results from estimating country fixed-effects pooled regression model [3.2] on emerging, developed, and the combined sample markets portfolio show that emerging and the combined sample markets portfolios are sensitive to changes in political risk after the 9/11Terrorism Attack. However, such an impact could not be found on developed markets. The result of the combined market portfolio is clearly being driven by emerging markets portfolio. The findings from Table 3.27 thus suggest that political risk change during and after the 9/11 event period is a more important determinant of stock returns of emerging markets than those of developed ones.

The fact that the stock returns of emerging markets become significant to changes in political risk after the 9/11 event indicates that investors in emerging markets raise their political risk awareness and pay more attention to the changes in such a risk after this event. Thus, they would require more returns if they perceived that they are facing higher political risk. However, studies such as Hon, Strauss, and Yong (2003), Chen and Siembs (2004), and Chesney, Reshetar, and Karaman (2011) argue that such a finding can also be attributable to the market comovement after shocks since they consistently find that both short- and long-term relationships between the US and global stock returns increase tremendously after the 9/11 event. Specifically, Hon *et al.* (2003) stress that the shock from 9/11 event causes global stock prices to move closely with the US stock prices.

Therefore, to test whether emerging markets are indeed tracking the movement of the US stock market in response to changes in political risk, an additional variable is augmented into the pooled regression model [3.2]. This variable is the pooled US stock market returns:

$$r_t = \alpha + \beta FX_t + \theta DY_t + \gamma \sigma_{rt}^2 + \delta SZ_t + \lambda PR_{t-1} + \sigma US_t + e_t \qquad \text{where} \quad [3.4]$$

US_t is the pooled US stock market returns at time *t*

In a sense, this additional variable is designed to rule out any possible influence from the US stock market. The results from estimating the country fixed-effects pooled regression model [3.4] on emerging, developed (excluding the US market), and the combined sample markets

are presented in Table 3.28. For developed markets portfolio, its returns remain statistically insensitive to changes in political risk regardless of this additional control variable. However, in the case of emerging and the combined sample markets portfolios, the coefficient of the political risk rating variable loses its statistical significance while that of US stock return is found to be strongly significance. These results suggest that the findings in Table 3.27 for emerging and the combined sample markets portfolios are clearly driven by the movement of US stock market returns in response to changes in political risk from the period subsequent to the 9/11 Terrorism Attack. Such a finding thus contribute to the arguments put forward by Hon *et al.* (2003) that the 9/11 event causes the global stock price to move closely with the US stock price.

Table 3.28

Aggregate portfolio tests of the political risk model using pooled regression with US stock market returns as an additional control variable

The table presents the results from estimating country fixed-effects pooled regression model [3.4] on emerging, developed, and the combined sample markets for three different sample period: (1) 9/11 Terrorism Attack to the end of sampling period (September 2001 – December 2007); (2) 9/11 Terrorism Attack to the beginning of Iraq War (September 2001 – March 2003); and (3) the beginning of Iraq War to the end of sampling period (March 2003 – December 2007). FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. US is the US stock market returns. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**σ (US_t)**	**Adj. R^2**
9/11 Terrorism Attack: September 2001 – December 2007								
Emerging	0.0105 (3.88)***	-1.204 (-3.29)***	-0.067 (-2.69)***	0.824 (4.18)***	0.000 (1.49)	-0.125 (-1.40)	0.650 (8.23)***	0.433
Developed	0.005 (1.75)*	-0.845 (-11.40)***	-0.215 (-6.55)***	1.935 (3.02)***	0.000 (0.83)	0.042 (0.34)	0.820 (5.79)***	0.495
Combined Sample	0.010 (3.83)***	-1.113 (-4.44)***	-0.073 (-2.77)**	0.839 (4.97)***	0.000 (0.89)	-0.097 (-1.19)	0.787 (6.45)***	0.429

The results from this sub-section therefore provide some evidence to support the findings of both Perotti and Van Oijen (2001) and Bilson *et al.* (2002) that political risk is to some extent related to levels of capital market integration. In such a case, political risk variable could possibly become a proxy measure of integration. However, a more formal testing needs to be carried out before drawing any conclusion on this matter.

3.6.5 SUMMARY OF RESULTS

Four hypotheses are developed to fulfil the research purposes of this study. Three null hypotheses are rejected and one is accepted. Hypothesis 1 and 2 are tested by using univariate statistical analysis wherein the findings indicate that the magnitude of political risk change is larger in emerging markets than in developed ones. Null Hypothesis 1 is therefore rejected based on this evidence. In the same vein, null Hypothesis 2 is also rejected since there is evidence of global convergence in political risk between emerging and developed markets after the year 1995. These two findings are consistent with those found by prior studies such as Diamonte *et al.* (1996) and Erb *et al*. (1996) for an earlier period.

Hypothesis 3 and 4 are tested by using the fixed-effects pooled regression analysis. It is found that political risk is not a more important determinant of stock market returns in emerging markets than in developed markets for the period ranging from1984 to 2007. Therefore, null hypothesis 3 cannot be rejected. Such a result is different to what is found earlier by Cosset and Suret (1995), Diamonte *et al.* (1996), and Bilson *et al.* (2002) whose studies are conducted up to mid 1990s. This may not be very surprising given the fact that there is some indicative evidence of global convergence, or a smaller difference, in political risk between emerging and developed markets after the year 1995.

Furthermore, null hypothesis 4 is rejected given that political risk has a more significant impact on the stock returns of Pacific Basin emerging markets than other emerging and developed markets. Such a result is found to be significant for the whole sampling period and it is most apparent during sub-sample period 2 which includes the Asian Financial Crisis

period. This suggests that Pacific Basin emerging markets are more responsive to political risk than any other sample markets in this study.

In addition, when the Asian emerging markets are examined exclusively, the results show that political risk is an important determinant of Asian emerging stock markets returns during sub-sample period 2 (January 1996 – December 2007) and particularly during the Asian Financial Crisis period. The findings thus suggest that it is the Asian emerging markets portfolio and the Pacific Basin emerging markets portfolio that are particularly sensitive to the increase in political uncertainty and the risk associated with it during the Asian Financial Crisis period.

A possible explanation is that investors place their confidence on the governments' ability to handle the countries' economic difficulties. Particularly during the time of crisis, investors are concerned over the government's economic policies and the corresponding outcomes of these policies on the financial sectors. Political uncertainty and other political risk factors that might affect the governments' abilities to implement these policies according to plan can therefore affect investors' confidence and their investment decisions. Hence, an increase in the level of political risk during such a crisis period lead investors to require higher returns in compensation for bearing such a higher risk. Given that political risk is a systematic risk, investors therefore need to be prepared to manage such a risk when investing in these respective markets, especially during the time of crisis. Moreover, such results contribute to the argument by Bekaert, Harvey, and Lumsdaine (2002) that there is an improved price setting processes which, in this case, specific risks such as political risk is priced for Asian emerging markets, particularly after mid 1990s.

The results from robustness tests largely confirm the above findings with only a few minor discrepancies. However, by comparing the adjusted R^2 and other statistical criterions between the original model and the one uses in robustness test, the former is superior in fitting the data than the latter. Therefore, the original model proves satisfactory in terms of the ability of the chosen explanatory variables in explaining the stock returns and, hence, the reliability of its results.

It should be pointed out that there are several reasons as to why some of the findings in this study are not in agreement with those of the prior studies of Diamonte *et al.* (1996), Erb *et al.* (1996), and Bilson *et al.* (2002). Firstly, there are changes to the markets that constitute emerging and developed markets on the IFC and MSCI index, respectively, since the time that prior studies are conducted. Secondly, the sample size increases from 35 to 42 sample markets. Thirdly, there is a ten years extension to the sampling period. Fourthly, the results from both Diamonte *et al.* (1996) and Erb *et al.* (1996) are from univariate statistical analysis which does not account for any potential influence that could affect stock returns. Fifthly, an additional control variable that controls for market size is added into the regression models. Lastly, since it is believed that there is a lagged relationship between political risk rating and stock returns given that the rating is being assigned based on analysts' forecast of future political condition, a lagged change in political risk variable is used instead of a contemporaneous one. These factors need to be taken into account when comparing the results of this study to those of prior ones.

In terms of contribution, this study helps to expand on the current literature by comprehensively examine specific time periods and specific groupings of markets. In particular, the results indicate that emerging markets are sensitive to changes in political risk subsequent to the 9/11 Terrorism Attack. An explanation for such a finding is found when the US stock market returns are added into the pooled regression model as an additional control variable. As a result of this, emerging markets lose their statistical significances to changes in political risk. This suggests that emerging market returns are driven, to a certain extent, by US stock market returns. Such a finding contributes to the argument by Hon *et al*. (2003), Chen and Siembs (2004), Karolyi (2006), and Chesney *et al*. (2011) that there is market comovement after shocks and both short- and long-term relationships between US and global stock returns increase significantly after the 9/11 event. The findings from this study thus highlight that there is a flow of political risk particularly from the shock of the 9/11 event from the US market to emerging markets. More importantly, it provides evidence that political risk may to some extent be responsible for such market comovement between emerging stock markets and the US stock market.

Lastly, despite the fact that pooled regression analysis allows us to see the effect of political risk on emerging and developed markets as a whole, there is also drawback for such an approach. That is, significant information or the effects of political risk on an individual market can be overlooked by drawing conclusions solely from the results of pooled sample markets[11]. Moreover, it is important to point out that the results from the aggregated sample can be misleading as the stock markets that constitute emerging and developed markets, based on the IFC and MSCI index, do change periodically. Hence, this points out the necessity to conduct country-level analysis; and, how the results from the country-level analysis should be looked at in conjunction with the results from the pooled regression analysis.

3.7 CONCLUSION

Studies such as Driessen and Laeven (2007) assert that the benefits from international portfolio diversification are largest for countries with high country risk. Since it is found that the magnitude of political risk change remains larger in emerging than developed markets and that these two types of markets are still weakly correlated, this study shows that equity investing in emerging markets can provide investors with some diversification benefits.

This study provides further evidence that, at the aggregated portfolio level, there are no significant relationships between political risk and the aggregated portfolio returns of emerging and developed markets for the period of 1984 to 2007. However, political risk appears to be an important factor in explaining the stock returns of emerging markets subsequent to the 9/11 Terrorism Attack. The results from robustness test, however, suggests that this is due to the fact that emerging markets track the movement of US stock market following the shock of 9/11 event. An important inference from this is that if changes in political risk in the US can be predicted, this may help investors to forecast the pattern of stock returns in emerging markets to a certain extent. Moreover, such a finding highlights the possibility that political risk is to some extent accountable for the market comovement

[11] Appendix A1 provides the OLS regression results for the country-level analysis.

between emerging markets and the US stock market. However, a formal testing of market cointegration needs to be conducted so as to provide concrete evidence on this matter. This is left for future research.

While finding no relationship between political risk and the portfolio returns of emerging and developed markets, the results of the Pacific Basin emerging markets portfolio highlight a significant relationship between political risk and the stock returns of these markets throughout the sampling period. This relationship is particularly apparent in the last few years of the sample which includes the Asian Financial Crisis period. This study therefore adds to the existing body of knowledge that Pacific Basin emerging markets are more responsive to political risk than any other markets.

Accordingly, the findings from this study suggest that there are differences in political risk exposure among emerging, developed, and Pacific Basin emerging markets at the aggregate portfolio level. Such findings therefore raise an important awareness to investors that caution need to be taken on the type and location of their investments to ensure that they optimise the diversification benefits. In addition, they need to be aware that investing in Pacific Basin markets can increase the level of risk and affect the risk-return characteristics of their investment portfolios.

To conclude, given that there is evidence that political risk is an important determinant of stock returns, particularly for the Pacific Basin emerging markets, the next chapter presents the second essay of the thesis which examines a specific political risk component that appears to be common amongst these markets. This is namely ‘Military in Politics’. It is a political risk component that bases on the degree of military involvement in political affairs. Since ‘Military in Politics’ is one of the political risk attributes that increases the level of risk of a given country according to the PRS group, it is of interest to examine whether this type of governance is in fact a price factor for these stock markets; and, whether these stock market returns are indeed higher during periods of ‘civilian’ as opposed to ‘military’ governments.

CHAPTER FOUR

ESSAY TWO:

POLITICAL REGIME & STOCK RETURNS

This chapter presents the second essay which investigates the differences between the stock returns of ten emerging markets under military and civilian regimes. A brief overview of the impact of political regimes on equity markets is provided in Section 1 of the chapter. Section 2 discusses the relationship between military involvement and stock markets. Section 3 proposes the hypotheses. Section 4 provides data description and descriptive statistics. Sections 5 and 6 present the test methodologies and empirical results, respectively. Section 7 outlines a series of robustness tests. Sections 8 and 9 discuss the results and conclude this essay, respectively.

4.1 INTRODUCTION

The interaction between civilian and military governments is extensively studied by historians, political scientists, and sociologists but rarely by finance academics. Political scientists such as Huntington (1968) assert that military intervention in politics can reveal both the political and institutional arrangement of that society. By comparing between developed and emerging markets, the political situation in the latter markets appears to be more unstable than the formers since the changes in the governments and political leaders can be observed more frequently. There are several factors that cause these frequent changes in governments. These range from, for example, economic problems, wrongful seizure of political power to corruption and abuse of power by politicians. Often, such a shift in power creates internal political conflicts that lead to riots[12]. To restore order in a country, military interference in politics is regularly seen following these incidents (Pinkney, 1990). Generally, the period of military rule lasts until the state is in order and a proper general election is held to find a new democratic leader. However, for some countries, this military rule lasts for a much longer period of time and this invariably leads to a lengthy period of political uncertainty (May, Lawson, and Selochan, 1998).

Despite the fact that the aim of military interventions is usually to restore order in a country, many still perceive that such a military interference in politics causes adverse effects on the financial market. Studies such as May *et al.* (1998) find that apart from the social implications a direct political involvement by the military generally suppresses economic growth and freedom, which lessens the country's overall credibility. As a result, this lowers investors' confidences and influences their investment decisions in the financial market. Both local and foreign investors could in this case delay or suspend their investments due to the perceived risks and uncertainties.

Nonetheless, there is not yet any direct empirical evidence showing the effect of 'military' governments on stock returns. The purpose of this study is to conduct an empirical study to fill this gap in the current literature. It is believed that emerging markets provide appropriate

[12] For example, Sylvia and Danopoulos (2003) document that the overthrow of President Hugo Chávez of Venezuela in April 2002 has lead to continuous protests and create a division within the society.

settings for conducting such type of research since most of them are relatively new democratic countries where corruption and abuse of power by politicians for personal interests are common problems (Khanna and Palepu, 2000; Dinç, 2005; and, Winichakul, 2008). Accordingly, emerging markets tend to have higher frequencies of political upheavals than developed markets and, as a result, military involvement in politics can be seen more regularly to resolve such political conflicts.

The main contribution to the existing literature is twofold. Firstly, this study is the first to examine the effect of military governments on stock markets. Therefore, it helps to fill in the gap in the current literature. Secondly, this study focuses on emerging stock markets. It is believed that an investigation and outlook on these markets are essential for investors, particularly during such periods of military interference since these markets are important venues in which investors diversify and hedge against the country-specific uncertainty of their local stock markets. An investigation of those markets where military intervention does occur can therefore have important implications for portfolio formation and the allocation of investment funds.

This study is organised as follows. Section 4.2 examines the relationship between military involvement in politics and its influences on stock markets. Section 4.3 proposes the research objectives and hypotheses. Section 4.4 provides data description and descriptive statistics. Section 4.5 outlines the test methodologies to be used. Sections 4.6 and 4.7 present the empirical results and robustness tests, respectively. Section 4.8 discusses the results and Section 4.9 concludes this study.

4.2 MILITARY, POLITICS, AND STOCK MARKETS

Alagappa (2001) asserts that the military has large interference and dominance in the politics of numerous countries worldwide, particularly the Asian countries. He states that the underlying explanation for such a relationship between civilian and military in these countries lies in the significant role of military in building the nation and in restoring political order through the use of coercion or power. The influence of the military on politics and the

continuity of civil-military relationships are therefore highly correlated with the government's ability in running the country.

It is well established, for example, by Khanna and Palepu (2000) and Dinç (2005) that political figures in emerging markets tend to abuse their powers for personal interests. Moreover, corruption within a government is fairly pervasive. Such misconduct by politicians often upsets the public and creates political unrests within a country. Accordingly, studies such as Jackman (1976), Pinkney (1990), and Ockey (1994) find that these are the main causes of several military interventions in emerging markets and, as a result, military force in the form of a coup d'état is often used to restore order and protect national interests. A coup is thus being referred to as a political conflict between military and government, which results in a military takeover through using or threat of using force (Thompson, 1975 and Pathmanand, 2008).

The fact that corruption and abuse of power by politicians in several emerging markets are issues that cannot be easily solved indicates that political upheavals are inevitable. Zolberg (1968) finds that once a coup takes place the probability of having another one tends to increase. Thus, military interference in politics can be seen persistently as a means to resolve political conflicts in emerging markets. This creates a pattern of military regimes alternating with civilian or democratic regimes which is similar to the alternation between right-wing and left-wing governments in developed markets. It is therefore rather surprising that the effect of military regimes on stock market returns is still largely overlooked by researchers.

Despite its attempt to restore order in a country, there is often an adverse perception about military intervention in politics. This is mainly due to the seizure of power by the military from an elected government in an illegal or anti-democratic manner (O'Kane, 1989 and Pathmanand, 2008). Le and Zak (2006) state that such an irregular change in government that occurs through unconstitutional means greatly disrupt the political system since the military junta holds absolute power in the running of the country under martial law. In this state of affairs, political activities are typically prohibited, the constitution is suspended and democracy which is deemed as exceptionally important in the modern era is suppressed. Moreover, the freedom of press is usually being restricted. May *et al.* (1998) assert that these

prohibitions and restrictions are great barriers to the development of civil politics. Consequently, such a military intervention in politics is being heavily criticised by those who are in favour of democracy and human rights. According to the Political Risk Service (PRS) Group, 'Military in Politics' is one of the political risk attributes that increases the level of risk of a given country. Therefore, military governments can increase the level of political riskiness of a stock market which then causes significant concern for foreign investors as this means an increase in the level of risk in their investment portfolios. Based on this view, it is conjectured that the stock market participants would react negatively and require higher rate of returns to compensate for bearing higher risk during the periods of military government.

Furthermore, Bernhard and Leblang (2006) assert that during a period of important political change the stock markets can be very unsettled as investors anticipate changes in policies by the new government. For example, it is found by Aggarwal, Inclan, and Leal (1999) that there was very high stock returns volatility during the period of the Marcos-Aquino conflict in the Philippines. Boutchkova *et al.* (2011) also find that an increase in stock return volatility reflects a higher level of political risk in a country during a period of political uncertainty. Accordingly, Cahan *et al.* (2005) argue that the differences in stock returns between the two political spectrums can be due to a simple explanation such as stock market volatility risk. That is, investors require higher returns in compensation for holding stocks during the period of highly volatile market conditions. Therefore, it is worthwhile to investigate the level of stock market volatility under military and civilian governments since this could help to explain the differences in stock returns under the two political regimes. This study conjectures that there is a higher stock return volatility under military regime. This is based on the intensity of political turmoil and state of uncertainty during the period of military administration and also on the fact that military governments increase the level of political risk of a country[13].

However, one of the characteristics of coups and military governments is that it is typically unpredictable as to when one will take place. The riskiness associated with it can therefore have significant implications for risk-averse investors. French and Poterba (1991) and Baxter and Jermann (1997) argue that this is particularly the case for domestic investors, who

[13] According to Political Risk Service (PRS) Group, 'Military in Politics' is one of the political risk attributes that increases the level of risk of a given country.

primarily hold domestic assets and are not well diversified internationally, since the country-specific political risk will concentrate in their portfolios. For international investors who allocate their investments to emerging markets so as to diversify the risks of their domestic assets, such a shift in the political regime could also increase the risk level of their investment portfolios (Bialkowski, Gottschalk, and Wisnrewski, 2008).

Accordingly, given the fact that the occurrence of a coup or military takeover cannot be easily foreseen, it would be very difficult to design a profitable trading strategy based on the prediction of its occurrence. Nonetheless, an investigation on the effect of political regimes on stock market returns would be very useful to investors as the findings highlight whether there is a need for investors to adjust their portfolio formation and allocation of investments when there is a shift from civilian to military government in emerging markets or vice versa. More importantly, such an investigation provides important empirical evidence as to whether the type of political regime is a stock price factor in emerging markets and whether there are any significant differences in stock returns under civilian and military governments.

4.3 RESEARCH OBJECTIVES AND HYPOTHESES

It is documented by May *et al.* (1998) that military interferences in politics generally suppress economic growth and freedom. Despite this, there is not yet any direct evidence showing the effect of military rule on stock returns. The main research objective of this study is to investigate the differences in stock returns between military and civilian regimes of ten emerging stock markets. Specifically, this study tests whether there are higher stock returns during the periods of military government. Given that political instability typically heightens during such periods, it is expected that investors would require higher rate of returns in compensation for bearing higher risk.

Two null hypotheses are developed for testing:

Hypothesis 1: There is no difference in stock returns between military and civilian governments.

If this hypothesis holds, it indicates that there is no significant difference in stock market returns regardless of the type of political regime. That is, the stock returns under civilian regimes are neither higher nor lower than the stock returns under military regimes. According to the Political Risk Service (PRS) Group, 'Military in Politics' is one of the political risk attributes that increases the level of risk of a given country. Hence, one would expect investors to require higher stock returns during periods of military governments in compensation for bearing higher risk. Consequently, if this hypothesis holds, the findings would go against the fundamental investment concept of the tradeoff between risk and returns.

Furthermore, the literature on the Presidential Puzzle such as Santa-Clara and Valkanov (2003) suggests that the difference in stock returns between the two political spectrums might come from the differences in economic policies pursued by each of the two governments and the different level of uncertainty amongst investors concerning these policies, which leads to higher stock market volatility. This argument is supported by studies that examine the political business cycle model such as Cahan *et al.* (2005) who suggest that it is possible that the difference in stock returns between political regimes may have a simple explanation like the financial market volatility risk. Accordingly, Hypothesis 2 tests whether the stock market returns premium under civilian or military governments could be the results of higher volatility risk during the respective political regimes.

Hypothesis 2: The military or civilian government returns premium is not the result of higher volatility risk.

If this hypothesis holds, there is evidence that the military or civilian government returns premium is not the result of higher volatility risk during the respective political regimes. Such a finding would go against the arguments of Santa-Clara and Valkanov (2003) and Cahan *et al.* (2005) and it also implies that financial market volatility risk does not explain the stock market returns premium that is found in either political regime.

4.4 DATA DESCRIPTION

4.4.1 SAMPLE DATA

A military government is defined as (i) a government that is assigned by a military junta; or (ii) a 'de facto' government. Cochran (1968) defines a de facto government as one which comes to power by unconstitutional means. That is, the position of political leader and his/her administration does not result from a general election. The government is therefore in power unconstitutionally.

It is documented, for example, by Diamonte *et al.* (1996) and Erb *et al.* (1996) that there is a more pervasive effect of political risk on emerging markets than on developed ones. These findings imply that there are higher frequencies of political upheavals in the former markets than the latter. Specifically, in terms of military interference in politics, Finer (1976) reports based on a sample of 51 countries that there were 130 coups between the period of 1958 to 1973. Out of these 130 coups, there were 7 successful coups in Europe (5.4%), 14 in Asia (10.8%), 31 in Latin America (23.8%), and the rest are in Sub-Sahara and Arabian countries. Such statistics evidently show that developing countries are more prone to coups than those of developed ones. Therefore, the scope of this study is limited to emerging markets since they appear to be an appealing case study for this type of research.

To qualify for the sample, the countries must have a clear record of military governments. Specifically, they must have more than one alternation between military and civilian government in order to avoid the circumstance where a single military or civilian government coincides with a period of stock market boom or bust. To identify this, we examine all the emerging markets that are listed on the International Financial Corporation (IFC) index in 2007. Based on this pre-established criterion, ten emerging markets qualify for inclusion in the sample. Four of these are Asian markets and the remaining are Latin American markets. These are, namely, Argentina, Bangladesh, Chile, Colombia, South Korea, Pakistan, Peru, Thailand, Uruguay, and Venezuela.

The sample period is allowed to vary for each market. This is done by setting the sample period to commence in the year that each market starts its trading and end in 2007[14]. This helps to attain the largest possible number of observations for the analysis of each market. We source all of our data from Global Financial Data (GFD). These include the monthly stock index real returns[15], 90 Day Treasury bill rate, one-year Government Bond rate, and total return World Market index.

To ascertain the exact starting and end dates of military governments, this study draws on the government official website of each sample market as the main reference. In addition, this information is also being cross-checked with the British Broadcasting Corporation's (BBC) website and the World Statesmen organization's website for added confirmation[16].

[14] Except for Uruguay where data only exists until 1995.

[15] All returns series have been tested for unit root using Augmented Dickey-Fuller test and the results show that all returns series are stationary. Moreover, the use of each country's general stock market index returns, which are calculated from the prices of all common stocks on the main boards of the stock exchange, should mitigate the problem of selection bias. This is where the chosen index may be dominated by the stocks that are politically connected or are clustered in the industry that is highly correlated to the military. Thanks to Katsuhiko Okada for bringing up this concern at the 2010 Asian Finance Association Meeting.

[16] BBC News Corporation's country profiles website: http://news.bbc.co.uk/2/hi/country_profiles/default.stm. World Statesmen Organization is an online encyclopaedia of the leaders of nations and territories. Its website is: http://www.worldstatesmen.org.

Table 4.1

List of index and sample period of each sample market

The table presents the list of index and sample period of each sample market. The start of sampling period varies for each market but all ends in 2007.

Sample markets	Index name and sample period
Argentina	Buenos Aires SE General Index (December 1966 – December 2007)
Bangladesh	Dhaka SE General Stock Index (September 1979 – November 1985) and Dhaka SE Index (December 1985 – December 2007)
Chile	Santiago SE Indice de Precios Selectivos Acciones (January 1913 – December 2007)
Colombia	Colombia IGBC General Index (January 1927 – December 2007)
South Korea	Korea SE Stock Price Index (January 1962 – December 2007)
Pakistan	Pakistan General Index (July 1960 – December 2007)
Peru	Lima SE General Index (December 1926 – December 2007)
Thailand	Thailand SET General Index (April 1975 – December 2007)
Uruguay	Uruguay Stock Exchange Index (January 1925 – December 1995)
Venezuela	Caracas SE General Index (December 1929 – December 2007)

4.4.2 DESCRIPTIVE STATISTICS

This section provides descriptive statistics for each sample market. Table 4.2 to 4.11 present the summary of returns for Argentina, Bangladesh, Chile, Colombia, South Korea, Pakistan, Peru, Thailand, Uruguay, and Venezuela, respectively[17].

Table 4.2

Summary of returns for Argentina: December 1, 1966 - December 31, 2007

The table presents summary of stock returns for Argentina. The sample period ranges from December 1, 1966 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	492	146.72	94.49	29.90
Inflation	492	107.07	50.75	30.21
Real Return	492	15.19	67.19	-10.34
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	168	113.56	74.44	14.94
Inflation	168	104.71	18.14	91.75
Real Return	168	5.38	68.17	-19.43
Civilian Government (C)				
Nominal return	324	166.20	103.54	42.48
Inflation	324	108.32	61.34	10.74
Real Return	324	20.72	66.74	-2.37

[17] The level of autocorrelation of the stock returns for each sample market is presented in section 4.7.2 where the issue of persistence in dummy variables is being addressed.

Table 4.3

Summary of returns for Bangladesh: September 30, 1979 - December 31, 2007

The table presents summary of stock returns for Bangladesh. The sample period ranges from September 30, 1979 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	339	15.86	36.37	3.66
Inflation	339	7.06	3.67	4.47
Real Return	339	8.69	33.80	-0.54
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	104	14.84	41.98	5.91
Inflation	104	10.65	4.98	5.47
Real Return	104	4.31	42.06	0.00
Civilian Government (C)				
Nominal return	235	16.27	33.72	2.18
Inflation	235	5.56	2.85	4.16
Real Return	235	10.57	29.61	-0.96

Table 4.4

Summary of returns for Chile: December 31, 1913 – December 31, 2007

The table presents summary of stock returns for Chile. The sample period ranges from December 31, 1913 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	1128	36.77	37.47	12.01
Inflation	1128	26.95	19.22	17.18
Real Return	1128	8.36	31.61	-2.14
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	253	75.16	56.25	22.28
Inflation	253	44.53	33.68	25.34
Real Return	253	23.49	45.31	4.53
Civilian Government (C)				
Nominal return	875	27.68	31.15	9.38
Inflation	875	22.00	10.43	13.76
Real Return	875	4.69	27.20	-3.08

Table 4.5

Summary of returns for Colombia: December 31, 1927 – December 31, 2007

The table presents summary of stock returns for Colombia. The sample period ranges from December 31, 1927 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	971	12.63	21.80	1.57
Inflation	971	12.76	7.02	11.15
Real Return	971	0.38	22.40	-5.61
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	62	3.10	5.98	2.18
Inflation	62	8.56	4.01	6.80
Real Return	62	-4.86	7.51	-2.08
Civilian Government (C)				
Nominal return	909	13.31	22.47	1.45
Inflation	909	13.05	7.18	11.62
Real Return	909	0.74	23.07	-6.06

Table 4.6

Summary of returns for South Korea: January 1, 1962 – December 31, 2007

The table presents summary of stock returns for South Korea. The sample period ranges from January 1, 1962 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	552	25.70	49.12	8.21
Inflation	552	9.31	4.69	6.55
Real Return	552	14.77	47.13	-0.60
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	307	39.10	59.68	14.71
Inflation	307	12.51	5.79	9.38
Real Return	307	23.18	56.80	3.04
Civilian Government (C)				
Nominal return	245	10.68	31.10	-1.55
Inflation	245	5.45	2.37	4.78
Real Return	245	5.04	31.09	-8.20

Table 4.7

Summary of returns for Pakistan: July 31, 1960 – December 31, 2007

The table presents summary of stock returns for Pakistan. The sample period ranges from July 31, 1960 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	587	10.64	18.59	5.66
Inflation	587	7.70	3.71	6.61
Real Return	587	2.81	18.85	-0.48
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	396	13.11	18.07	7.83
Inflation	396	5.73	3.31	5.03
Real Return	396	7.04	18.25	1.81
Civilian Government (C)				
Nominal return	191	5.98	19.55	2.37
Inflation	191	11.65	4.24	8.80
Real Return	191	-4.97	19.83	-7.19

Table 4.8

Summary of returns for Peru: December 31, 1926 – December 31, 2007

The table presents summary of stock returns for Peru. The sample period ranges from December 31, 1926 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	972	48.10	54.16	5.28
Inflation	972	41.65	52.93	10.16
Real Return	972	5.56	40.78	-5.38
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	269	16.39	23.95	3.17
Inflation	269	15.49	7.12	10.30
Real Return	269	0.69	21.52	-5.72
Civilian Government (C)				
Nominal return	703	61.81	61.95	6.29
Inflation	703	52.89	62.15	9.97
Real Return	703	7.30	46.19	-5.27

Table 4.9

Summary of returns for Thailand: April 30, 1975 – December 31, 2007

The table presents summary of stock returns for Thailand. The sample period ranges from April 30, 1975 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	392	11.24	29.31	4.84
Inflation	392	4.87	2.19	4.41
Real Return	392	6.19	29.48	-2.18
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	63	32.45	26.67	31.37
Inflation	63	5.44	2.16	5.79
Real Return	63	25.65	26.52	14.58
Civilian Government (C)				
Nominal return	329	7.51	29.99	1.69
Inflation	329	4.78	2.18	4.16
Real Return	329	2.75	30.24	-4.02

Table 4.10

Summary of returns for Uruguay: January 31, 1925 – December 31, 1995

The table presents summary of stock returns for Uruguay. The sample period ranges from January 31, 1925 to December 31, 1995. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	851	17.29	42.29	0.00
Inflation	851	29.15	10.13	18.58
Real Return	851	-8.47	41.17	-16.99
Panel B: Annualised percentage returns under each political regime				
Military Governments (M)				
Nominal return	156	38.16	61.49	0.00
Inflation	156	59.12	11.14	47.13
Real Return	156	-12.76	57.02	-31.13
Civilian Government (C)				
Nominal return	695	13.04	36.63	0.00
Inflation	695	23.20	9.35	9.71
Real Return	695	-7.48	36.75	-10.77

Table 4.11

Summary of returns for Venezuela: December 31, 1929 – December 31, 2007

The table presents summary of stock returns for Venezuela. The sample period ranges from December 31, 1929 to December 31, 2007. The mean, standard deviation, and median of nominal and real rate of returns and inflation rate are presented. Observations are made on monthly basis. Panel A presents the annualised percentage returns regardless of political regimes. Panel B subsequently presents the annualised percentage returns under each political regime.

Variable	Observation Months	Mean	Standard Deviation	Median
Panel A: Annualised percentage returns regardless of political regimes				
Nominal return	936	16.76	25.83	4.53
Inflation	936	13.11	8.70	8.54
Real Return	936	1.66	28.00	-0.66
Panel B: Annualised percentage returns under each political regimes				
Military Governments (M)				
Nominal return	268	7.78	13.76	0.00
Inflation	268	4.88	11.12	0.00
Real Return	268	3.49	16.30	0.00
Civilian Government (C)				
Nominal return	668	20.76	29.42	5.47
Inflation	668	16.61	7.31	12.15
Real Return	668	1.02	31.69	-1.79

The results from the summary of stock returns under military and civilian governments for each sample market show that the average returns of civilian governments are higher than military governments for the stock markets of Argentina, Bangladesh, Colombia, Peru, and Uruguay. However, for Colombia and Peru, the higher average returns under civilian governments are believed to be compensating for the higher risks under civilian rules.

The average returns under military governments are higher than civilian governments for the stock markets of Chile, South Korea, Pakistan, Thailand, and Venezuela. Nonetheless, it is

possible that this higher average returns under military governments for Chile and South Korea is due to the higher risk under military regimes.

In summary, descriptive statistics suggest that the higher returns under civilian governments for the stock markets of Argentina, Bangladesh, and Uruguay cannot be explained by the higher standard deviation of returns under civilian governments. Likewise, the higher returns under military governments for Pakistan, Thailand, and Venezuela also cannot be explained by the higher standard deviation of returns under military governments. Therefore, a more detailed investigation on this matter needs to be conducted. Specifically, other possible influences on stock returns need to be controlled for in order to ensure that the higher returns under civilian or military governments are not the results of business or economic conditions. This study applies regression analysis in order to conduct the formal testing.

4.5 TEST METHODOLOGIES

To analyse the stock market returns under each political regime, this study closely follows the approach taken by Santa-Clara and Valkanov (2003), Cahan *et al.* (2005), and Anderson *et al.* (2008). The following regression model [4.1] therefore tests whether military regimes have any significant influence on the stock returns of each sample market:

$$r_{t+1} = \alpha + \beta\ M_t + u_{t+1} \qquad [4.1]$$ where

r_{t+1} is real rate of returns at month *t+1*;

M_t is a political dummy variable where M = 1 if a military government is in office at time *t*; M = 0, otherwise;

U_{t+1} is the error term at month *t+1*.

Month *t+1* real rate of returns are explained using information on the government political regime that is observable prior to the return formation period (at month t). Under the null

Hypothesis 1 of military regime having no effect on stock returns, β should equal to zero ($\beta = 0$).

For the purpose of an explicit illustration of the differences in stock returns between the two political regimes, a civilian government dummy variable is included in the following regression model [4.2] and is estimated on each sample market:

$$r_{t+1} = \alpha_1 M_t + \alpha_2 C_t + u_{t+1} \qquad [4.2]$$

where M_t and C_t denotes the period in which military and civilian government is ruling the country, respectively. Notice that when the complementary dummy variable is added into the regression model [4.2], the slope intercept is suppressed. This procedure helps to avoid the multicollinearity problem or the 'dummy variable trap' in a least square dummy variable regression (Anderson *et al.,* 2008). Under the null Hypothesis 2 of no difference between military and civilian regime on stock returns, α_1 should equal to α_2.

In reference to the Presidential Puzzle literature, the most natural explanation for the correlation between either of the two political parties, Democrat or Republican, and the excess returns is based on a 'proxy' effect (Santa-Clara and Valkanov, 2003). Taking this factor into consideration, it is possible that the superior returns that are found in this study for either the military or civilian regimes might simply be proxying for variations in expected returns due to business and economic cycle fluctuations. Therefore, this study follows the approach taken by Santa-Clara and Valkanov (2003) and incorporates the short-term interest rate into the regression model in order to control for such an effect. The regression model [4.2] is thus augmented in the following manner:

$$r_{t+1} = \alpha_1 M_t + \alpha_2 C_t + \alpha_3 I_t + u_{t+1} \qquad [4.3]$$

where I_t denotes short-term interest rate at time *t*. The 90 Day Treasury bill rate of each sample market is used as a proxy for short-term interest, except for South Korea. In this case, its one-year government bond rate is used as the next best alternative proxy due to data

availability. If political variables contain only information about returns that could be explained by business and economic cycle fluctuations, the coefficient α_1 and α_2 in regression model [4.3], with a short-term interest rate as a controlled variable, should equal to zero.

Two possible econometric problems might arise when estimating regression model [4.3]. One is the large outliers in the time series of each stock market returns since it is probable that the sample markets experience some crises of their own during certain administrations which lead to extremely large negative movement in stock prices. Another is the problem of autocorrelation as it is also possible that the error term is not normally distributed. In order to counteract the first econometric problem and ensure that the results are not driven by any extreme negative outliers, the approach taken by Döpke and Pierdzioch (2006) is followed herein. This is by inserting an additional dummy variable to the right-hand side of the equation. This dummy variable accounts for any returns that fall below negative three standard deviations from the mean as outliers. Regression model [4.3] is herein augmented as follows:

$$r_{t+1} = \alpha_1 M_t + \alpha_2 C_t + \alpha_3 I_t + \alpha_4 \text{Outliers}_t + u_{t+1} \qquad [4.4]$$

where Outliers_t denotes the outliers dummy variable and it is equal to 1 if stock market returns fall below negative three standard deviations (-3σ) from the mean at time *t*, otherwise Outliers is equal to 0.

In addition, to counteract the potential problem of autocorrelation in regression, this study then follows the approach of Gärtner and Wellersholf (1995) and Döpke and Pierdzioch (2006). This is through modelling the error term by using an autoregressive process of order one (AR(1)) to achieve white noise errors. Regression model [4.4] is thus augmented in the following manner:

$$r_{t+1} = \alpha_1 M_t + \alpha_2 C_t + \alpha_3 I_t + \alpha_4 \text{Outliers}_t + \alpha_5 \text{AR}(1)_t + u_{t+1} \qquad [4.5]$$

where AR(1) denotes an autoregressive process of order one at time *t.* After controlling for outliers and autocorrelation in the error term, the coefficient α_1 and α_2 should equal to zero if political variables contain only information about returns that could be explained by economic cycle fluctuations (I_t).

Furthermore, Cahan *et al.* (2005) argue that it is possible that the difference in stock returns between political regimes may have a simple explanation such as the financial market volatility risk. Therefore, for the last procedure, it is necessary to examine whether the military or civilian government's stock market returns premium could be the result of higher volatility risk during the respective political regimes. This study hereby follows Cahan *et al.* (2005) with the following absolute value regression model, where the absolute monthly real returns are regressed against the political dummy variables:

$$|r_{t+1}| = \beta_1 M_t + \beta_2 C_t + u_{t+1} \qquad [4.6]$$

where $|r_{t+1}|$ is the absolute value of real rate of return at month *t+1*. Such a regression model measures the volatility of returns under both military and civilian regimes. Santa-Clara and Valkanov (2003) suggest that such a difference in return volatility between the two political spectrums might come from the differences in economic policies pursued by each of the two governments and the different level of uncertainty amongst investors concerning these policies. Higher uncertainty leads investors to require higher compensation from their investments during such a risky period. Under the null Hypothesis 2, which states that military or civilian government returns premium is not the result of higher volatility risk, β_1 should equal to β_2.

Overall, the four regression models to be tested in this study are regression models [4.1], [4.2], [4.5], and [4.6]. The robustness tests of the results are presented in Section 4.7. Specifically, it is tested whether the results can be attributed to the co-movement between the sample stock markets and international indices as suggested by Anderson *et al.* (2008), as well as whether the results are subjected to spurious regression bias as indicated by Powell *et al*. (2007).

4.6 EMPIRICAL RESULTS

This section presents the results from estimating regression models [4.1], [4.2], [4.5], and [4.6]. The results from these regression analyses provide empirical evidence that certain stock markets do behave differently under military and civilian regimes.

Firstly, regression model [4.1] is estimated to find the stock market returns under military governments for each sample market. All statistics are calculated on a monthly basis and annualised into percentages. The results are reported in Table 4.12.

Table 4.12

Stock market annualised percentage returns under military governments

The table presents the results from estimating regression model [4.1] on ten sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. M_t denotes a political dummy variable where M=1 if a military government is in office at time t; otherwise, M=0. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Market	**α**	**β (M_t)**	**R^2**
Argentina	21.577 (1.54)	-14.786 (-0.68)	0.001
Bangladesh	7.312 (1.19)	-2.550 (1.03)	0.006
Chile	5.295 (1.13)	11.817 (1.05)	0.002
Colombia	0.742 (0.23)	-5.448 (-1.07)	0.000
South Korea	3.400 (0.47)	17.527 (1.18)	0.003
Pakistan	-5.012 (-1.04)	12.562 (2.01)**	0.008
Peru	7.931 (1.20)	-7.541 (-0.91)	0.001
Thailand	2.155 (0.37)	33.161 (2.26)**	0.011
Uruguay	-0.577 (-0.09)	-12.030 (-0.77)	0.001
Venezuela	0.735 (0.13)	3.080 (0.46)	0.000

Table 4.13

Differences in stock market annualised percentage returns under military and civilian governments

The table presents the results from estimating regression model [4.2] on ten sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. M_t and C_t are political dummy variables. They denotes the period in which military and civilian government is ruling the country, respectively. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are also reported in parentheses in the last column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Market	$\alpha_1 (M_t)$		$\alpha_2 (C_t)$		**Difference** $(\alpha_1 - \alpha_2) = 0$		R^2
Argentina	3.871	(0.19)	21.577	(1.55)	-14.786	(0.50)	0.001
Bangladesh	4.592	(0.57)	7.312	(0.90)	-2.550	(0.05)	0.006
Chile	17.683	(1.66)*	5.295	(1.13)	11.817	(1.11)	0.002
Colombia	-4.743	(-1.18)	0.742	(0.23)	-5.448	(1.14)	0.000
South Korea	21.467	(1.67)*	3.400	(0.47)	17.527	(1.40)	0.003
Pakistan	6.974	(2.05)**	-5.012	(-1.04)	12.562	(4.02)**	0.008
Peru	-0.158	(-0.03)	7.931	(1.20)	-7.541	(0.83)	0.001
Thailand	35.962	(2.17)**	2.155	(0.34)	33.161	(3.41)*	0.011
Uruguay	-12.543	(-0.87)	-0.577	(-0.09)	-12.030	(0.59)	0.001
Venezuela	3.835	(1.07)	0.735	(0.13)	3.080	(0.21)	0.000

Evidence from Table 4.12 suggest that the annualised percentage real returns are greater under military governments for five out of ten stock markets being examined. These five markets are Chile, South Korea, Pakistan, Thailand, and Venezuela. These results are consistent with the descriptive statistics shown in section 4.4.2. However, out of these five markets, it is found that only the stock returns of Pakistan and Thailand are statistically significantly greater under military government, at the 5% significance level. For an explicit

illustration of the differences in stock returns between military and civilian governments, regression model [4.2] is estimated and the results are presented in Table 4.13.

Similarly to the finding from Table 4.12, the results from Table 4.13 show that the annualised percentage returns are greater under military governments for five out of ten stock markets, which are Chile, South Korea, Pakistan, Thailand, and Venezuela. Under the null Hypothesis 1 that there is no difference in stock returns between military and civilian regime, α_1 should equal to α_2 ($\alpha_1 = \alpha_2$). The test for equal coefficients in Table 4.13 suggests that the real stock returns are significantly different from each other under the two political regimes for only two markets, which are Pakistan and Thailand. The null Hypothesis 1 can therefore be rejected for these two markets based on these findings.

In terms of economic significance, the regression coefficients and the test for equal coefficients from Table 4.13 illustrate that there are negative stock market returns for Pakistan during civilian governments at -5.01% per annum. However, its real stock market returns are a substantial 6.97% per annum under military governments. Thus, the stock returns are more than triple during military governments as opposed to civilian ones. Notably, this difference in stock returns between the two political regimes is even larger for Thailand since the real stock market returns during civilian governments are merely 2.16% per annum compared to a substantial 35.96% per annum under military governments. This makes a 33.16% difference per annum between the two political regimes.

Nevertheless, it is essential to control for the influence of economic cycle fluctuation, outliers, and autocorrelation in the error terms. Regression model [4.5] is therefore designed to capture the effect of these factors on stock returns and is being estimated on each sample market. The results are presented in Table 4.14.

Table 4.14

Differences in stock market annualised percentage returns under military and civilian governments with control variables

The table presents the results from estimating regression model [4.5] on ten sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. M_t and C_t are political dummy variables. They denotes the period in which military and civilian government is ruling the country, respectively. I_t denotes short-term interest rate at time *t*. $Outliers_t$ denotes the outliers dummy variable where Outliers = 1 if stock market returns are below negative three standard deviations from the mean at time *t*; otherwise, Outliers = 0. $AR(1)_t$ denotes an autoregressive process of order one at time *t*. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are also reported in parentheses in the last column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Market	α_1 (M_t)	α_2 (C_t)	α_3 (I_t)	α_4 ($Outliers_t$)	α_5 ($AR(1)_t$)	$(\alpha_1 - \alpha_2)=0$	R^2
Argentina	442.204 (1.73)*	433.442 (1.75)*	-16.365 (-1.12)	-84.531 (-1.71)*	106.640 (2.80)***	1.891 (0.01)	0.091
Bangladesh	-13.778 (-1.54)	-10.474 (-0.82)	4.306 (2.63)***	22.420 (2.09)**	33.875 (4.51)***	-3.657 (0.09)	0.127
Chile	33.698 (0.50)	27.548 (0.38)	45.573 (0.8168)	-16.665 (-0.30)	103.797 (4.14)***	4.923 (0.13)	0.090
Colombia	16.977 (0.84)	22.919 (1.09)	69.842 (1.21)	-18.499 (-1.11)	78.373 (2.84)***	-4.915 (0.90)	0.049
South Korea	329.519 (1.65)*	291.061 (1.53)	-86.217 (-1.05)	-77.977 (-1.51)	59.346 (1.26)	11.076 (0.89)	0.041
Pakistan	39.153 (1.87)*	22.453 (1.14)	18.582 (0.37)	-24.026 (-1.53)	69.164 (4.35)***	13.884 (3.37)*	0.041
Peru	706.457 (0.99)	743.984 (1.01)	-24.509 (-0.33)	-92.023 (-0.99)	-2.632 (-0.12)	-5.290 (0.42)	0.022
Thailand	159.594 (2.01)**	101.895 (1.51)	-57.454 (-1.07)	-50.239 (-1.44)	27.660 (0.97)	30.522 (2.67)*	0.024
Uruguay	-57.824 (-0.82)	-55.881 (-0.75)	18.114 (0.16)	121.803 (0.78)	-23.430 (-1.25)	-4.120 (0.04)	0.005
Venezuela	95.711 (0.85)	88.482 (0.80)	-12.627 (-0.39)	-49.017 (-0.81)	42.586 (1.60)	4.048 (0.32)	0.008

Under the null Hypothesis 1 that there is no difference in stock returns between military and civilian regime, α_1 should equal to α_2 ($\alpha_1 = \alpha_2$). Table 4.14 shows that, once the influences of short-term interest rates, outliers, and the error terms are controlled, the annualised percentage returns are greater under military governments for six out of ten markets being examined. Despite this, the military returns premiums are found to be significant only for the stock market of Pakistan and Thailand. Furthermore, it is found that the annualised percentage returns are greater under civilian governments for the stock market of Colombia, Peru, and Uruguay. However, the results of these three markets are statistically insignificance.

Noticeably, the military returns premiums found for Pakistan and Thailand do not appear to be explained by any of the economic conditions, outliers, or autocorrelation. The real stock returns of these two markets under military governments remain significantly higher than those under civilian governments by 13.88% and 30.52% per annum, respectively. Having control for possible influences on stock returns and given the robustness of the results, the findings from Table 4.14 therefore support the decision to reject null Hypothesis 1 for the stock market of Pakistan and Thailand.

Next, it is possible that the stock market returns premiums found for Pakistan and Thailand can simply be explained by the financial market volatility risk. To test whether this factor is accountable for such a result, regression model [4.6] is estimated on each sample market and the results are presented in Table 4.15.

Under the null Hypothesis 2, which states that military or civilian government returns premium is not the result of higher volatility risk, β_1 should equal to β_2. The results from Table 4.15 indicate that, for Pakistan, stock returns volatility is in fact significantly lower during the period of military governments. For Thailand, there is no significant difference in the stock return volatility between the two political regimes. Hence, the military governments' stock market returns premiums that are found for Pakistan and Thailand are not the results of higher risk premium during military regimes. Based on this finding, the null Hypothesis 2 cannot be rejected particularly for the stock market of Pakistan and Thailand. Such results go against the common perception that stock market under military government

should be more volatile than under civilian one due to investors' susceptibility to the consequences of political reforms on the financial market and the state of political uncertainty, which would then help to explain the higher returns under military rule. Given that there are no large fluctuations in stock returns during the period of military governments in Pakistan and Thailand, this implies that military interventions in politics do not create significant shocks for these two stock markets.

Table 4.15

Stock market volatility under military and civilian political regimes

The table presents the results from estimating regression model [4.6] on ten sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. M_t and C_t are political dummy variables. They denotes the period in which military and civilian government is ruling the country, respectively. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are also reported in parentheses in the last column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Market	**β_1 (M_t)**		**β_2 (C_t)**		**Difference ($\beta_1 - \beta_2$) = 0**		**R^2**
Argentina	12.638	(7.09)***	11.388	(8.89)***	1.250	(0.33)	0.002
Bangladesh	13.627	(1.47)	5.177	(6.48)***	8.450	(0.83)	0.006
Chile	7.807	(8.16)***	4.767	(13.52)***	3.040	(10.49)***	0.033
Colombia	1.618	(7.66)***	4.010	(15.34)***	-2.393	(50.54)***	0.013
South Korea	7.212	(5.75)***	6.763	(13.28)***	0.448	(0.11)	0.000
Pakistan	3.517	(16.99)***	4.178	(14.89)***	-0.661	(3.59)*	0.006
Peru	2.909	(5.42)***	5.984	(8.25)***	-3.075	(11.62)***	0.017
Thailand	6.104	(10.01)***	6.025	(12.18)***	0.079	(0.01)	0.000
Uruguay	8.277	(6.45)***	7.342	(7.34)***	0.935	(0.43)	0.001
Venezuela	3.256	(12.94)***	5.050	(10.60)***	-1.794	(11.14)***	0.015

Overall, based on the empirical findings, this study rejects the first null hypotheses and accepts the second null hypothesis particularly for the stock markets of Pakistan and Thailand. The regression results show relatively puzzling outcomes. Factors such as economic cycle fluctuation, extreme stock market slumps, error terms, and stock return volatility cannot explain the significantly higher returns of Pakistani and Thai stock markets under military governments. It is therefore intriguing as to why this is the case given the conventional wisdom which typically associates a period of military government with a highly volatile market conditions. To confirm these results, robustness checks are carried out in the next section.

4.7 ROBUSTNESS TESTS

This section presents the results from three robustness tests. Firstly, the co-movement between sample stock market returns and international indices is controlled for. Secondly, spurious regression problem which arises from the persistence in political dummy variables is considered. Thirdly, the bootstrap experiment is carried out. Finally, since data mining can be a potential problem in this type of research, this issue is also discussed in this section.

4.7.1 WORLD MARKET INDEX

It is possible that the significance of the results found in the previous section is attributable to the co-movement between the sample stock markets and international indices. In order to rule out such a possibility, this study follows the approach taken by Anderson *et al.* (2008) and controls for worldwide stock market movements. Therefore, a World Market Index is augmented into regression model [4.2], as follows:

$$r_{t+1} = \gamma\, r_{world,\, t+1} + \alpha_1\, M_t + \alpha_2\, C_t + u_{t+1} \qquad [4.7]$$

where $r_{world,\ t+1}$ denotes real rate of returns on the world market index at month *t+1*. This regression model is estimated on each sample market and the results are presented in Table 4.16.

Table 4.16

Robustness test: World market index

The table presents the results from estimating regression model [4.7] on ten sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. M_t and C_t are political dummy variables. They denotes the period in which military and civilian government is ruling the country, respectively. $r_{world,\ t+1}$ denotes real rate of returns on the world market index at month *t+1*. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are also reported in parentheses in the last column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Country	**γ ($r_{world,\ t+1}$)**	**α_1 (M_t)**	**α_2 (C_t)**	**Difference ($\alpha_1 - \alpha_2$)= 0**	**R^2**
Argentina	361.774 (0.53)	2.697 (0.13)	20.356 (1.43)	-14.884 (0.46)	0.002
Bangladesh	81.946 (0.59)	3.962 (1.13)	6.916 (0.84)	-2.778 (0.07)	0.008
Chile	614.402 (1.67)*	17.002 (1.57)	4.625 (0.93)	11.877 (2.27)	0.009
Colombia	287.113 (2.67)**	-6.634 (-1.72)*	0.028 (0.01)	-6.661 (1.75)	0.006
South Korea	304.461 (1.41)	18.110 (1.39)	0.876 (0.13)	17.096 (1.37)	0.024
Pakistan	235.974 (1.91)*	6.155 (1.72)*	-5.457 (-0.88)	12.222 (2.57)*	0.014
Peru	489.148 (1.02)	-0.782 (-0.14)	6.547 (0.93)	-6.914 (0.67)	0.003
Thailand	268.969 (1.07)	33.471 (1.91)*	-3.534 (-0.59)	38.228 (3.94)**	0.103
Uruguay	342.960 (1.16)	-12.799 (-0.91)	-1.593 (-0.24)	-11.373 (0.52)	0.002
Venezuela	329.355 (1.40)	3.081 (0.84)	-0.085 (-0.02)	3.166 (0.22)	0.004

The results from Table 4.16 are consistent with those of Table 4.13 where the annualised percentage real returns are greater under military governments for five out of ten stock markets being examined. These markets are Chile, South Korea, Pakistan, Thailand, and Venezuela. Moreover, the results of the test for equal coefficients in Table 4.16 similarly indicate that it is only the stock returns of Pakistan and Thailand that are significantly different from each other under military and civilian governments. Particularly for Pakistan, the test for equal coefficients indicates a difference of 12% per annum. This means the real stock returns of military governments are almost threefold over those of civilian ones. Similarly for Thailand, the real stock returns of military governments are substantially 38% per annum higher than those of civilian ones. Therefore, based on the findings from this first robustness test, it can be concluded that the results are robust to the inclusion of the world market index.

4.7.2 PERSISTENCE IN DUMMY VARIABLES

It is arguable that the results from the previous section which are found to be significant can be due to the impact of persistence or high autocorrelation in military and civilian dummy variables. Such a persistence in dummy variables typically occurs when stock returns are regressed on the dummy variable that is highly autocorrelated through time and this leads to a spurious relation between stock returns and a dummy variable when none actually exists (Ferson, Sarkissian, and Simin, 2003 and Powell *et al.*, 2007). This sub-section therefore takes into account such a problem and analyses whether the results are being influenced by the spurious regression problem.

Firstly, this study follows the suggestions of Powell *et al.* (2009) by reporting the summary statistics for the dependent and dummy regression variables of each sample market in Table 4.17 and 4.18, respectively. Then, the t-statistics that are reported in Table 4.12 together with the level of autocorrelation (AC) and transition probability of dummy variables (q) in Table 4.17 and 4.18 are checked with the table for the cut-off t-statistics that is provided in Powell et al. (2009) whether there is any prospect for a spurious regression problem. It is found that all of the sample markets pass the critical cut-off values for spurious regression bias.

Table 4.17

Summary statistics for dependent regression variables

The table presents the monthly summary statistics for the real stock returns variables of each sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. The number of observations (N) in month, mean, standard deviation (SD), and autocorrelation (AC) are reported, respectively. The mean and standard deviation of returns are in percentage term.

Country	N	Mean (%)	SD (%)	AC
Argentina	492	1.18	19.42	0.073
Bangladesh	339	3.32	48.94	-0.097
Chile	1128	0.67	9.13	0.296
Colombia	971	0.03	6.47	0.214
South Korea	552	1.16	13.62	0.196
Pakistan	587	0.22	5.44	0.176
Peru	972	0.45	11.77	0.060
Thailand	392	0.50	8.51	0.100
Uruguay	851	-0.24	16.24	-0.064
Venezuela	936	0.14	8.08	0.058

Table 4.18

Summary statistics for dummy regression variables

The table presents the summary statistics for the Military dummy regression variables of each sample markets. The sample periods vary for each sample market. This is according to the year that each stock market starts its trading. However, the end of sampling period is set at December 2007 for all markets. The number of observations (N) in month, mean, standard deviation (SD), autocorrelation (AC), and transition probability of military dummy variable (q), are reported, respectively. Transition probability is calculated by q = (1+ AR(1))/2 . The mean and standard deviation of dummy variable are in percentage term.

Country	N	Mean (%)	SD (%)	AC	Q
Argentina	492	34.55	47.60	0.983	0.9915
Bangladesh	339	30.24	46.00	0.959	0.9795
Chile	1128	25.74	43.74	0.978	0.9890
Colombia	971	6.48	24.63	0.983	0.9915
South Korea	552	55.37	49.76	0.987	0.9935
Pakistan	587	65.78	47.49	0.982	0.9910
Peru	972	28.45	45.14	0.972	0.9860
Thailand	392	16.03	36.74	0.914	0.9570
Uruguay	851	18.38	38.75	0.992	0.9960
Venezuela	936	30.02	45.86	0.982	0.9910

Secondly, to further confirm the robustness of the results, the issue of persistence in dummy variable is also addressed by using the approach advocated by Powell *et al.* (2007). In this approach, it is suggested that the regression analysis should be repeated by using one return and one dummy variable per political term. Anderson *et al*. (2008) suggest that such an

approach helps to mitigate the spurious regression problem and reduces the autocorrelation in the dummy variable. Therefore, the regression is being re-estimated with one return and one dummy variable per military/civilian regime. Notably, this robustness test is carried out exclusively for Pakistan and Thailand since they are the two markets with significant differences in stock returns between the two political regimes. The results are reported in Table 4.19, as follows:

Table 4.19

Robustness check: Persistence in dummy variable

The table presents the results from estimating regression model [4.2] on the stock market of Pakistan and Thailand by using one return and one dummy variable per each military/civilian regime. M_t and C_t denote political dummy variables where M=1 or C=1 if a military or civilian government is in office at time *t*, respectively, M=0 or C=0, otherwise. There are nine political shifts between military and civilian regime for Pakistan and 19 for Thailand. The sample period is from 1960 to 2007 and 1975 to 2007 for Pakistan and Thailand, respectively. The results are annualised and they are presented in percentage term. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are also reported in parentheses in the last column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Country	α_1 (M_t)		α_2 (C_t)		**Difference** ($\alpha_1 - \alpha_2$) = 0		R^2
Pakistan	8.906	(2.03)*	-7.459	(-1.57)	17.561	(4.14)*	0.355
Thailand	32.022	(2.77)**	-8.084	(-0.85)	43.242	(5.58)**	0.195

With this approach, it is found that the autocorrelation of the dummy variables reduces considerably from 0.982 to 0.122 for Pakistan and from 0.914 to 0.117 for Thailand. The results from Table 4.19 also show that the annualised percentage stock returns are significantly greater under military governments for both Pakistan and Thailand. Moreover, these returns are significantly different from each other under the two political regimes. The power of the statistical tests is also shown to be reasonably strong under this approach. Therefore, the findings of higher stock returns under military regimes for Pakistan and Thailand are robust to the use of one return and one dummy variable per military/civilian regime.

Despite this, there remains the chance that the differences in the stock returns between the two political regimes are due to a too small sample problem. This issue is therefore addressed next.

4.7.3 RANDOMISATION-BOOTSTRAP PROCEDURE

Since there are only nine Presidents for the Pakistani sample and 19 Prime Ministers for the Thai sample, such samples with few alternations between political regimes could potentially lead to a significant relationship between stock returns and political regimes when none actually exists. Moreover, the issue of stock market expectation may be another concern with this type of research[18]. That is, although the shifts from civilian to military regimes are naturally unexpected due to the nature of the coups and military takeovers, it is arguable that the shifts from military back to civilian regimes could be anticipated since general election dates are typically announced in advance.

Therefore to counteract such problems of small sample and market expectation, this study closely follows the approach taken by Santa-Clara and Valkanov (2003), which is the use of a randomisation-bootstrap procedure. This procedure is formally developed by Davison and Hinkley (1997) and Efron and Tibshirani (1998). It tests how likely such a difference in returns is observable across political regimes given that there is truly no association between regimes and returns. Such a procedure can be carried out regardless of the nature of stochastic disturbances or any time dependence of the data since these are eradicated through its reshuffling process (Kim, Nelson, and Startz 1991). Again, for this robustness check, the focus is on Pakistan and Thailand as these are the two markets with significant military returns premiums.

Following Santa-Clara and Valkanov (2003), the testing procedures are implemented in three steps. In the first step, a re-sampling experiment is carried out in order to find the small-

[18] We thank Katsuhiko Okada at the 2010 AFA meeting for bringing this issue to attention.

sample distribution of the t-statistic, *t*. This is done by drawing: (1) a sample of 10,000 observations with replacement from the returns series; and (2) a sample of 10,000 observations of military and civilian dummy variables independently from the returns series. This procedure helps to ensure that military and civilian dummy variables are truly independent of returns.

In the second step, with 10,000 time series of $\{r_{t+1}, M_t, C_t\}^T_{t=1}$, regression model [4.2] is re-estimated which yields a new estimate of $\hat{\alpha}_1^j$, $\hat{\alpha}_2^j$ and two new t^j. This is repeated 10,000 times for j = 1, …, 10,000. Here, r_{t+1} denotes the real rate of returns at month *t+1*. M_t and C_t denote the political dummy variable, where M or C = 1 if a military or civilian government is in office at time *t*; M or C = 0, otherwise.

From step two, there are now series of α_1^j and α_2^j. The bootstrapped distributions of *t* are the distribution of the 10,000 draws of t^j. The mean of the bootstrapped distributions of $\hat{\alpha}_1$ and $\hat{\alpha}_2$ are denoted by $\bar{\hat{\alpha}}_1$ and $\bar{\hat{\alpha}}_2$. Under the null hypothesis that returns during military and civilian governments must be equal to each other and to the unconditional mean, this implies that $\bar{\hat{\alpha}}_1$ should equal to $\bar{\hat{\alpha}}_2$ ($\bar{\hat{\alpha}}_1 = \bar{\hat{\alpha}}_2$).

Therefore, in step three the two-sided bootstrapped p-value is computed by determining the percentage of situation where the bootstrapped t^j is larger and smaller than the *t* calculated from the original sample. That is, $P_{boot} = \left(\#\{t^j \geq t\} + \#\{t^j \leq -t\} \right)/10{,}000\big)$, where $\#\{t^j \geq t\}$ denotes the number of bootstrapped t^j's that are higher than the computed *t* statistic; and $\#\{t^j \leq -t\}$ denotes the number of bootstrapped t^j's that are lower than the computed - *t* statistic. Table 4.20 presents the results from the bootstrap tests for the stock markets of Pakistan and Thailand.

Table 4.20

Robustness check: Randomisation-bootstrap test

The table presents the results from estimating randomisation-bootstrap test on Pakistan and Thailand. M_t and C_t denote political dummy variables where M=1 or C=1 if a military or civilian government is in office at time *t*, respectively, M=0 or C=0, otherwise. The sample period is from 1960 to 2007 and 1975 to 2007 for Pakistan and Thailand, respectively. The results are annualised and they are presented in percentage term. The numbers in square brackets are the mean of the corresponding parameter from the bootstrap samples. The last line represents the p-value from the bootstrap samples.

Country	$\hat{\alpha}_1$ **(**M_t**)**	$\hat{\alpha}_2$ **(**C_t**)**	**Difference** $(\hat{\alpha}_1 - \hat{\alpha}_2) = 0$
Pakistan	6.974 [2.81] 0.06	-5.012 [2.81] 0.50	12.562 [0.00] 0.07
Thailand	35.962 [6.19] 0.04	2.155 [6.19] 0.49	33.161 [0.00] 0.08

The numbers in the first line represent the estimated value of the parameters. The numbers in square brackets are the mean of the parameter from the bootstrap samples. Noticeably, these numbers are identical across the two political regimes. This is because under the assumption that returns are independent of the political variables, the average returns under military and civilian governments should be equal to each other and to the unconditional mean. The numbers in the last line represent the bootstrapped p-value.

The null hypothesis of no military returns premium implies that $\hat{\alpha}_1$ should equal to $\hat{\alpha}_2$ ($\hat{\alpha}_1 = \hat{\alpha}_2$). It is found that the difference between the two political regimes remains statistically significant for both Pakistan and Thailand, at the 10 percent level, using the randomisation-bootstrap method. The strength of the results from this robustness check thus supports earlier findings that the stock markets of Pakistan and Thailand perform better under military regimes.

4.7.4 DATA MINING

It is arguable that, like much of the literature that examine stock market anomalies, the military returns premium may be the product of data mining since this study is largely motivated by a postulation rather than by a theoretical framework. However, it must be remarked at this point that the political regime dummy variables used in this study are strictly mutually exclusive to either a military or civilian one. The sample markets are thus restricted to those that have a history of more than one alternation between military and civilian governments. Hence, the results presented are not preceded by the search for a potential anomaly. In this regards, the issue of data mining should not be an issue for this study.

4.8 DISCUSSION OF RESULTS

Overall, there is evidence that once the influences of short-term interest rates, outliers, and the error terms are controlled, the annualised percentage returns are greater under military governments for six out of ten markets being examined. However, these returns are only statistically significant in two markets being Pakistan and Thailand. In particular, it is found that the military returns premiums for Pakistan and Thailand cannot be explained by stock market volatility and are statistically significant to the control of worldwide stock market movements as well as to the test of spurious regression bias and randomisation-bootstrap.

Such outcomes are rather puzzling and raise the intriguing questions of why the stock returns of Pakistan and Thailand cannot be explained by these risk factors. Advocates of behavioural finance such as Statman (1999) and Thaler (1999) suggest that, apart from the risk factors, stock prices can also reflect the "psychological" factor such as investors' sentiment. In light of this, it is found by Bunbongkran (1992), Durani and Grare (2006), Maisrikod (2007), Mikami and Inoguchi (2008), and Zaidi (2009) that the general public of both Pakistan and Thailand holds a positive attitude toward military takeovers and similarly perceives military movements as a way to resolve political turbulence. The results from this study show some support for the above findings since such a positive attitude toward military governments is

reflected in equity pricing and the military returns premiums that are found in both the stock markets of Pakistan and Thailand[19].

Specifically for Pakistan, a lack of political stability is a hallmark of the country ever since the last century. To restore order and stability, military leaders frequently step in and dismiss civilian governments based on similar charges which are corruption and cronyism. Durrani and Grare (2006) assert that one common factor among several military takeovers in Pakistan is the general acceptance of such military movements by the general public. According to Zaidi (2009), civilian governments are often accused of unsatisfactory performance in meeting the expectations and hopes of the electorate while military leaders are able to create stability in the political sphere as they take a bold and straightforward approach to the nation's problems. Such an approach creates confidence that is desired and welcomed by the public. Zaidi (2009) further suggests that because of the fear of the military, there are fewer criticisms against the government. This essentially makes the government less sensitive to any disparagements and means they can concentrate on solving problems. In a sense, such a military ideology might help to explain why there are significantly positive stock returns for Pakistan during periods of military rule which could not be explained by any economic or risk factors.

Under similar circumstances as Pakistan, a possible explanation for the military returns premium for Thailand can be traced back to its political system. Since the overthrow of absolute monarchy in 1932, Thailand has been governed under a constitutional monarchy. This by itself is different in many aspects from the system of democracy in several developed countries. Since this transition, the military has played a significant role in the formation of Thailand's democratic system. Notably, it regards itself as a proud protector of the people and the monarchy (Kitiarsa, 2006). According to Ockey (2001) who examines the past operations and traditions of the Thai military, it is found that military always has a major role in Thai society and politics. Finer (1976, p.21) states that "where public attachment to civilian

[19] Contrary to May, Lawson, and Selochan (1998)'s finding that military regimes generally suppress economic growth and freedom which would lower investors' confidence in financial markets, this study observes that the shifts from civilian to military regime do not lead to negative responses in returns. In fact, there are positive stock market returns during the first month in which the military is in control of the government, particularly for Pakistan and Thailand. Hence, for these two countries, military interferences in politics do not appear to cause adverse effects on the stock markets.

institutions is strong, military intervention in politics will be weak...where public attachment to civilian institution is weak or non-existence, military intervention in politics will find wide scope – both in manner and in substance". Moreover, it is pointed out by Kitiarsa (2006) that the Thai military is prepared to carry out its traditional role of defending the King and the nation even if this means stopping the country's development of democracy. Therefore, it is not unordinary to see Thai royal armed forces seize power from popular governments that are democratically elected into parliament, with the accustomed reason for such seizures being corruption and abuse of power. This recurring sequence of political events is somehow a vicious cycle in Thai politics.

Consequently, Thailand is a country that experiences an average of one attempt or successful military coup every four years since the ruling transition in 1932 (Ponguudhirak, 2003). Such a statistic is quite remarkable in itself. However, what is even more intriguing is the fact that coups seem to be fairly acceptable by the general public (Bunbongkran, 1992 and Mikami and Inoguchi, 2008). To a certain extent, the coup is being perceived as a Thai way of resolving political problems. Numerous leading public scholars, such as Professor Saneh Chammarik and Dr. Pravej Wasi, concur that such a perception does exist in the Thai society (Maisrikrod, 2007). This clearly illustrates how the public welcomes and supports the move by the military and how the coup can bring an immediate relief for most Thais as it can put an end to the country's political crisis and bring a sense of stability back to the country. In response, this helps to boost the confidence of businesses as well as investors in the financial market. Therefore, one of the possible explanations for the military returns premium in Thailand is the military mindset that Thai society in general has about coups and military takeovers.

On the whole, this study provides a feasible psychological factor which may have driven investors' sentiments in these two markets. It appears that Pakistanis and Thais share a similar perception about military involvement in politics. That is, the general public holds a positive attitude toward military governments. In a sense, such a military mindset helps to explain the military returns premiums that are found in Pakistan and Thailand. Nonetheless, the justifications given in this study are suggestive rather than conclusive and there may be other factors which could explain such puzzling outcomes. The empirical findings from this

study simply highlight that military government is a stock price factor for Pakistan and Thailand and military government in itself does not appear to increase the risk level of investors' portfolios.

4.9 CONCLUSIONS

The relationship between military rule and asset pricing has attracted very little attention from finance researchers. From a sample of ten emerging markets where military rule is common, this study provides evidence that there is no significant difference in stock returns between military and civilian governments for eight of the ten markets being examined. Such a finding indicates that military rule is not a stock price factor in these eight emerging markets.

However, there is evidence for military returns premiums in two markets being those of Pakistan and Thailand. The stock returns under military governments for these two markets are significantly higher than under civilian ones. These military returns premiums are additional to what could be explained by the economic cycle fluctuation, extreme stock market slumps, error term, and stock market volatility. Besides, this finding holds when allowing for world returns correlations, persistence in dummy variables, and randomisation-bootstrap robustness checks.

Despite the fact that a highly profitable trading strategy based on the prediction of the occurrence of a coup is almost impossible to be designed due to the unpredictability of its occurrence, the findings show that holding or investing in either Pakistani or Thai stock markets during a period of military control can provide an opportunity for a military return premium. Moreover, the findings also show that the periods of military governments for these two countries do not necessarily accompanied by financial market shocks and fluctuations due to the changes in policies made by military-led cabinets and the suppression of democracy to its lowest echelon. This contradicts the customary view of the financial markets during periods of military governments.

As a result, this study provides important knowledge for investors on their portfolio formations and allocations of investments. Particularly for those who would like to invest in Pakistan and Thailand, this study brings to light how such a shift from civilian to military government does not increase the risk level of their investment portfolios. However, it must be remarked that such military returns premiums observed in these two countries appear to be country-specific and thus cannot be applied to all countries under military governments.

Lastly, it must be noted that Pakistan and Thailand, as well as many other emerging markets, are relatively new democratic countries where democracy is still not yet fully developed. Also, the rule of law is still not truly and effectively exercised. The root of military coups typically comes from intolerable abuse of power by political figures and corruption, especially within a government (Hopkins, 1966; Jackman, 1976; and Pinkney, 1990). As asserted by Winichakul (2008), it is well-known that corruption and abuse of power for personal interest is particularly widespread and they are common problems in the electoral politics of emerging markets. Such common problems have remain unsolved for many decades and it is likely to remain a problem unless there is a major reform on the country's political structure together with a radical change in politicians' attitude and morality. Without these changes, these prior studies suggest that the military-civilian-military political cycle is likely to be seen yet again in the future. For this reason, this study on the effect of political regimes on stock returns provides important information for prospective investors who seek to invest in emerging capital market, particularly in Pakistan and Thailand.

Given such a unique characteristic of Thai's equity market, the next chapter presents the third essay of the thesis which examines the relationship among corporate political connectedness, stock returns, and firm values in Thailand. Particularly, the study is interested to examine whether the level of political connection is a stock price factor in Thailand and whether there are differences in firm's financial performances among firms with different level of political connection.

CHAPTER FIVE

ESSAY THREE:

POLITICAL CONNECTIONS & STOCK RETURNS

This chapter presents the third essay which investigates the relationship among political connectedness, stock returns, and firm values in Thailand. A brief overview of the influences of political connectedness on Thai businesses is provided in Section 1 of the chapter. Section 2 discusses prior evidence on the link between political ties and Thai equity markets. Section 3 proposes the hypotheses. Section 4 provides data description and descriptive statistics. Sections 5 and 6 present the test methodologies and empirical results, respectively. Section 7 outlines the series of robustness tests. Sections 8 and 9 discuss the results and conclude this essay, respectively. The essay's appendix and reference list is presented in the last section of this thesis.

5.1 INTRODUCTION

There is international evidence of the relationship between political connections and firms values. These are documented for countries with weak as well as strong legal systems. However, the findings from these studies are inconclusive. Ang, Ding, and Thong (2010) and Wu, Wu, and Rui (2010) suggest that the country's institutional environment is likely to be the main influencing factor of conflicting results. It is found by Faccio (2006, 2010) that political connections are most valuable for countries with weak legal systems, high government intervention and corruption. All of these are the characteristics of emerging markets in general.

Accordingly, it is documented by, for example, Fisman (2001), Fraser, Zhang, and Derashid (2006), and Luez and Oberholzer-Gee (2006) that there is a potential link between political patronage and firms in the Asian emerging markets. Furthermore, Johnson and Mitton (2003) and Imai (2006) also provide evidence that politically connected firms in Asia benefit from private economic rents in addition to being exempt from certain rules and regulations. These priorities help politically connected firms to gain higher market share and profitability than non-connected firms; and, for this reason, there are pressures placed on firms in establishing and maintaining political ties in order to remain competitive. Such a reliance on political power points toward an inseparable nexus between politicians and businesses in these markets.

Whilst the above facts are well documented, the relationship between political connectedness and stock performance in the Asian emerging markets still receives little attention from finance researcher. Despite the fact that politically connected firms receive higher protection and greater economic benefits, it remains questionable as to whether the stock market participants would incorporate such a factor into their investment decisions and whether this would be a factor in stock pricing. This study aims to fill this gap in the current literature and answer these questions by focusing on one particular Asian emerging market, Thailand. This is because it is one of the Asian emerging markets where there is a solid presence of large politically powerful business groups. More importantly, politics in Thailand is renowned to

be strongly associated with corruption, cronyism, and economic rent-seeking. Altogether, this makes it an ideal venue to conduct this type of research.

In financial theory, the efficient market hypothesis (EMH) suggests that stock prices in an efficient market reflect all known information. It is therefore arguable that one should not observe any differences in stock returns since publicly available information should already be fully reflected in stock prices of an efficient market. However, in the case of political connections in Thailand, it can be difficult to trace corporate political connectedness through publicly available information since there is close public scrutiny on listed firms for any misconduct such as insider trading. Moreover, Thai politicians also have to conceal their affiliations to firms so as to avoid violating the law[20]. Hence, politicians often use nominees and shell entities to reduce transparency and obscure the true connections between firms and themselves. This makes corporate political connectedness to be unobservable at the surface level and a thorough investigation is required to reveal the link between two parties. It is therefore believed that the Thai stock market offers an attractive research setting and provides the unique opportunity to analyse the impact of political connections where information on such connections could not be fully priced.

This study sheds further lights beyond previous literatures such as Imai (2006), Chantrataragul (2007), and Bunkanwanicha and Wiwattanakantang (2009) that investigate the relationship between political connectedness and firm performance in Thailand. However, the level of investigation in this study is more comprehensive than the earlier ones in at least four aspects: (1) the scope of study; (2); the sampling period; (3) the levels of political connection; and, (4) industrial analysis.

Firstly, this study aims to investigate the effect of political connections on stock performance in addition to the accounting performance of listed firms in Thailand. Despite the fact that these two performance measurements may be interrelated since investors generally rely on firms' fundamental values in their stock selection process, an investigation on how political

[20] Under Section 4,5,6,16,17,and 18 of the Management of Partnership Stakes and Shares of Ministers Act B.E.2543. And, under Article 128 and 269 of the Constitution of Thailand B.E. 2550.

connectedness has an impact on both stock and accounting performance remains essential. Such an investigation will provide a comprehensive outlook on the relationship between political ties and firm values in Thailand. To the researcher's knowledge, no prior studies have yet examined the effect of political connections on both of these firms' performance concurrently.

Secondly, the sample period of this study dates back until 1987. This is when the stocks become actively traded since the start up of the Stock Exchange of Thailand (SET) in 1975. To date, the existing literature only covers the period of 2001 to 2004. Since the Thai's Securities Exchange Commission (SEC) was not established until 1992, the earlier period is particularly interesting for analysis. This is especially true in light of corporate governance regulations which are weakly enforced on listed firms[21]. Moreover, restrictions on the relationship between politicians and firms were also virtually absent at that time. This provides opportunity for firms to allocate their shares to politicians and use inside information to influence stock prices for large profits (Sitthipongpanich, 2004).

Thirdly, it is found by Faccio (2010) that politicians do not have equal influence in all countries. Using the data from 1996 to 1999, she finds that connected firms in 47 sample countries have stronger market power than non-connected firms. Moreover, there are differences in market power among politically connected firms. Particularly, firms connected to the Prime Minister are found to have greater market power than those connected to Members of the Parliament. Such a finding motivates this study to investigate whether the different levels of political connection between the Thai executive body and publicly listed firms are fundamental in explaining the stock returns and financial performance of firms in Thailand. Specifically, this study tests whether firms with connections to the Prime Minister have superior stock and financial performance than firms with other types of connections.

[21] Listed firms in Thailand are often being charged with lack of good corporate governance practice. See, for example: Alba, Claessens, and Djankov (1998); Pomerleano (1999); and, Claessens, Djankov, Fan and Lang (1999).

Accordingly, the connections to politicians are categorised into four levels. These consist of the connections to: (1) Prime Minister; (2) Cabinet Members; (3) Members of Parliament within coalition parties; and (4) Members of Parliament within opposition parties. Furthermore, the connections within listed firms are also being distinguished into those connected through the Board of Directors or shareholders. It is believed that such an investigation distinguishes this study from all existing literature. To the researcher's knowledge, this study is the first to carry out such a detailed investigation on political connections for the Thai securities market.

Lastly, prior studies find that entry and the ability to obtain projects in certain sectors in Thailand are based on the strength of political connections (Pathmanand, 1998; Intarakumnerd, 2000; and, Intarakumnerd, Chairatana, and Tangchitipiboon, 2002). This is particularly the case for restrictive industries such as resources and telecommunication. Such findings imply that, for a given industry, political connections and the level of connection can have significant impact on the economic life of Thai firms. Therefore, this study investigates and provides evidence as to whether the different levels of political connection are important in explaining stock returns for each of the industries in Thailand. Besides, it aims to highlight whether the impact of different levels of political connection on stock returns varies across the different industries. Since firms in a restricted and highly competitive industry require more protection and preferential treatments from politicians than firms in other industries, it is conjectured that the impact of different levels of political connection on stock returns would vary from one industry to another. This study is believed to be the first to conduct such an analysis on Thai securities market.

This study is organised as follows. Section 4.2 discusses prior evidence on the relationship between political ties and the Thai equity markets. Section 4.3 proposes the research objectives and hypotheses. Section 4.4 provides data description and descriptive statistics. Section 4.5 outlines the test methodologies. Sections 4.6 and 4.7 present the empirical results and robustness tests, respectively. Section 4.8 discusses the results and Section 4.9 concludes this study.

5.2 POLITICS, BUSINESS, AND THAI'S SECURITIES MARKET

The involvement of politicians in business is not a new phenomenon in Thailand. In fact, it is relatively common to see a repeated pattern of political scandal and allegation of corruption by Thai politicians. Evidently, none of the elected governments, except only one, can complete a four-year term. Parliament is always dissolved by the Prime Ministers, or else there are military takeovers. Usually, the latter arises as a result of the pressure from the public, who accuses the government of inefficient administration, corruption, and favouritism toward individuals and businesses in its network ties. Such a political-business nexus in Thailand creates what is called a "crony economy" in which the Thai economy grows with the growth of business groups that have connections to the government (Pomerleano, 1999). In such a scenario, politicians in power typically provide preferential treatments to connected firms and facilitate business operations such that it creates a monopolistic environment which protects these businesses from competitions (Chaithanakij, 2006). For example, Charumilind *et al.* (2006) document that connected firms in Thailand are able to obtain more long-term loans than non-connected ones. With better financing, this helps connected firms to have superior financial results and market power over their non-connected counterparts. Essentially, this shows that establishing political connections is vital for Thai businesses and gaining helps from political ties is a common factor in Thai business operations.

It is found by Shleifer and Vishny (1994) and Svensson (2003) that establishing and maintaining political connections can be difficult and often costly for business owners. This is particularly the case for Thailand since there are frequent turnovers of the government which make it costly to re-establish and retain connection with those in power. To counteract such a problem, business tycoons prefer to seek positions in the government themselves or instead ensure positions for their family members (Bunkanwanicha and Wiwattanakantang, 2009). By doing so, not only could they make rent-seeking more efficient and less costly, but also they are able to secure the details of negotiation to be within the family.

Accordingly, a study by Imai (2006) empirically examines whether political participations of family businesses yield private economic payoffs in Thailand. By focusing on the accounting

and profitability ratios such as net profit-to-assets ratio and operating profit-to-asset ratio during the period of 2001 to 2005, she finds that firms which are owned or managed by family members of politicians have higher profitability than those competing within the same industry. Moreover, by categorising firms into those with and without family members in the cabinet, she finds that firms have higher profitability when their family members are in the cabinet. This result implies that Thai politicians offer different levels of political influence, which lead them to differ in their abilities to deliver private rents to the connected firms. Imai (2006) therefore concludes that the level of political connection is important for family businesses in Thailand. Her findings also highlight the fact that political connections in Thailand are not concentrated to a single politician like the neighbouring countries such as Indonesia and Malaysia where political connections can be found with a single powerful political figure like Suharto or Mahathir, respectively. Despite this, it must be pointed out that the sampling period of Imai (2006) is relatively short. There is only one administration during the sampling period of 2001 to 2005, which was the first administration of Dr. Thaksin Shinawatra. Notably, this administration is different from all the previous ones since both the PM and almost all cabinet members are business tycoons or a member of large business families. Thus, the study by Imai (2006) is highly subjected to a sampling bias with time-invariant political connection variables.

As for those firms whose owners do not enter politics but seek to establish and maintain political connections, Faccio (2006) asserts that they are likely to 'bribe' a politician by offering him/her a position as a director in the firm rather than offering company shares. In fact, such a company practice is extensively found in Malaysia by Gomez and Jomo (1997). For Thailand, however, the offering positions are typically delegated to the family members of the politicians in order to conceal the connections and to avoid violating the laws[22]. In such a case, firms may believe that having a politically connected director on the board can signify to investors that there are political ties to facilitate their business operations, and, thereby hoping that this would help to boost investors' confidence and bid up the stock prices of their firms. Limpaphayom & Connelly (2004) find that Thai boards frequently contained 'connected' directors such as representatives from suppliers, customers, or professional

[22] Under Section 4,5,6,16,17,and 18 of the Management of Partnership Stakes and Shares of Ministers Act B.E.2543. And, under Article 128 and 269 of the Constitution of Thailand B.E. 2550.

service suppliers. This suggests that directors in Thailand are typically appointed on the basis of usefulness rather than their monitoring abilities or the knowledge and experiences that they could meaningfully contribute to firm.

In January 1998, a new set of regulations was introduced by the Stock Exchange of Thailand (SET) and the Security Exchange Commission (SEC) which requires the appointment of at least two independent directors. The guidelines on best practices for directors were also concurrently announced. Yet, prior studies such as Alba, Claessens, and Djankov (1998), Pomerleano (1999), and Claessens, Djankov, Fan, and Lang (1999) consistently report that there remains a lack of good corporate governance practice in Thailand. The problem does not lie in the number of independent directors but in the quality of their contributions to firm performance. Furthermore, Chaithanakij (2006) asserts that, despite providing written guidelines and policies on corporate governance for listed firms, the SET and SEC, being under the government control, ebb and flow with political tides and leave the implementation of the policies opens for each firm's own design. With good faith, many listed firms attempt to improve their corporate governance practices in order to keep abreast with the international standard. However, since firms still rely on political power and seek to place politically connected individuals onto the board, such pressure makes improvement on corporate governance standard difficult and almost impossible to implement in this context.

After the Asian Financial Crisis, Thailand underwent a major institutional development under the new constitution in 1997. A number of new institutions were formed to counteract corruption which is one of the country's biggest problems and also one of the main causes of the crisis. These institutions are, for example, the Election Commission, the National Counter Corruption Commission, and the Constitutional Court. Moreover, in order to increase checks and balances in the parliament, Senators are elected for the first time as opposed to being merely appointed by political parties. The 'Thai Rak Thai' party of Prime Minister (PM) Thaksin Shinawatra won the first general election in 2001 under the 1997 constitution.

Under the Shinawatra administration, the public began to doubt whether such a constitutional reform truly helps to reduce conflict of interests and improve the quality of governance in

Thailand since politicians continue to take advantage of shortcomings within the system. For example, politicians transfer the shares that they hold in their own companies or of any companies to their family members so as to avoid the law that limits any shareholding by Members of the Parliament (MPs) in any company to five percent[23]. It is through this way that politicians are able to maintain their economic interests in their family businesses and hold public office simultaneously.

Furthermore, during Dr. Thaksin Shinawatra's administration, the independence and integrity of the National Counter Corruption Commission (NACC) was being questioned since it is found that he is able to place several political allies on the commission (Imai, 2006). Because of such a weak institution and lack of a checks and balances system, it is found that Dr. Thaksin Shinawatra is able to provide enormous private rents to his political networks. For example, Imai (2006) and Bunkanwanicha and Witwattanakantang (2009) find evidence that there are significant reductions in licensing fees and taxes for his family firms[24]. Besides, a number of mega projects and state concessions are granted to firms with political ties during his administration. Various other rules and regulations are also amended so as to benefit his business empire[25]. As a result, Bunkanwanicha and Witwattanakantang (2009) find that the market-to-book ratio of firms connecting to Dr. Thaksin Shinawatra increased tremendously by 242.16%, during just the two years after he entered office. Specifically, the majority of these connected firms belong to Technology sector which is a regulated sector in Thailand.

[23] Under Section 4,5,6,16,17,and 18 of the Management of Partnership Stakes and Shares of Ministers Act B.E.2543. And, under Article 128 and 269 of the Constitution of Thailand B.E. 2550.

[24] Imai (2006) states that 'ITV' which is a television station owned by the family firm of Dr. Thaksin Shinawatra benefits from the government decision to cut the television licensing fees. Moreover, the airport authority also provides a discount on airport fees for 'Thai Air Asia' which is an airline that his family firm, Shin Corporation, has a 50 percent stake.

[25] There are several anecdotes to support this argument. One of this is concerning SC Assets Plc. It is a company that is ultimately owned by the Shinnawatra family. SC Assets is accused of profiting from the Cabinet resolution on July 4, 2003, when Dr. Thaksin Shinnawatra was the Prime Minister (Bunkanwanicha, Fan, and Wiwattanakantang, 2008). This resolution approves a project in which a new road is to be constructed in Bangkok from Ratchadapisek to Ram-Intra. After this resolution, the value of the property development project of SC Assets increases immediately as it has large plots of land surrounding that area (The Nation, September 26, 2006). It is debatable whether this is a matter of pure coincidence or a well planned plot.

Another case is the purchase of land at Ratchadapisek, Bangkok, by Khunying Potjaman who is Dr. Shinnawatra's wife during the time that her husband is the PM. The land is purchased from the Financial Institution Development Fund, which is controlled by the Ministry of Finance, at what is believed to be an undervalued price. This later leads the Supreme Court's Political Crime Section to sentence Dr. Shinnawatra to two year imprisonment. The Court rules that the couple breaches Article 100 of the National Counter Corruption Act, which prohibits state officials and their spouses from doing business with a state agency (Bangkok Post, February 15, 2010).

A number of literatures such as Agrawal and Knoeber (2001), Johnson and Mitton (2003), Fan *et al.* (2007), Boubakri *et al.* (2008), and Faccio (2010) document that political connections are more prevalent and essential for some industry than others. The pervasiveness of private rents received by connected firms in regulated sectors is specifically found in China. Fan *et al.* (2007), who use a Chinese dataset from 1993 to 2001, find that there is a cross-industry variation in the appointment of politically connected CEOs. Particularly, the highest percentage of politically connected CEOs appears to be in the restricted sectors such as the natural resources and utilities sectors. This finding highlights the fact that economic liberalisation which takes place in China does not mean an end to regulatory power of the Chinese government. Similarly for Thailand, the Thai government still has considerable power over resources allocation, regulatory changes, and access to restricted markets. Intarakumnerd (2000) and Intarahumnerd *et al.* (2002) assert that entry into highly regulated sectors in Thailand relies heavily on the firms' degree of political connectedness. This is particularly the case of technology and transportations sectors. Pathmanand (1998), for example, stresses that the chances of obtaining the telecommunication and mass transit projects largely depend on whether or not firms have political connections. This is because the authority to award these projects are in the hands of politicians who administered these respective ministries. Altogether, these findings highlight the importance of political patronages for restricted industries in Thailand. This study therefore believes that the stock returns and financial performance of politically connected firms are in part associated with the type of industry. In this regard, the differences in the stock returns and financial performance of firms with different levels of political connection among the different types of industry should be observed.

Lastly, it is found by Faccio (2006) that the Thai stock market had a relatively large domination of politically connected firms during 1996 to1999. Approximately 15.05% of listed firms are politically connected. This ranks Thailand in fourth place behind Indonesia, Russia, and Malaysia, respectively, for the country with the highest concentration of politically connected firms listed on the national stock markets, out of the 47 sample countries. More importantly, these politically connected firms represent 41.62% of the Thai stock market capitalisation. This places Thailand in the second place behind Russia as the

country where politically connected firms account for a high percentage of market capitalisation. Such findings, together with a distinctive political and business background, show that Thailand is an ideal setting for the analysis of the impact of political connections on stock returns.

5.3 RESEARCH OBJECTIVES AND HYPOTHESES

There is evidence that political patronage is important for firms in Thailand. By being politically connected, firms receive private economic rents and preferential treatments which help them to gain higher market shares and profitability (i.e. Faccio, 2006; Imai, 2006; and, Bunkanwanicha and Witwattanakantang, 2009). Accordingly, these connected firms are found to have higher firm values than their non-connected counterparts. Whilst these facts are well documented, the relationship between political connectedness and equity performance in Thailand still receives very little attention from academics.

Therefore, the major research objective for this study is to investigate the relationship among political connectedness, equity performance, and accounting performance of listed firms in Thailand. Particularly, this study aims to investigate whether the difference levels of political connection are important determinant of both stock and accounting performance of Thai listed companies. There are four different levels of political connection being examined. These four levels categorise firms into those with connections to (1) Prime Minister (PM); (2) Cabinet Ministers (CM); (3) Member of Parliaments within coalition parties (MPC); and (4) Member of Parliaments within opposition parties (MPO). Such a classification of different levels of political connection distinguishes this study from all prior ones.

Four null hypotheses are developed for testing:

Hypothesis 1: There are no differences in terms of explanatory power among the different levels of political connection on stock returns of firms in Thailand.

If this first hypothesis holds, it indicates that the different levels of political connection are not important determinant of stock returns in Thailand. Since prior studies such as Imai (2006) only examine family firms' profitability and categorises these firms into those with and without political connections to Cabinet members, the result from testing this hypothesis provides important knowledge as to whether Thai politicians offer different levels of political influences on the equity returns of all listed firms in Thailand.

Furthermore, a number of literatures such as Agrawal and Knoeber (2001), Johnson and Mitton (2003), Fan *et al.* (2007), Boubakri *et al.* (2008), and Faccio (2010) document that political connections are more prevalent and essential for some industries than others. Fan *et al.* (2007), for example, find that Chinese firms in highly regulated industries tend to rely more on political connections than firms in other industries. It is therefore interesting to investigate whether such findings can be applied to Thailand where the government has similar control over resources allocation. Accordingly, Hypothesis 2 tests whether the different levels of connection are important in explaining stock returns of firms across eight different industries in Thailand. These industries consist of: (1) Agro & Food; (2) Consumer Product; (3) Financials; (4) Industrials; (5) Property & Construction; (6) Resources; (7) Services; and (8) Technology. Such an analysis further distinguishes this study from all prior ones since there is not yet any empirical study that investigates the effect of political connections on stock returns in Thailand, at an industrial level analysis. Hypothesis 2 is as follows:

Hypothesis 2: There are no differences in terms of explanatory power among the different levels of political connection on stock returns of firms belonging to the different types of industry in Thailand.

If this hypothesis holds, it signifies that there are no differences in stock returns of firms that are connected to the Prime Minister, Cabinet Ministers, Member of Parliaments within coalition parties, or Member of Parliaments within opposition parties, across the eight

industries. That is, the different levels of political connection are not the key factors that drive the stock returns of firms belonging to the different types of industry in Thailand.

In addition, it is interesting to examine each industry independently as to whether the different levels of political connection are important in explaining stock returns of firms within each particular industry. Hypothesis 3 is therefore as follows:

Hypothesis 3: There are no differences in terms of explanatory power among the different levels of political connection on stock returns of firms within each industry in Thailand.

If this hypothesis holds, there is evidence that there are no differences in stock return of firms that are connected to the Prime Minister, Cabinet Ministers, Member of Parliaments within coalition parties, and Member of Parliaments within opposition parties within each industry. This indicates that the different levels of political connection are not important determinant of stock returns of firms within each industry in Thailand.

Lastly, Imai (2006) shows that firms which are owned or managed by family members of politicians have higher profitability than those competing within the same industry. However, the profitability is measured in terms of net profit-to-assets ratio and operating profit-to-asset ratio during the sampling period of 2001 to 2005. Moreover, by categorising firms into those with and without family members in the cabinet, Imai (2006) finds that firms have higher profitability when their family members hold the Minister positions. Despite this, this study believes that such a sampling period is too short. Besides, by examining only two levels of political connection and since there is only one administration during the sampling period, her results can be misleading and subjected to sampling bias.

Therefore, by using six financial performance ratios which consist of: (1) Return on Assets (ROA); (2) Price-to-Earning (PE); (3) Market-to-Book (M/B); (4) Dividend Yield (DY); (5)

Fixed-to-Total Assets (AT); and, (6) Sales-to-Assets (FE), this study determines whether the four different levels of political connection are important determinant of firms' financial performance in Thailand during the period of 1987 to 2008.

Hypothesis 4: There are no differences in terms of explanatory power among the different levels of political connection on financial performance of listed firms in Thailand.

If this hypothesis holds, it indicates that the different levels of political connection are not important determinant of financial performance in Thailand. By testing this hypothesis, the results provide important knowledge as to whether the Prime Minister, Cabinet Ministers, Member of Parliaments within coalition parties, and Member of Parliaments within opposition parties offer different levels of political influence on listed firms' performance in Thailand over the 21 years sampling period.

5.4 DATA DESCRIPTION

5.4.1 DEFINING VARIABLES

A 'politician' in this study is defined as any individual who is: (1) Prime Minister (PM); (2) Cabinet Minister; or (3) Member of Parliament (MP). Under the Thai constitution, politicians including their spouses are prohibited to hold more than five percent of shares in any company[26]. This is for the purpose of reducing any conflict of interest. Yet, Thai politicians typically overcome this limitation by transferring their shares to family members, who then commonly sit as executive or non-executive directors of the companies. Such a practice is regularly seen in companies that are previously run by politicians before they enter politics. This allows politicians to hide their private interests and still retain control of their businesses.

[26] Under Section 4,5,6,16,17,and 18 of the Management of Partnership Stakes and Shares of Ministers Act B.E.2543. And, under Article 128 and 269 of the Constitution of Thailand B.E. 2550.

A ‘family member’ is defined as any individual with the same surname in addition to close family members who are linked to the family by marriage. It is believed that surnames can be used to trace family relationship as they are very unique in Thailand. That is, it is required by law that each surname must be distinctive particularly through the way they are spelt (Bunkanwanicha and Wiwattanakantang, 2009). Besides, only individuals that belong to a particular family are allowed to use that particular surname. As for the link by marriage, this is included providing that it is covered by Sappaiboon (2000, 2001) whose two books specifically identify the connections found amongst Thai business families[27]. This source is also being referred to by earlier studies such as Chantrataragul (2007), Bunkanwanicha *et al.* (2008), and Bunkanwanicha and Wiwattanakantang (2009). By using this source, Chantrataragul (2007) finds that political connections have no impact on the level of firm risk. Moreover, there is evidence that connections to the Cabinet Ministers have positive effects on firms’ profitability during the year 2001 to 2004, which concurs with the finding of Imai (2006).

Similarly, by using Sappaiboon (2000, 2001)’s two books, Bunkanwanicha *et al.* (2008) and Bunkanwanicha and Wiwattanakantang (2009) find that family networks of politicians help to provide information that is important in gaining access to state resources and contracts. More specifically, they find that those firms whose family members have top positions in the government are able to capture higher market shares in Thailand. It is therefore believed that these two books by Sappaiboon (2000, 2001) are appropriate sources for establishing the link by marriages among Thai business families. Nevertheless, for additional references on family relations particularly for those affiliated with big business groups, this study also cross check with prior literatures and Thai local newspapers of various issues and various years for added confirmation[28].

[27] These two books specifically specify the time of marriages. Thus, the study is able to pin point the time in which the connections were established.

[28] Previous literatures are, for example, Imai (2006); Polsiri and Wiwattanakantang (2006); Bertrand, Johnson, Samphantharak, and Schoar (2008); and, Bunkanwanicha *et al.*(2008). Newspapers are, for example, Manager Online; The Nation; Krung Thep Turakij; Thairath; Post Today; and Bangkok Post.

A number of literature documents that the most common large shareholders around the world are family members (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Morck, Stangeland, and Yeung, 2000; Faccio and Lang, 2002; Anderson and Reeb 2003; and, Villalonga and Amit, 2006). In practice, a sizable portion of Thai businesses are controlled by families. A notable feature of family business is the concentrated ownership and board structure. The coupling of management and ownership is too a norm. Listed firms are of no exception since a vast majority of them start out as family businesses. Polsiri (2004) finds that both executive and non-executive positions are typically filled by relatives in order to keep decision making power within the family.

Accordingly, Bertrand *et al.* (2008) document that it is fairly common for the proportion of shares to be spread and held among family members for Thai listed companies. However, with such a corporate governance structure and the spread of shares, there can be no major shareholder since no particular individual holds a large enough number of shares. Taking this fact into account, if individuals with the same surname including the family members that are linked by marriage and the companies ultimately owned by them hold shares which in aggregate exceed the 10 percent threshold, these individuals are collectively regarded as a 'single major shareholder'. This cut off point is also used by prior studies such as La Porta *et al.* (1999), Claessens, Djankov, and Lang (2000), Faccio (2006), and Bunkanwanicha *et al.* (2008). Moreover, it is in accordance with the Thai's corporate law as well as the rule of the Stock Exchange of Thailand (SET) and the Security Exchange Commission (SEC), wherein a shareholder who holds at least 10 percent of a firm's total shares is regarded as having control of the firm (Charumilind *et al.*, 2006 and Chantrataragul, 2007)[29].

The SET provides information on shareholders who hold at least 0.5% of the firms' total shares. This makes it possible to detect the spread of shares among the family members. Besides, every listed firm is required to disclose information on the family relationship among the shareholders and the board of directors, as well as to provide a list of their

[29] For example, Wiwattanakantang (2001) and Charumilind *et al.* (2006) state that, according to Thai corporate law, a shareholder who hold at least 10% of the firm's total share, have the power to submit a motion to the court for the company's liquidation under the circumstances where (1) firm's management fail to act in accordance with the provisions relating to payments of stock issuance and transferring of ownership; (2) the number of shareholders is less than 15; and, (3) the company is in financial distress and have no chance of recovery.

subsidiaries. All of these must be presented in Form 56-1 which is submitted to the SET and SEC on an annual basis[30]. This document is one of the sources which help to identify the firms' subsidiaries as well as the family relationship even if the shareholders possess different surnames.

Furthermore, there may also be cases where private entities rather than individuals are the major shareholders of listed firms. It is suspected that some of these firms might be 'shell entities' or nominees of politicians. Hence, the ultimate ownership of these shell entities or any private companies is being traced through the 'Business Online' website. This website is available both in Thai and in English. It is owned by Business Online Public Company Limited, who has a license from The Ministry of Commerce of Thailand to handle the information of all Thai registered companies. This includes the information about the registered shareholders, capital, address, and contact details. Consequently, this study defines a 'politically connected firm' as any firm that: (1) has a politician or a family member of a politician sits on the Board of Directors, either as an executive or non-executive director; and/or, (2) has a politician, a family member of a politician, or, any private entity ultimately owned by him/her as a major shareholder.

This study acknowledges the methodologies used by Faccio (2006) and Chaney *et al.* (2011) in classifying a politically connected firm as being connected through 'closely-related' individuals of high level politicians. Specifically, they classify closely-related individuals as family members or close friends. It is believed that the case of family members is appropriate for the purpose of determining political connections. This is due to the certainty of such a type of relationship. However, it is arguable that the case of friendship is rather subjective and judgmental since it could be difficult to firmly establish whether there is truly a close friendship between a politician and an individual. Furthermore, it is possible that a friendship can change over time and, thus, political connections can disappear at some point. Despite considering for close friendship, Faccio (2006) explicitly reports that the results still hold, even when the case of friendship is excluded from her study. For this reason, such type of relationship is not included in this study for the purpose of determining any political

[30] Form 56-1 of each listed firm can also be downloaded from the SEC's website.

connections. Furthermore, similarly to Bunkanwanicha *et al.* (2008), this study acknowledges the limitations of this study since the relationship between politicians and firms cannot be traced beyond the last names, the family information provided in the companies' annual reports, and the ownership details of private entities. Hence, there remains the possibility that this study may underestimate the true value of corporate political connectedness of some firms.

5.4.2 SAMPLE PERIOD & DATA

Despite the fact that the Stock Exchange of Thailand (SET) started its operations in 1975, the stocks were not actively traded until 1987. The sampling period of this study therefore ranges from 1987 to 2008. The data that are needed for the analysis include: (1) the real monthly stock returns, in Thai baht, of all firms publicly listed on the main board of the SET; (2) financial performance ratios: Return on Assets (ROA), measured as net income over total assets; Price-to-Earning (PE); Market-to-Book (M/B); Dividend Yield (DY); Asset Tangibility (AT); Sales-to-Assets (FE); (3) the composition of the board of directors for both executive and non-executive directors of each listed firm; (4) the lists of shareholders of each listed firm; and (5) the lists of MPs, Cabinet Ministers, and PM of each government administration.

The real monthly stock returns and financial performance ratios are obtained from Datastream. Overall, there are 653 firms listed on the main board of the SET during the period of 1987 to 2008. The sample statistics and firm-specific variable characteristics are presented in Tables 5.1 and 5.2, respectively.

The information on listed companies' board of directors and shareholders for the year 1987 to 1993 must be purchased directly from the SET. However, for the remaining years 1994 to 2008, this information is collected from the SET's library through its 'SETSMART' database. This database is available onsite and is publicly accessible. It must be pointed out that this information is also available commercially in a CD form. However, it only covers the past three and five years from the current year. Thus, in order to obtain the required

information for more than the past five years, it is necessary to hand-collect these data on site. This inconvenient and time-consuming data collection process partly explains why the sample period of all prior studies which examine political connections in Thailand is limited to only a five-year period. Hence, this study uses a unique dataset for the analysis. In this respect, it helps to distinguish this study from all others within this area of research.

Table 5.1

Sample statistics

The table presents descriptive sample statistics of 653 firms listed on the Stock Exchange of Thailand (SET). The sample period ranges from January 1987 to December 2008. Firms are also sorted into eight different types of industry classified by the SET. Firms are counted as 'connected firms' as long as they have political connection in any given month throughout the sample period.

	Number of Firms	Number of Connected Firms	Percentage of Connected Firms
All Firms	**653**	**421**	**65%**
Industries:			
Agro & Food Industry	**67**	**40**	**60%**
Consumer Products	**61**	**36**	**59%**
Financials	**109**	**79**	**73%**
Industrials	**109**	**59**	**54%**
Property & Construction	**109**	**71**	**65%**
Resources	**33**	**24**	**73%**
Services	**108**	**80**	**74%**
Technology	**57**	**32**	**56%**

Table 5.2
Firm-specific variables statistics

The table presents sample statistics of 653 firms listed on the Stock Exchange of Thailand (SET). The sample period ranges from January 1987 to December 2008. The table contains firm-specific variables and it shows the mean, median, minimum, maximum and standard deviation of each variable. Size is measured as the log of total assets. ROA denotes returns on total assets which is calculated as net income over total assets. B/M denotes the book-to-market ratio, which is measured as the book value of equity over the market value of equity. M/B indicates the market-to-book ratio, which is calculated as the market value of equity over the book value of equity. LEV stands for leverage, which is measured as total debt over total assets. PE denotes the price-to-earnings ratio, which is the firm's share price relative to its net income. DY stands for dividend yields, which is measured as dividend per share over price per share. AT represents asset tangibility effect, which is measured as fixed-to-total assets. And, FE represents the sales-to-assets ratio, which is calculated as the firm's sales over its fixed assets.

Variable	Mean	Median	Minimum	Maximum	Standard Deviation
SIZE	6.510	6.383	-0.092	9.218	0.732
ROA	0.050	0.045	-0.336	0.821	0.096
B/M	1.040	0.840	-36.000	20.000	1.613
M/B	1.411	1.030	-11.720	33.010	1.584
LEV	0.338	0.301	0.000	1.466	0.292
PE	9.701	9.200	-7.143	19.700	4.932
DY	0.007	0.000	-0.975	1.359	0.121
AT	0.385	0.362	0.000	3.809	0.282
FE	0.798	0.697	-0.242	2.997	0.606

For the lists of MPs and Cabinet Ministers, this information is purchased from Thaidatabase & Information Co., Ltd[31]. It is found by Imai (2006) and Chantrataragul (2007) that Thai politicians differ in terms of their political powers and their abilities to deliver private rents to

[31] This is through its website: www.myfirstinfo.com.

connected firms. This depends on the positions that they hold in the government. One conjecture from these prior studies is that there can be differences in the stock returns and financial performance of firms that are connected to different levels of politicians within the Thai parliament.

Accordingly, the 'level of political strength', from the most influential to the least influential in the lower house (House of Representatives) is ranked as the following: (1) PM; (2) Cabinet Ministers; (3) MPs within coalition parties; and (4) MPs within opposition parties. This justification is based on the likelihood that the individual in such a position are better informed about the new government projects or policies due to his/her access to official information. More importantly, it is also based on the extent to which a person in such a position would be able to influence the government's rules, regulations, policies, or other decisions that would be favourable to the connected firms. Accordingly, Imai (2006) asserts that, since the Cabinet Ministers have control over both the policy and everyday management of the economy, firms connected to these Ministers receive more benefits from their connections than those without such connections. Note that, a distinction is also made between MPs within coalition and opposition parties since it is believed that the former would have more political power and would be able to deliver more superior rents than the latter since they are allies of those in power.

In light of this discussion, this study conjectures that differences in the stock and financial performance of firms with different levels of political tie should be observable. Specifically, it is expected that the stock returns and performance of firms with network ties to the PM would outperform those with network ties to the Cabinet Ministers and MPs.

5.4.3 MATCHING & IDENTIFICATION PROCESS

The analysis starts by matching the surnames of each firm's directors and major shareholders with the surnames of PM, Cabinet Ministers, and MPs within coalition and opposition parties, of the corresponding month and government administration. The family members of directors, major shareholders, and politicians are also taken into consideration. In this

matching process, the study is very careful with regards to the month that each director and shareholder starts and ends his/her position. This is to ensure that the correct level of political connection is accurately assigned for each firm at all times.

It is believed that such an approach is crucial when identifying the political connections in Thailand. This is because of the frequent political unrest where changes in government and government composition are relatively common. This includes the changes in the coalition parties and Cabinet Ministers. Moreover, it is customary for Thai politicians to switch from one political party to another. As a result, political connections and the strength of those connections could shift considerably within a year.

Furthermore, there could be cases where more than one political connection could be established for a single firm. This is given that it is possible for a firm to be connected to a number of politicians from various political parties. In such cases, connection to the politician, who is higher in ranking according to the political ranking scale, is the one to be recognised[32]. Again, this is based on the argument that a higher level politician has the ability to deliver superior private rents to a connected firm than a lower level politician.

5.5 TEST METHODOLOGIES

5.5.1 POLITICAL CONNECTIONS & STOCK RETURNS

In this section, the impact of different levels of political connection on stock returns is analysed. The regression models employed in this study are largely adapted from Johnson and Mitton (2003) who investigate the impact of political connections on stock returns in Malaysia. To assess the impact of different levels of political connection on stock returns, the following time fixed-effects pooled regression model [5.1] is estimated, where the pooled

[32] Overall, there are 121firms that are connected to more than one politician. A detailed discussion of this issue is provided in section 5.8.2, Robustness checks.

stock returns are regressed on the pooled political dummy variables in the absence of all control variables. Time fixed-effect is used throughout this study to account for any aggregate time shocks to stock returns.

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \varepsilon_{it} \quad [5.1]$$

where r_{it} denotes the pooled real rate of stock returns at time *t*. PM_{it}, CM_{it}, MPC_{it}, and MPO_{it} denote the pooled political dummy variables. Each of these political dummy variables equals to 1 if there is connection to the Prime Minister (PM), Cabinet Minister (CM), Member of Parliament within a coalition party (MPC), or Member of Parliament within an opposition party (MPO), at time *t*, respectively. Otherwise, it equals to 0. ε_{it} denotes the pooled residual of real rate of stock returns at time *t*. White period standard errors and covariance is used throughout this study to correct for heteroskedasticity and account for any arbitrary serial correlation and time-varying variances in the disturbances.

Fama and French (1992) suggest that stock risks are multidimensional. One dimension of risk is proxied by size and another dimension is proxied by book-to-market ratio. Moreover, it has been theorised by Fama and French (1995) that firm size matters in determining stock returns because it acts as a proxy for some unobserved or omitted risk factor (Perez-Quiros & Timmerman, 2000). Watt and Zimmerman (1978) also stress the importance of firm size in relation to politics. They suggest that larger firms face greater political visibility and therefore a greater general importance of politics. Accordingly, this study builds the second model by augmenting two control variables on the previous model which rule out the effect of size and value of sample firms. Charumilind *et al.* (2006) and Faccio (2010) further find that politically connected firms in Thailand are associated with higher leverage. Accordingly, the study also controls for the level of debt in the analysis. These three control variables used herein are also being employed by prior studies such as Johnson and Mitton (2003), Luez and Oberholzer-Gee (2006), and Wu *et al.* (2010). Regression model [5.1] is therefore augmented in the following manner:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it}$$
$$+ \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it} \quad [5.2]$$

where $Size_{it}$ denotes the proxy for firm's size measured as the logarithm of total assets at time *t*. B/M_{it} denotes the book-to-market ratio calculated as book value of equity over market value of equity at time *t*. LEV_{it} is the debt ratio measured as total debt over total assets at time *t*. $Industry_{it}$ is the industrial dummy variables which aim to adjust or remove any variation from sector effects on the stock returns.

In accordance with Fama and French (1992), the study expects a negative relationship between firm size and stock returns and a positive one for the book-to-market ratio. However, the empirical evidence on the relationship between stock returns and leverage remains inconclusive. On one hand, studies such as Hamada (1972) and Laxmi Chand (1988) argue that stock returns increase with higher leverage. On the other hand, Penman, Riachardson, and Tuna (2007), Valentin and Prem (2008), Sivaprasad and Muradoglu (2009), and Korteweg (2010) show that stock returns decrease with higher leverage. Therefore, while political connectedness is associated with higher leverage, it is possible that the relationship between stock returns of politically connected firms and leverage could be either a positive or negative one. This is because a shift in leverage could either increase or decrease firms' financial constraints and affect investors' sentiment on the firms correspondingly.

Under the null hypothesis 1 of no difference in terms of explanatory power among the different levels of political connection on stock returns of firms in Thailand, the coefficients β_1, β_2, β_3, and β_4 from regression model [5.2] should equal to zero when testing for equal coefficients among them.

Furthermore, this study would like to examine whether there are any differences in stock returns of firms that are connected to the Prime Minister, Cabinet Ministers, MPs within

coalition parties, and MPs within opposition parties across eight different industries in Thailand. Hypothesis 2 is developed to examine this issue and interactive dummy variables are created for testing purposes. Accordingly, the industrial dummy variables are interacted with each of the four political dummy variables. These industrial dummies correspond to eight different types of industry that are classified by the Stock Exchange of Thailand (SET). These consist of: (1) Agro & Food Industry (AGRO); (2) Consumer Product (CON); (3) Financials (FIN); (4) Industrials (IND); (5) Property & Construction (PROP); (6) Resources (RES); (7) Services (SER); and (8) Technology (TECH). Regression model [5.2] is therefore augmented with the interactive dummy variables in the following manner:

$$r_{it} = \alpha + \sum_{i=1}^{a} \beta_a \, PM \,.\, Industry_{it} + \sum_{i=1}^{b} \beta_b \, CM \,.\, Industry_{it} + \sum_{i=1}^{c} \beta_c \, MPC \,.\, Industry_{it} + \sum_{i=1}^{d} \beta_d \, MPO \,.\, Industry_{it} + \sigma_{it} \, SIZE_{it} + \theta_{it} \, B/M_{it} + \gamma_{it} \, LEV_{it} + \varepsilon_{it} \qquad [5.3]$$

where $PM \,.\, Industry_{it}$, $CM \,.\, Industry_{it}$, $MPC \,.\, Industry_{it}$, and $MPO \,.\, Industry_{it}$ are the interactive dummy variables between the political dummies and the set of dummies defined by eight different industries on the SET, at time *t.* Under the null hypothesis 2 of no differences in terms of explanatory power among the different levels of political connection on stock returns of firms belonging to the different types of industry in Thailand, the coefficients β_a, β_b, β_c, and β_d should equal to zero when testing for equal coefficients.

Lastly, it is of interest to examine each industry independently to see whether the different levels of political connection are important in explaining stock returns of firms within each particular industry. Hypothesis 3 is developed to examine this matter and a sector analysis is performed by estimating regression model [5.2] on each of the eight industries. Under the null Hypothesis 3 of no differences, the coefficient β_1, β_2, β_3, and β_4 should be equal to zero when testing for equal coefficients among them.

5.5.2 POLITICAL CONNECTIONS & FIRM PERFORMANCE

In this section, the study determines the impact of different levels of political connection on financial performance of listed firms on the Stock Exchange of Thailand by estimating the following time fixed-effects pooled regression model [5.4]:

$$\text{Performance}_{it} = \alpha + \beta_1 \text{PM}_{it} + \beta_2 \text{CM}_{it} + \beta_3 \text{MPC}_{it} + \beta_4 \text{MPO}_{it} + \sigma_{it} \text{SIZE}_{it} + \sum_{i=1}^{8} \text{Industry}_{it} + \varepsilon_{it} \quad [5.4]$$

The dependent variables are the six financial performance ratios which consist of: (1) Return on Assets (ROA), measured as net income over total assets ; (2) Price-to-Earning (PE) which is the firm's share price relative to its net income ; (3) Market-to-Book (M/B), calculated as the market value of equity over the book value of equity; (4) Dividend Yield (DY), measured as dividend per share over price per share; (5) Fixed-to-Total Assets (AT), calculated as the firm's fixed assets over its total assets; and, (6) Sales-to-Assets (FE), measured as the firm's sales over its fixed assets. The Fixed-to-Total assets ratio (AT) is aimed at capturing the asset tangibility effect while the Sales-to-Assets ratio (FE) is used to measure firm efficiency under different levels of political connection. In terms of control variables, this study controls for the size and industry effects similar to those of prior studies such as Boubakri *et al*. (2008) and Faccio (2010)[33].

Under the null hypothesis 4 of no difference in terms of explanatory power among the different levels of political connection on listed firms' financial performance, the coefficients β_1, β_2, β_3, and β_4 from regression model [5.4] should equal to zero when testing for equal coefficients among them.

[33] As part of the robustness check, the book-to-market ratio and leverage are augmented into regression model [5.4] as additional control variables. The findings from this robustness check are presented in Table B4.1, Appendix B4.

5.6 EMPIRICAL RESULTS

5.6.1 POLITICAL CONNECTIONS & STOCK RETURNS

In this section, this study provides evidence that there are differences in the stock returns of firms with different levels of political connection in Thailand. Firstly, the time fixed-effect pool regression model [5.1] is estimated to find the stock returns of firms under different levels of political tie. The results are presented in Table 5.3.

The results from Panel A, Table 5.3 show that the stock returns are significantly greater for firms that are connected to the Prime Minister (PM) and Cabinet Ministers (CM) at 1.14% and 0.40% per month, respectively. Panel B then shows the results from the tests for equal coefficients which indicate that there is a significant difference in the stock returns of firms with different levels of political connection in Thailand at 0.82% per month. Specifically, there are significant difference among the stock returns of firms that are connected to the PM and CM, PM and MPC, and PM and MPO at 0.74%, 0.94%, and 1.42%, per month, respectively. Moreover, there is also a significant difference among the stock returns of firms that are connected to the CM and MPO, and MPC and MPO at 0.69% and 0.48% per month, respectively.

Table 5.3

Monthly stock returns under different levels of political connection

The table reports coefficient estimates from time fixed-effects pooled regression model [5.1] of stock returns on political connection variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. White period standard errors and covariance is used to correct for heteroskedasticity. *T*- statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in Panel B for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.1]:

$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \varepsilon_{it}$.

	Panel A		Panel B		
	Returns		Test for equal coefficients		
	Coefficients	T-stat		Differences	F-stat
C	-0.009	(-13.19)***	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.008	(2.87)*
PM	0.011	(2.91)***	$\beta_1 - \beta_2 = 0$	0.007	(3.37)*
CM	0.004	(2.82)***	$\beta_1 - \beta_3 = 0$	0.009	(5.55)**
MPC	0.002	(1.42)	$\beta_1 - \beta_4 = 0$	0.014	(11.53)***
MPO	-0.003	(-1.42)	$\beta_2 - \beta_3 = 0$	0.002	(1.36)
			$\beta_2 - \beta_4 = 0$	0.007	(8.72)***
			$\beta_3 - \beta_4 = 0$	0.005	(5.02)**
			R-squared = 0.21		

Nonetheless, it is essential to control for other firms specific risks and any industrial effects on stock returns. The time fixed-effect pool regression model [5.2] is therefore estimated to find the stock returns of firms under different levels of political connection. The test for equal coefficients is then conducted to identify whether there are any differences in the stock returns of firms with different levels of political connection. The results are presented in Table 5.4.

Table 5.4

Monthly stock returns under different levels of political connection with control variables

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* -statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties.*, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]: $r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}$.

	Panel A		Panel B		
	Returns		Test for equal coefficients		
	Coefficients	T-stat		Differences	F-stat
C	-0.004	(-0.71)	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.007	(1.95)
PM	0.013	(3.08)***	$\beta_1 - \beta_2 = 0$	0.008	(2.92)*
CM	0.006	(3.70)***	$\beta_1 - \beta_3 = 0$	0.010	(5.55)**
MPC	0.003	(2.00)**	$\beta_1 - \beta_4 = 0$	0.016	(11.43)***
MPO	-0.003	(-1.26)	$\beta_2 - \beta_3 = 0$	0.003	(1.87)
SIZE	-0.001	(-1.24)	$\beta_2 - \beta_4 = 0$	0.008	(12.28)***
B/M	0.002	(3.90)***	$\beta_3 - \beta_4 = 0$	0.006	(5.99)**
LEV	-0.001	(-1.75)*			
	R-squared = 0.21		Industry Dummies = Yes		

By controlling for firms' size, book-to-market ratio, and leverage as well as taking into account industrial effects on stock returns, the results on Panel A of Table 5.4 suggest that the stock returns are significantly greater for firms that are politically connected to the PM, CM, and MPC at 1.30%, 0.60% and 0.30% per month, respectively. The results for the test for equal coefficients on Panel B further suggest that there are significant differences among the stock returns of firms that are connected to the PM and CM, PM and MPC, and, PM and

MPO at 0.75%, 1.01% and 1.57% per month, respectively. These are equivalent to 9.38%, 12.68%, and 20.98% per annum, respectively.

Moreover, there are also significant differences among the stock returns of firms that are connected to the CM and MPO, and, MPC and MPO at 0.83% and 0.57% per month, or equivalent to 10.43% and 7.06% per annum, respectively. The control variables for book-to-market ratio and leverage are also significant in this regression, with higher book-to-market ratio being associated with higher returns, and higher leverage with lower returns. Moreover, the inclusion of industry dummies does not decrease the level of significance of the coefficients on political connection variables. Hence, the null Hypothesis 1 of no differences among the different levels of political connection on stock returns of firms in Thailand can be rejected based on these findings.

The findings from Table 5.4 illustrate that being connected to higher level politicians is associated with higher stock returns. This implies that the level of political connection is important for listed firms in Thailand and that the Thai stock market participants regard the politician's ability to deliver private rents to the connected firms to depend on his/her position in the parliament. Moreover, this provides evidence that cronyism is present in Thailand and it is essential for listed firms.

In terms of economic significance of political connections, it is observable from Panel A of Table 5.4 that the estimated coefficients on book-to-market (B/M) ratio is 0.0020. A rise in the B/M ratio of ten percentage points would therefore lead to a higher return of 2%. This is consistent with the expectation that there is a significant positive relationship between the book-to-market ratio (B/M) and stock returns. The coefficients on the Prime Minister (PM), Cabinet Ministers (CM), and Member of Parliaments within coalition parties (MPC) dummies are 0.013, 0.006, and 0.003, respectively, when B/M is controlled which imply that firms connected to PM, CM, and MPC have a significantly higher return of 1.30%, 0.60%, and 0.30% per month, respectively, compared to those without political connections. Altogether, this means that being connected to the PM, CM, and MPC is equivalent to the

effect of increasing the B/M ratio by 6.5%, 2.85%, and 1.55% per month, respectively[34]. This increases the median of B/M ratio for firms connected to PM, CM, and MPC from 1.04 to around 1.11, 1.07, and 1.06, respectively. The standard deviation of B/M ratio is 1.61. Therefore, having political connections to the PM is equal to 4 standard deviations increase in B/M ratio[35]. Besides, this is $1\,{}^{3}/_{4}$ and 1 standard deviation increase for those firms with connections to the CM and MPC, respectively.

As for leverage, panel A of Table 5.4 shows that the coefficient on the debt ratio is -0.0006. A rise in the debt ratio of ten percentage points, from the median debt ratio of 30.19% to 40.19%, would therefore lead to a lower return of 0.6%. The results from Table 5.4 indicate that the coefficients on the Prime Minister (PM), Cabinet Ministers (CM), and Member of Parliaments within coalition parties (MPC) dummies are 0.013, 0.006, and 0.003, respectively, when leverage is controlled. This suggests that firms connected to PM, CM, and MPC have a significantly higher return of 1.30%, 0.60%, and 0.30% per month, respectively, compared to those without political connections. On the whole, this indicates that being connected to the PM, CM, and MPC is equivalent to the effect of decreasing the debt ratio by 21.67%, 10.00%, and 5% per month, respectively[36]. The standard deviation of debt ratio is 29.08. Therefore, having political connections to the PM is equal to a $^{3}/_{4}$ standard deviation decreases in debt ratio[37]. Besides, this is a $^{1}/_{3}$ and $^{1}/_{6}$ standard deviation decrease for those firms with connections to the CM and MPC, respectively.

Next, the stock returns of firms with different levels of political connection across the eight industries that are classified by the SET are examined. This analysis is carried out to examine whether there are any differences in the stock returns of firms that are connected to the Prime Minister (PM), Cabinet Ministers (CM), Member of Parliaments within coalition parties

[34] For example, for the Prime Minister (PM), the coefficient on the political dummy of 0.013 is divided by the coefficient on the book-to-market (B/M) ratio of 0.002. This is equal to 6.5%. The same calculation procedure applies for Cabinet Ministers and Member of Parliament within coalition parties (MPC).

[35] For example, for the PM, this is calculated by using the increasing in B/M ratio of 6.5 percentage point divided by the standard deviation of B/M ratio of 1.61, which is equal to 4.

[36] For example, for the Prime Minister (PM), the coefficient on the political dummy of 0.013 is divided by the coefficient on the leverage ratio of -0.0006. This is equal to -21.67%. The same calculation procedure applies for Cabinet Ministers (CM) and Member of Parliament within coalition parties (MPC).

[37] For example, for the PM, this is calculated by using the decreasing in B/M ratio of 21.67 percentage point divided by the standard deviation of B/M ratio of 29.08, which is equal to 0.75 or 3/4.

(MPC), and Member of Parliaments within opposition parties (MPO) across the industries. To test this, regression model [5.3] is estimated and the results are reported in Table 5.5. The test for equal coefficients in Panel B of the table suggests that there is a significant difference in the stock returns of firms with different levels of political connection, across the industries, at -9.73%, per month.

Particularly, there are differences in the stock returns of firms which are connected to the PM, CM, and MPO across the different industries at -5.97%, -3.10%, and 4.68%, per month, respectively. Therefore, the null Hypothesis 2 of no differences in terms of explanatory power among the different levels of political connection on stock returns of firms across the different types of industry in Thailand can be rejected based on these findings.

Furthermore, the findings from Table 5.5 imply that being connected to the PM, CM, or MPO of a particular industry can result in a significantly lower or higher returns than being connected to the PM, CM, or MPO of another industry. To examine which industries they are in particular, the study performs the test for equal coefficients among the political dummies variables of the eight industries and reports the results in Table 5.6.

Table 5.5

Monthly stock returns of firms, with different levels of political connection, across eight industries

The table reports the test for equal coefficient of the monthly stock returns of firms, with different levels of political connection, among the eight industries. These coefficients are estimated from time fixed-effects pooled regression model [5.3] of stock returns on the interactive dummy variables and control variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size is measured as the log of total assets. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.3]:

$$r_{it} = \alpha + \sum_{i=1}^{a} \beta_a \, PM \,.\, Industry_{it} + \sum_{i=1}^{b} \beta_b \, CM \,.\, Industry_{it} + \sum_{i=1}^{c} \beta_c \, MPC \,.\, Industry_{it} + \sum_{i=1}^{d} \beta_d \, MPO \,.\, Industry_{it} + \sigma_{it} \, SIZE_{it} + \theta_{it} \, B/M_{it} + \gamma_{it} \, LEV_{it} + \varepsilon_{it} \,.$$

	Panel A Returns		Panel B Test for equal coefficients		
	Coeff.	T-stat		Diff.	F-stat
C	0.002	(0.42)	Across all interactive political dummies	-0.097	(4.12)**
Agro & Food					
PM	-0.013	(-0.92)	Across PM dummies	-0.060	(2.63)*
CM	0.005	(1.60)			
MPC	0.007	(1.48)	Across CM dummies	-0.031	(6.60)**
MPO	0.008	(1.20)			
			Across MPC dummies	-0.013	(1.02)
Consumer Product					
PM	-0.022	(-0.86)	Across MPO dummies	0.047	(8.36)***
CM	0.009	(4.43)***			
MPC	0.005	(1.56)			
MPO	-0.006	(-1.30)			
			R-squared	0.21	
Financials					
PM	0.014	(2.93)***	D-W Statistics	1.98	
CM	0.004	(1.37)			
MPC	0.001	(0.02)			
MPO	-0.010	(-2.33)**			
Industrials					
PM	0.005	(1.14)			
CM	0.011	(2.98)***			
MPC	0.004	(1.26)			
MPO	0.004	(0.91)			
Property					
PM	0.017	(1.15)			
CM	-0.003	(-0.63)			
MPC	0.001	(0.30)			
MPO	-0.002	(-0.32)			
Resources					
PM	0.025	(3.84)***			
CM	0.006	(1.30)			
MPC	0.002	(0.30)			
MPO					
Services	-0.008	(-1.34)			
PM	0.001	(0.06)			
CM	0.008	(3.45)***			
MPC	0.002	(0.76)			
MPO	0.001	(0.14)			
Technology					
PM	0.007	(0.70)			
CM	-0.001	(-0.02)			
MPC	0.005	(0.83)			
MPO	-0.018	(-2.43)**			
SIZE	-0.002	(-1.81)*			
B/M	0.001	(5.31)***			
LEV	-0.005	(-3.68)***			

Table 5.6

Test for equal coefficients among PM, CM, MPC, and MPO dummies of the eight industries

The table reports the test for equal coefficient of the monthly stock returns of firms with connection to the PM, CM, MPC, and MPO of the eight industries. These are presented in Panel A, B, C, and D, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties. These coefficients are estimated from time fixed-effects pooled regression model [5.3] of stock returns on the interactive dummy variables and control variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size is measured as the log of total assets. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. AGRO, CON, FIN, IND, PROP, RES, SER, and TECH represent industrial dummy variables which stand for Agro & Food Industry, Consumer Product, Financials, Industrials, Property & Construction, Resources, Services, and Technology. Regression model [5.3]:

$$r_{it} = \alpha + \sum_{i=1}^{a} \beta_a \text{PM} \,.\, \text{Industry}_{it} + \sum_{i=1}^{b} \beta_b \text{CM} \,.\, \text{Industry}_{it} + \sum_{i=1}^{c} \beta_c \text{MPC} \,.\, \text{Industry}_{it} + \sum_{i=1}^{d} \beta_d \text{MPO} \,.\, \text{Industry}_{it} + \sigma_{it} \text{SIZE}_{it} + \theta_{it} \text{B/M}_{it} + \gamma_{it} \text{LEV}_{it} + \varepsilon_{it} .$$

Panel A: Test for equal coefficients among PM dummies of the eight industries

	Difference	F-stat
PM(AGRO) – PM(CON) = 0	0.009	(0.10)
PM(AGRO) – PM(FIN) = 0	-0.027	(3.43)*
PM(AGRO) – PM(IND) = 0	-0.018	(1.52)
PM(AGRO) – PM(PROP) = 0	-0.030	(2.16)
PM(AGRO) – PM(RES) = 0	-0.038	(6.28)**
PM(AGRO) – PM(SER) = 0	0.013	(0.69)
PM(AGRO) – PM(TECH) = 0	-0.020	(1.34)
PM(CON) – PM(FIN) = 0	-0.036	(1.94)
PM(CON) – PM(IND) =0	-0.027	(1.08)
PM(CON) – PM(PROP) = 0	-0.039	(1.77)
PM(CON) – PM(RES) = 0	-0.047	(3.23)*
PM(CON) – PM(SER) = 0	-0.022	(0.70)
PM(CON) – PM(TECH) = 0	-0.029	(1.12)
PM(FIN) – PM(IND) = 0	0.009	(2.12)
PM(FIN) – PM(PROP) = 0	-0.003	(0.03)
PM(FIN) – PM(RES) = 0	-0.011	(2.00)
PM(FIN) – PM(SER) = 0	0.014	(2.14)
PM(FIN) – PM(TECH) = 0	0.007	(0.41)
PM(IND) – PM(PROP) = 0	-0.012	(0.61)
PM(IND) – PM(RES) = 0	-0.020	(7.04)***

Panel A: Test for equal coefficients among PM dummies of the eight industries		
	Difference	**F-stat**
PM(IND) – PM(SER) = 0	0.005	(0.25)
PM(IND) – PM(TECH) = 0	-0.002	(0.04)
PM(PROP) – PM(RES) = 0	-0.008	(0.27)
PM(PROP) – PM(SER) = 0	0.016	(0.98)
PM(PROP) – PM(TECH) = 0	0.010	(0.31)
PM(RES) – PM(SER) = 0	0.025	(5.87)**
PM(RES) – PM(TECH) = 0	0.018	(2.39)
PM(SER) – PM(TECH) = 0	-0.007	(0.26)

Panel B: Test for equal coefficients among CM dummies of the eight industries		
	Difference	**F-stat**
CM(AGRO) – CM(CON) = 0	1.173	(1.17)
CM(AGRO) – CM(FIN) = 0	0.001	(0.12)
CM(AGRO) – CM(IND) = 0	-0.006	(1.63)
CM(AGRO) – CM(PROP) = 0	0.009	(1.96)
CM(AGRO) – CM(RES) = 0	-0.001	(0.03)
CM(AGRO) – CM(SER) = 0	-0.003	(0.68)
CM(AGRO) – CM(TECH) = 0	0.005	(0.82)
CM(CON) – CM(FIN) = 0	0.005	(1.92)
CM(CON) – CM(IND) =0	-0.002	(0.27)
CM(CON) – CM(PROP) = 0	0.013	(4.98)**
CM(CON) – CM(RES) = 0	0.003	(0.38)
CM(CON) – CM(SER) = 0	0.001	(0.08)
CM(CON) – CM(TECH) = 0	0.009	(3.13)*
CM(IND) – CM(PROP) = 0	0.015	(5.29)**
CM(IND) – CM(RES) = 0	0.005	(0.79)
CM(IND) – CM(SER) = 0	0.003	(0.48)
CM(IND) – CM(TECH) = 0	0.012	(3.45)*
CM(PROP) – CM(RES) = 0	-0.010	(1.83)
CM(PROP) – CM(SER) = 0	-0.012	(4.24)**
CM(PROP) – CM(TECH) = 0	-0.003	(0.20)

Panel B: Test for equal coefficients among CM dummies of the eight industries		
	Difference	**F-stat**
CM(RES) – CM(SER) = 0	-0.002	(0.20)
CM(RES) – CM(TECH) = 0	0.006	(0.84)
CM(SER) – CM(TECH) = 0	0.009	(2.48)

Panel C: Test for equal coefficients among MPC dummies of the eight industries		
	Difference	**F-stat**
MPC(AGRO) – MPC(CON) = 0	0.002	(0.08)
MPC(AGRO) – MPC(FIN) = 0	0.007	(1.50)
MPC(AGRO) – MPC(IND) = 0	0.003	(0.23)
MPC(AGRO) – MPC(PROP) = 0	0.006	(1.15)
MPC(AGRO) – MPC(RES) = 0	0.005	(0.45)
MPC(AGRO) – MPC(SER) = 0	0.005	(0.74)
MPC(AGRO) – MPC(TECH) = 0	0.002	(0.03)
MPC(CON) – MPC(FIN) = 0	0.005	(1.29)
MPC(CON) – MPC(IND) =0	0.001	(0.06)
MPC(CON) – MPC(PROP) = 0	0.004	(0.92)
MPC(CON) – MPC(RES) = 0	0.003	(0.26)
MPC(CON) – MPC(SER) = 0	0.003	(0.50)
MPC(CON) – MPC(TECH) = 0	-0.001	(0.01)
MPC(IND) – MPC(PROP) = 0	0.003	(0.52)
MPC(IND) – MPC(RES) = 0	0.002	(0.12)
MPC(IND) – MPC(SER) = 0	0.002	(0.20)
MPC(IND) – MPC(TECH) = 0	-0.001	(0.03)
MPC(PROP) – MPC(RES) = 0	-0.001	(0.02)
MPC(PROP) – MPC(SER) = 0	-0.001	(0.09)
MPC(PROP) – MPC(TECH) = 0	-0.004	(0.39)
MPC(RES) – MPC(SER) = 0	-0.001	(0.01)
MPC(RES) – MPC(TECH) = 0	-0.004	(0.17)
MPC(SER) – MPC(TECH) = 0	-0.003	(0.21)

Panel D: Test for equal coefficients among MPO dummies of the eight industries		
	Difference	**F-stat**
MPO(AGRO) – MPO(CON) = 0	0.015	(3.05)*
MPO(AGRO) – MPO(FIN) = 0	0.018	(5.22)**
MPO(AGRO) – MPO(IND) = 0	0.004	(0.27)
MPO(AGRO) – MPO(PROP) = 0	0.010	(1.32)
MPO(AGRO) – MPO(RES) = 0	0.016	(3.21)*
MPO(AGRO) – MPO(SER) = 0	0.008	(0.98)
MPO(AGRO) – MPO(TECH) = 0	0.026	(6.79)***
MPO(CON) – MPO(FIN) = 0	0.004	(0.35)
MPO(CON) – MPO(IND) =0	0.004	(0.35)
MPO(CON) – MPO(PROP) = 0	-0.005	(0.37)
MPO(CON) – MPO(RES) = 0	0.001	(0.03)
MPO(CON) – MPO(SER) = 0	-0.007	(1.24)
MPO(CON) – MPO(TECH) = 0	0.011	(1.73)
MPO(FIN) – MPO(IND) = 0	-0.014	(5.34)**
MPO(FIN) – MPO(PROP) = 0	-0.008	(1.36)
MPO(FIN) – MPO(RES) = 0	-0.003	(0.13)
MPO(FIN) – MPO(SER) = 0	-0.011	(3.41)*
MPO(FIN) – MPO(TECH) =0	0.008	(0.82)
MPO(IND) – MPO(PROP) = 0	0.006	(0.69)
MPO(IND) – MPO(RES) = 0	0.012	(2.66)
MPO(IND) – MPO(SER) = 0	0.004	(0.37)
MPO(IND) – MPO(TECH) = 0	0.022	(6.65)***
MPO(PROP) – MPO(RES) = 0	0.006	(0.52)
MPO(PROP) – MPO(SER) = 0	-0.002	(0.12)
MPO(PROP) – MPO(TECH) = 0	0.016	(3.00)*
MPO(RES) – MPO(SER) = 0	-0.008	(1.43)
MPO(RES) – MPO(TECH) = 0	0.010	(1.21)
MPO(SER) – MPO(TECH) = 0	0.018	(5.02)**

The results from Panel A, B, and D of Table 5.6 suggest several industries in which there are significant differences among the stock returns of firms that are connected to the Prime

Minister (PM), Cabinet Ministers (CM), and Member of Parliament within opposition parties (MPO). For the connections to the Prime Minister (PM), the results from Panel A shows that the largest difference in the stock returns is between the resources and consumer product sectors. That is, firms which are connected to the PM from the resources sector have a significantly higher stock returns than those with the same level of connection from the consumer product sector by 4.67%, per month. For the connections to the Cabinet Ministers (CM), the results from Panel B suggest that the largest difference in the stock returns is between the industrial and property & construction sectors. To be specific, firms which are connected to the CM from the industrial sector have a significantly higher stock returns than those with the same level of connection from the property & construction sector by 1.48%, per month.

However, for the connections to the Member of Parliament within coalition parties, it is found that there is no significant difference in the stock returns of firms across the industries. In terms of the connections to the Member of Parliament within opposition parties (MPO), the results from Panel D of Table 5.6 indicate that the largest difference in the stock returns is between the agro & food and technology sectors. Specifically, firms which are connected to the MPO from the agro & food sector have a significantly higher stock returns than those with the same level of connection from the technology sector by 2.59%, per month. As a whole, the results from Table 5.6 suggest that despite being connected to the PM there could still be significant differences in the stock returns of firms within this highest level of connection. This depends on which industries the connected firms belong to.

Lastly, each industry is examined independently to determine whether the different levels of political connection are important in explaining stock returns of firms within each particular industry. To test this, regression model [5.2] is estimated on each industry and the results are reported in Table 5.7. The results from Panel A of Table 5.7 indicate that stock returns are significantly greater for firms that are politically connected to the Prime Minister (PM) in almost all industries except those in Agro & Food, Consumer product, and Services. The stock returns are also found to be significantly greater for firms that are connected to the Cabinet Ministers (CM) in Financial, Industrial, Services, and Technology sectors.

Table 5.7

Monthly stock returns of firms, with different levels of political connection, within each industry

Panel A reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables for each of the eight industries classified by the Stock Exchange of Thailand. Panel B presents the test of equal coefficients. The sample period ranges from January 1987 to December 2008. Firm size is measured as the log of total assets. White cross-section standard errors and covariance is used to correct for heteroskedasticity. For Panel A, *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. For Panel B, *F*-statistics are reported in parentheses for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. AGRO, CON, FIN, IND, PROP, RES, SER, and TECH represent industrial dummy variables which stand for Agro & Food Industry, Consumer Product, Financials, Industrials, Property & Construction, Resources, Services, and Technology. Regression [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

Panel A: General Results

	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
Intercept	-0.022	0.207	-0.008	0.025	0.452	0.266	-0.008	0.339
	(-1.06)	(2.79)***	(-0.75)	(1.52)	(4.62)***	(1.87)*	(-0.78)	(6.17)***
PM	-0.018	-0.045	0.013	0.013	0.048	0.043	-0.009	0.051
	(-1.29)	(-1.58)	(2.11)**	(2.07)**	(2.33)**	(3.13)***	(-1.21)	(2.47)**
CM	-0.001	0.006	0.008	0.011	0.023	0.012	0.005	0.020
	(-0.31)	(1.05)	(2.09)**	(2.40)**	(1.26)	(0.36)	(1.64)*	(1.79)*
MPC	0.002	0.003	0.001	0.003	0.016	0.007	0.001	0.012
	(0.32)	(0.38)	(0.22)	(0.91)	(1.64)	(0.53)	(0.12)	(1.16)
MPO	-0.003	-0.011	-0.006	0.003	-0.004	-0.013	-0.003	-0.015
	(-0.45)	(-1.57)	(-1.24)	(0.48)	(-0.36)	(-0.94)	(-0.62)	(-1.15)
SIZE	0.004	-0.033	-0.001	-0.006	-0.070	-0.044	0.001	-0.053
	(1.09)	(-2.80)***	(-0.44)	(-2.05)**	(-4.55)***	(-2.10)**	(0.15)	(-6.35)***
B/M	0.001	0.004	0.002	0.001	0.001	0.006	0.001	0.001
	(0.15)	(4.08)***	(2.39)**	(1.30)	(2.53)**	(3.74)***	(0.89)	(0.72)
LEV	-0.013	-0.031	-0.011	-0.003	-0.020	0.027	-0.004	-0.023
	(-2.53)**	(-3.24)***	(-2.45)**	(-0.71)	(-1.32)	(1.42)	(-0.79)	(-1.43)
R^2 adj.	0.187	0.160	0.353	0.200	0.330	0.329	0.210	0.320

Panel B: Test of equal coefficients

	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
$\beta_1 - \beta_2 -$	-0.015	-0.043	0.010	-0.004	0.025	0.046	-0.012	0.034
$\beta_3 - \beta_4 = 0$	(0.94)	(2.03)	(1.20)	(0.18)	(1.12)	(2.46)	(1.50)	(1.54)
$\beta_1 - \beta_2 = 0$	-0.016	-0.050	0.005	0.002	0.025	0.031	-0.014	0.031
	(1.37)	(1.45)	(0.62)	(0.10)	(3.81)*	(7.18)***	(1.79)	(2.36)
$\beta_1 - \beta_3 = 0$	-0.019	-0.048	0.012	0.010	0.032	0.036	-0.009	0.039
	(1.90)	(1.07)	(4.13)**	(2.07)	(2.68)*	(3.56)*	(1.52)	(3.03)*
$\beta_1 - \beta_4 = 0$	-0.015	-0.034	0.019	0.011	0.052	0.056	-0.006	0.066
	(1.06)	(1.57)	(8.28)**	(2.11)	(5.58)**	(7.89)***	(0.56)	(7.92)***
$\beta_2 - \beta_3 = 0$	-0.003	0.003	0.007	0.008	-0.005	-0.004	0.005	0.008
	(0.21)	(0.17)	(2.42)	(2.23)	(0.35)	(0.07)	(1.41)	(0.32)
$\beta_2 - \beta_4 = 0$	0.001	0.016	0.013	0.009	0.014	0.017	0.008	0.035
	(0.03)	(5.59)**	(8.30)***	(1.76)	(1.18)	(1.38)	(2.55)	(5.04)**
$\beta_3 - \beta_4 = 0$	0.004	0.013	0.006	0.001	0.020	0.020	0.003	0.027
	(0.41)	(2.95)*	(1.74)	(0.01)	(3.42)*	(1.34)	(0.49)	(3.06)*

In terms of economic significance of political connections, Panel A of Table 5.7 shows that Finance, Property & Construction, and Resources are the three sectors where political connection variables and book-to-market (B/M) ratio are collectively statistically significant. The results indicate that being connected to the PM and CM for firms belonging to Financial sector is equivalent to the effect of increasing the B/M ratio by 5.60% and 3.39% per month, respectively[38]. For firms in Property & Construction and Resources sectors, having connections to the PM is equal to the effect of increasing the B/M ratio by 53% and 6.70% per month, respectively.

As for leverage, Panel A of Table 5.7 shows that Finance is the only sector where political connection variables and leverage (LEV) are jointly statistically significant. The results indicate that having connections to the PM and CM for firms in Finance sector is equivalent

[38] For example, for the Prime Minister (PM), the coefficient on the political dummy of 0.013 is divided by the coefficient on the book-to-market (B/M) ratio of 0.0023. This is equal to 5.60%. The same calculation procedure applies for Cabinet Ministers (CM).

to the effect of decreasing the debt ratio by 1.18% and 0.73% per month, respectively[39]. Furthermore, it is noticeable from Panel A that the adjusted R^2 varies greatly from one sector to another. The lowest adjusted R^2 of 0.16 belongs to Consumer sector while the highest of 0.33 belongs to Property & Construction sector. This is a 17% difference. Thus, this highlights considerable differences of total variation in returns that can be explained by the different levels of political connection and the set of control variables among eight different industries in Thailand. Evidence shows that Financial, Resources, and Technology sectors are among those with high R^2.Whereas, Agro & Food, Consumer Product, Industrial, and Service are those with lower R^2. Noticeably, those with high R^2 belong to more restricted industries where the authorities to award projects are in the hand of politicians who administered the respective ministries. This highlights the importance of political ties for restricted industries in Thailand.

The results from Panel B of Table 5.7 show that there are significant differences in the stock returns of firms that are connected to the different levels of political connection in five out of eight industries. These consist of: (1) Consumer; (2) Financial; (3) Technology; (4) Property; and, (5) Resources. Therefore, the null Hypothesis 3 can be rejected for these five industries based on these findings.

In terms of the percentage of difference in stock returns between the different levels of connections: Firstly, for the Consumer sector, it is found that there are significant differences between the stock returns of firms connected to the CM and MPO, and, MPC and MPO at 1.61% and 1.32% per month, respectively. Secondly, for the Financial sector, the differences in stock returns are found between those connected to the PM and MPC, PM and MPO, and, CM and MPO at 1.22%, 1.85%, and 1.33% per month, respectively. Thirdly, such differences are also found in the Technology sector with an addition of the differences between those connected to the MPC and MPO. The variations are 3.89%, 6.63%, 3.53%, and 2.74% per month, respectively.

[39]For example, for the Prime Minister (PM), the coefficient on the political dummy of 0.013 is divided by the coefficient on the leverage (LEV) ratio of -0.011. This is equal to -1.18%. The same calculation procedure applies for Cabinet Ministers (CM).

Fourthly, for the Property sector, it is found that there are significant differences between the stock returns of firms connected to the PM and CM, PM and MPC, PM and MPO, and, MPC and MPO at 2.46%, 3.18%, 5.15%, and 1.97% per month, respectively. Finally, this set of difference is also found in the Resources sector but with an exception for the MPC and MPO case. The differences in returns are found to be 3.05%, 3.60%, and 5.62% per month, respectively.

As a whole, the results from Panel B of Table 5.7 shows that the differences in the stock returns are greatest between firms connected to the Prime Minister (PM) and Members of Parliament within opposition parties (MPO). In other words, this is between the highest level of political connection and the lowest one. Evidently, the degree of differences lessens when the returns of firms connected to Cabinet Ministers (CM),which is the second highest level of connection, is compared to those connected to the lowest level one (MPO). Such differences in returns become even smaller between firms connected to the third highest level of connection and those connected to the lowest one, which is between Member of Parliament within coalition parties (MPC) and Member of Parliament within opposition parties (MPO).

In conclusion, the results from individual sector analysis show that the higher the level of political connection, the higher the stock returns. Noticeably, the large differences in returns are found particularly in regulated sectors in Thailand such as the Financial, Property, Resources and Technology sectors. Possibly, firms in such regulated sectors need to secure positional advantages over one another in order to attain the contracts for mega projects or concessions that are awarded by the government. Since high level politicians have the ability to protect the interests of connected firms by enacting or changing laws such that it generates economic rents and protect the connected firms from competitions and industrial regulations, investors may regard the more highly connected firms in these industries as having competitive advantages. Consequently, this has a positive impact on highly connected firms' equity values. Besides, the findings from this study contribute to the arguments by Pathmanand (1998), Intarakumnerd (2000), and Intarahumnerd *et al.* (2002) that entry into highly regulated sectors in Thailand relies heavily on the firms' degree of political connectedness.

5.6.2 POLITICAL CONNECTIONS & FIRM PERFORMACES

In this section, the study provides evidence that there are differences in the financial performance of listed firms with different levels of political connection in Thailand. Firstly, the time fixed-effect pool regression model [5.4] is estimated to find the financial performance of firms under the different levels of political tie. The test for equal coefficients is then conducted to identify whether there are any differences in the performance of firms with different levels of political connection. The main regression results are reported in Panel A while the tests for equal coefficients for each performance measurement are reported in Panel B of Table 5.8.

The results from Panel A of Table 5.8 show that firms which are connected to the Prime Minister (PM) have significantly higher profitability as measured by return-on-assets (ROA) ratio than firms with lower levels of political connection at 3.56% per month. The test for equal coefficients in Panel B suggests that there are significant differences in ROA among firms with different levels of political connection at 3.14% per month. Specifically, the ROA of firms connected to the PM is significantly greater than those connected to the Cabinet Ministers (CM), Member of Parliament within coalition parties (MPC), and Member of Parliament within opposition parties (MPO) at 3.42%, 3.73%, and 3.10% per month.

Panel A of Table 5.8 also shows that the price-to-earnings (PE) ratio is statistically significant across all levels of political connection. Specifically, the PE ratio of firms connected to the PM, CM, MPC, and MPO is significantly greater than firms without political connections at 1.71, 1.23, 1.05, and 0.82 per month, respectively. The test for equal coefficients in Panel B indicates that there are significant differences in PE ratio among firms with different levels of political connection at -1.38 per month. In particular, the PE ratio of firms connected to the PM and CM is significantly greater than those connected to MPO at 0.89 and 0.41 per month, respectively.

Table 5.8

Monthly financial performance under different levels of political connection

Panel A reports coefficient estimates from time fixed-effects pooled regression model [5.4] of firms' financial performance on political connection variables and control variables. Panel B reports the test of equal coefficients. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008.The dependent variables are ROA, PE, M/B, DY, AT, and FE. ROA denotes the return-on-assets ratio. PE stands for price-to-earnings ratio. M/B is the market-to-book ratio. DY denotes the dividend yield. AT is the fixed-to-total assets ratio. And, FE represents the sales-to-assets ratio. Firm size is measured as the log of total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. Panel B reports the test for equal coefficients. *F*-statistics appear in parentheses and are a test of the null hypothesis that the differences among coefficients are equal to zero. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Regression model [5.4]:

$$\text{Performance}_{it} = \alpha + \beta_1 \text{PM}_{it} + \beta_2 \text{CM}_{it} + \beta_3 \text{MPC}_{it} + \beta_4 \text{MPO}_{it} + \sigma_{it} \text{SIZE}_{it} + \sum_{i=1}^{8} \text{Industry}_{it} + \varepsilon_{it}$$

Panel A: General Results

	ROA	PE	M/B	DY	AT	FE
Intercept	0.071 (2.13)**	8.917 (8.50)***	0.946 (2.20)**	-0.012 (-1.68)*	0.497 (5.03)***	3.055 (8.51)***
PM	0.036 (1.92)*	1.712 (3.20)***	0.955 (2.83)***	-0.006 (-1.75)*	0.092 (2.91)***	0.050 (6.34)***
CM	0.001 (0.28)	1.229 (5.48)***	0.068 (0.99)	-0.002 (-0.86)	0.017 (0.95)	0.011 (2.64)***
MPC	-0.001 (-0.28)	1.045 (3.64)***	0.109 (1.48)	-0.003 (-1.31)	0.028 (1.60)	0.045 (6.64)***
MPO	0.005 (0.73)	0.820 (3.50)***	0.032 (0.45)	0.001 (0.86)	0.045 (2.39)**	0.021 (3.04)***
SIZE	-0.002 (-0.42)	0.012 (0.08)	0.112 (1.11)	0.003 (1.28)	0.002 (0.12)	-0.309 (-9.69)***
R^2 adj.	0.10	0.19	0.16	0.11	0.31	0.30
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Test of equal coefficients

	ROA	PE	M/B	DY	AT	FE
$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.031 (3.18)*	-1.381 (3.77)*	0.746 (4.11)**	-0.002 (0.26)	0.003 (0.00)	-0.024 (3.31)*
$\beta_1 - \beta_2 = 0$	0.034 (3.45)*	0.484 (0.79)	0.887 (6.68)***	-0.004 (0.99)	0.076 (5.42)**	0.042 (21.99)***
$\beta_1 - \beta_3 = 0$	0.037 (4.00)**	0.667 (1.43)	0.845 (6.22)**	-0.003 (0.64)	0.064 (3.92)**	0.008 (1.15)
$\beta_1 - \beta_4 = 0$	0.031 (2.65)*	0.893 (2.65)*	0.923 (7.27)***	-0.007 (4.08)**	0.047 (2.10)	0.032 (12.67)***
$\beta_2 - \beta_3 = 0$	0.003 (0.31)	0.184 (0.57)	-0.042 (0.25)	0.001 (0.26)	-0.011 (0.39)	-0.034 (1.10)
$\beta_2 - \beta_4 = 0$	-0.003 (0.28)	0.409 (2.61)*	0.036 (0.22)	-0.003 (1.62)	-0.029 (2.41)	-0.009 (1.88)
$\beta_3 - \beta_4 = 0$	-0.006 (0.83)	0.226 (0.63)	0.078 (1.14)	-0.005 (5.76)**	-0.017 (1.01)	0.024 (27.92)***

For the market-to-book (M/B) ratio, there is evidence from Panel A of Table 5.8 that firms connected to the PM have significantly higher M/B ratio than firms connected to lower levels of political connection at 0.95 per month. The tests for equal coefficients in Panel B further suggest that there are significant differences in M/B among firms with different levels of political connection at 0.75 per month. Especially, the M/B ratio of firms connected to the PM is significantly greater than those connected to the CM, MPC, and MPO at 0.89, 0.85, and 0.92 per month, respectively.

Furthermore, Panel A of Table 5.8 shows that firms which are connected to the Prime Minister (PM) have significantly lower dividend yield (DY) than firms with lower levels of political connection at 0.57% per month. The test for equal coefficients in Panel B indicates that DY of firms connected to PM is significantly lower than those connected to MPO at

0.70% per month. Dividend yield of firms connected to MPC is also found to be lower than those connected to MPO at 0.45% per month.

Additionally, Panel A of Table 5.8 shows that firms which are connected to the Prime Minister (PM) and Member of Parliament within opposition parties (MPO) have significantly higher asset tangibility as measured by the Fixed-to-Total assets (AT) ratio than firms connected to other levels of political connection at 9.24% and 0.45% per month, respectively. The test for equal coefficients in Panel B indicates that the AT ratio of firms connected to the PM is significantly greater than those connected to the Cabinet Ministers (CM) and Members of Parliament within coalition parties (MPC) at 7.57% and 6.44% per month, respectively.

Lastly, Panel A of Table 5.8 shows that firm efficiency which is measured by the sales-to-assets (FE) ratio is statistically significant across all levels of political connection. To be precise, the PE ratio of firms connected to the PM, CM, MPC, and MPO is significantly greater than firms without political connections at 5.03%, 1.13%, 4.48%, and 2.08% per month, respectively. The test for equal coefficients in Panel B indicates that there are significant differences in firm efficiency among firms with different levels of political connection at -2.41% per month. Particularly, the FE ratio of firms connected to the PM is significantly greater than those connected to CM and MPO at 4.16% and 3.21% per month, respectively. Besides, firms connected to MPC are found to have higher FE ratio than those connected to MPO at 2.40% per month.

The interpretation of the results is that, firstly, the higher return-on-assets (ROA) ratio for firms that are connected to the Prime Minister (PM) suggests that highly connected firms are associated with superior profitability. This implies that firms connected to the PM are more effective in using their assets as well as being able to generate profit before leveraging their own assets. As a result, these firms could grow faster without having to borrow or sell additional shares to raise capital. This is consistent with the main findings in Table 5.4 since being connected to PM is found to be equivalent to the effect of decreasing the debt ratio by 21.67% per month.

Secondly, the higher price-to-earnings (PE) ratio for firms connected to the Prime Minister (PM) and Cabinet Ministers (CM) compared to those connected to the Members of Parliament within opposition parties (MPO) indicates that investors are paying more for the higher connected firms than the lower connected firms. Therefore, investors would expect a higher earnings growth in the future for these highly connected firms in response to the higher prices that they paid. Moreover, since firms with higher PE ratios (higher politically connected firms) are generally riskier than firms with lower PE ratios (lower politically connected firms) due to a greater probability of missing high-growth expectations as opposed to low-growth predictions, investors also generally demand higher returns for bearing such a higher risk. These in a sense help to explain the higher stock returns of firms with higher level of political connections in Thailand.

Thirdly, firms with high price-to-earnings (PE) ratios generally provide lower yields than firms with low PE ratios. Consistent with this argument, evidence shows that firms with connections to the Prime Minister (higher PE ratio firms) have lower dividend yield (DY) than those connected to the Member of Parliament within opposition parties (lower PE ratio firms). In other words, firms connected to high level politicians practice a low dividend yield policy. Hence, a high level of political connection coupled with low dividend yield policy indicates that highly connected firms are likely to have more major plans of expansion which leads to the need to retain their earnings. Again, it is believed that such plans for expansion result from a range of economic rents that these highly connected firms received. Therefore, the findings indicate that investors who invest in highly connected firms should be expecting capital appreciation rather than dividend income.

Fourthly, the fact that firms connected to the Prime Minister (PM) have higher market-to-book (M/B) ratios than firms connected to lower levels of political connection suggests that investors are more willing to pay for firms connected to the PM above its hard assets compared to those connected to lower levels ones. This higher premium signifies that market participants bid up the share prices of firms connected to the PM based on the prospect for better earnings and cash flow in the future compared to firms with other types of connection.

Fifthly, the fraction of fixed-to-total assets (AT) ratio is found to be larger for firms connected to the PM than those connected to the Cabinet Ministers (CM) and Member of Parliament within coalition parties (MPC). AT ratio measures the productivity of the firm's fixed assets. This ratio reflects the firm's efficiency in managing the fixed assets which, for most firms, represent the largest component of total assets. Therefore, the higher AT ratio for firms connected to the PM suggests that highly connected firms are more efficient in managing their fixed assets compared to those connected to other levels of political connection. This ratio also reflects the fact that highly connected firms are more dependent on fixed assets to run their businesses.

Finally, firms connected to the PM are found to have higher total asset turnover, as measured by the sales-to-assets ratio, compared to those connected to the CM and MPO. This indicates the effective use of fixed assets by highly connected firms. Moreover, it also shows how firms connected to the PM are better in using their assets to generate more sales compared to those connected to other levels of political connection.

As a whole, the results from Table 5.8 provide evidence that there are differences in financial performance among firms with different levels of political connection for four out of six financial performance measurements. These four are the return-on-assets (ROA) ratio, price-to-earnings (P/E) ratio, market-to-book (M/B) ratio, and sales-to-assets (FE) ratio. As a result, the null Hypothesis 4 which states that there are no differences in terms of explanatory power among the different levels of political connections on financial performance of listed firms in Thailand can be rejected for these four financial performance measurements based on the findings. Moreover, all performance measurements, except the fixed-to-total assets ratio, indicate that firms connected to the Prime Minister (PM) have superior financial performance than those connected to Member of Parliament within opposition parties (MPO). This highlights the significant differences in financial performance between firms connected to the highest level of political connection and those connected to the lowest levels ones. The findings thus contribute to the argument by Imai (2006) that firms which are connected to the higher level politicians benefit from the private rents that these politicians have to offer.

5.7 ECONOMETRIC ISSUES

To ensure the validity of the results, this study addresses several econometric issues that could arise from the test methodologies and regression models estimation. Specifically, this study ensures that clustering effect, outliers, multicollinearity, and measurement errors are not influencing the results.

5.7.1 CLUSTERING EFFECT

Despite the fact that White period standard error and covariance are employed to correct for heteroskedasticity – robust standard error throughout the regression analysis, it remains possible that the results may be affected by both serial and within-firm cross-sectional correlation. This is where there may be clustering of observations among firms with the same connected politicians. To control for such a clustering effect, the study employs panel-corrected standard errors (PCSE) as suggested by Petersen (2008). The significance of the results does not change after adjusting the standard errors of the coefficients to account for a clustering effect. This indicates a lack of a serious clustering problem. As a result, it can be concluded that clustering does not appear to be an important problem in this study.

5.7.2 EXTREME OUTLIERS

Outliers can become an issue if the variables contain extreme outliers which drive the significance of the results. Therefore, in order to rule out such a possibility, all variables' values are winsorised at the 1st and 99th percentile before the test analysis and the results that are reported in the empirical results, section 5.6, already reflect this restriction.

5.7.3 MULTICOLLINEARITY

The average correlation coefficient among the political dummy variables is 0.1123. This indicates that the political variables used in this study are not highly correlated. Nevertheless, to formally detect the problem of multicollinearity, the average variance inflation factor (VIF) of the coefficients is computed. This is about 1.26 with the maximum VIFs of no greater than 2. This is well below the rule of thumb critical value, which should not be greater than 5. Hence, it can be concluded that multicollinearity does not affect the models and it does not appear to be a problem in the analysis.

5.7.4 MEASUREMENT ERROR

Perhaps, a more serious issue is the measurement error or errors-in-variables which exist upon establishment of the political connections. One potential concern for the regressions used in the estimation is that the political dummy variables may be endogenous. The model used in this study assumes that firms' political connections are predetermined. However, one can argue that it is not the political connections that yield better stock performance. On the contrary, good performance may influence the decision as to whether the firm should maintain its political connections or not. It is possible that a firm will only remain connected to a politician if it performs well. In this case, some unobserved determinants of stock returns may also explain political connections. This would violate the OLS assumptions and leads the OLS estimate to be biased and inconsistent. The study addresses this issue by using the instrumental variable (IV) estimation procedure. This approach to address endogeneity was suggested by Sovey and Green (2009) and Almeida, Campello, and Galvao (2010) and is widely used in researches that examine the role of political interference such as Bertrand *et al.* (2007), Chaney *et al.* (2011), and Dinç and Gupta (2011).

Prior studies consistently show that firm's age and location are important influences on political connections. For example, Luez and Oberholzer-Gee (2006) use firm's age as an instrumental variable for political closeness. While, Roberts (1990), Agrawal and Knoeber

(2001), Bertrand *et al.*(2007), Boubakri, Cosset, and Saffar (2008, 2009), and Faccio and Parsley (2009) use firm's location as an instrumental variable. Particularly, Chaney *et al.* (2011) assert that the presence of firm's headquarters in the capital city is an important determinant as to whether or not a firm will establish political connections. Accordingly, the firm's age and location are specified herein as IV for political connections.

In the first-stage regression, a logit regression model is estimated. Here, the dummy variables for each level of political connection is used as a dependent variable and is regressed on the set of independent variables that is included in regression model [5.2] plus the firm's age (AGE) and location (LOC). The first stage regression is as follows:

$$\text{Political Connection Dummy Variable}_{it} = \alpha + \beta_1 \text{AGE}_{it} + \beta_2 \text{LOC}_{it} + \sigma_{it} \text{SIZE}_{it} + \theta_{it} \text{B/M}_{it} + \gamma_{it} \text{LEV}_{it} + \sum_{i=1}^{8} \text{Industry}_{it} + \varepsilon_{it} \quad [5.5]$$

AGE denotes the firm's age which is the number of years a firm has been listed on the stock exchange. LOC represents the firm's location which is an indicator variable that takes the value of one if the firm's headquarter is located in Bangkok, and zero otherwise.

For the second-stage regression, the fitted value for political connections from the first-stage regression is then used as an additional covariate, as follows:

$$r_{it} = \alpha + \beta_1 \text{IPC}_{it} + \sigma_{it} \text{SIZE}_{it} + \theta_{it} \text{B/M}_{it} + \gamma_{it} \text{LEV}_{it} + \sum_{i=1}^{8} \text{Industry}_{it} + u_{it} \quad [5.6]$$

IPC denotes the predicted value of political connection dummy variable from the first-stage regression. The results from estimating the first- and the second-stage regressions are presented in Table 5.9.

Table 5.9

The stock returns of politically-connected firms with firm's age and location as instrumental variables

This table presents the results from regressions conducted to determine the source of stock returns changes of politically-connected firms over the period 1987-2008. The sample size is 653 listed firms on the Stock Exchange of Thailand. The dependent variable for the first-stage regression is the dummy variable for each level of political connection. The dependent variable for the second-stage regression is the pooled real rate of stock returns. Age (AGE) is the number of years a firm has been established. Location (LOC) is a dummy variable that takes the value of 1 if the firm is located in the capital city, Bangkok. IPC is the predicted value of each political connection dummy variable estimated in the first-stage regression. Firm's size (SIZE) is measured as the log of total assets. B/M is the book-to-market ratio. Leverage (LEV) is measured as total debts to total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties.*,**,*** indicates significance at the 10%, 5%, and 1% level, respectively.

Constant	AGE	LOC	IPC	SIZE	B/M	LEV	Industry dummies	Adj. R^2
PM:								
First -Stage								
-0.043	0.001	0.006		-0.014	0.029	-0.009	Yes	0.05
(-1.10)	(1.84)*	(1.09)		(-2.17)**	(1.93)*	(-0.28)		
Second-Stage								
-0.013			0.304	-0.003	0.027	-0.001	Yes	0.21
(-2.09)**			(3.53)***	(-2.07)**	(4.83)***	(-1.74)*		
CM:								
First -Stage								
				-0.066	0.021	0.009	Yes	0.07
-0.321	0.007	0.013		(4.23)***	(0.29)	(0.04)		
(-3.12)	(4.79)***	(0.63)						
Second-Stage								
0.012			0.056	-0.005	0.026	-0.001	Yes	0.21
(1.71)*			(3.85)***	(-3.59)***	(3.93)***	(-1.76)*		

Constant	AGE	LOC	IPC	SIZE	B/M	LEV	Industry dummies	Adj. R^2
MPC:								
First -Stage								
0.099	0.005	0.005		-0.004	0.022	0.002	Yes	0.07
(1.19)	(3.47)***	(0.25)		(-2.09)**	(2.72)***	(0.75)		
Second-Stage								
-0.0136			0.082	-0.001	0.031	-0.001	Yes	0.20
(-2.17)**			(3.87)***	(-2.03)**	(0.43)	(-2.18)**		
MPO:								
First -Stage								
0.057	0.003	-0.012		0.007	-0.001	-0.003	Yes	0.05
(0.82)	(2.74)***	(-0.62)		(0.67)	(-1.61)	(-1.48)		
Second-Stage								
-0.011			0.117	-0.002	0.003	-0.002	Yes	0.21
(-1.88)*			(1.19)	(-1.09)	(5.08)***	(-0.71)		

For the first-stage, the results from Table 5.9 show that firm's age is a superior predictor of political connections in Thailand than firm's location since it is statistically significant at all levels of political connection. This implies that the incidence of connections is higher for firms with long establishment and at the same time the likelihood of observing political connections does not depend on the firms being located in the capital city, Bangkok. In other word, firms seek political affiliations regardless of their locations.

For the second-stage, it is found that stock returns are positively related to the instrumented value of political connections (IPC). This relationship is significant at the 1% level for the

connections with the Prime Minister (PM), Cabinet Minister (CM), and Member of Parliament within coalition parties (MPC). For the connections with the Member of Parliament within opposition parties (MPO), this relationship is, however, not statistically significant. Nonetheless, in accordance with what is anticipated, the stock returns are greater for firms which are connected to the PM than for those connected to other levels of political connection. The findings therefore indicate that politically connected firms, except for those connected to MPO, exhibit a significant positive stock performance after taking into consideration the endogeneity issue in the political connections by using the firm's age and location as instrumental variables.

5.8 ROBUSTNESS CHECKS

In this section, a number of robustness checks are carried out to ensure the validity of the results. Firstly, the connections to the board of directors and to the shareholders are considered independently. Secondly, the levels of political connection for firms that are connected to more than one politician are considered. Thirdly, an alternative proxy for firm size is being used. Lastly, two additional control variables are augmented into the regression analysis for testing the strength of the results.

5.8.1 POLITICAL CONNECTIONS MEASUREMENT

In this robustness check, the term 'politically connected firm' is redefined in order to ensure that the results are not specific to the choice of political connections measurement. That is, the connections to the board of directors and to the shareholders are considered independently. There are two steps taken herein. In the first step, a politically connected firm is redefined as any firm with political connections through the board of directors. This means only the firm that has a family member of a politician sits on the board of directors, either as an executive or non-executive director, is considered.

In the second step, a politically connected firm is redefined as any firm with political connections through a major shareholder. Specifically, only the firm that has a family member of a politician or any private entity ultimately owned by him/her as a major shareholder is considered. This robustness check should indicate whether the strength of political connections is stronger when that connections are through the board of directors or through shareholdings.

The results from this first robustness check are presented in Table B1.1 and B1.2, Appendix B1. The results show that it is the connections through the shareholders rather than the board of directors that primarily drive the main results. This is because the strength of statistical significance is much stronger when the connections are established through the shareholders as opposed to the board of directors. Moreover, with the connections established through the shareholders, stock returns are significantly greater for firms connected to the Prime Minister (PM), Cabinet Ministers (CM), and Member of Parliament within coalition parties (MPC). On the contrary, with the connections established through the board of directors, stock returns are only significantly greater for those connected to the PM and CM.

Accordingly, such findings suggest that investors prefer and bid up the stock prices if political connections are established through the shareholders rather than the board of directors. One of the reasons may be due to the higher degree of stakes and benefits involved with the former since the family members of politicians or the private entities ultimately owned by him/her also have major stakes in the companies. Besides, investors may regard this type of connections to be more certain since businessmen who have positions in the government typically transfer the shares they held in the companies to their family members. While in the case of directors, there may be firms whose owners do not enter politics but seek political connections through offering seats on the board of directors to the family members of the politicians. Consequently, this type of connections may become uncertain if the firms cannot maintain the relationship with the politicians.

Nevertheless, even when the connections to the board of directors and to the shareholders are each considered independently, the stock returns of firms connected to the Prime Minister

remain significantly greater than those connected to Members of Parliament within opposition parties. This indicates that the stock returns of firms connected to the highest level of political connection are greater than those connected to the lowest level regardless of the choice of political connections measurement. It is in this respect that the findings from this first robustness test do provide consistent evidence with the main findings presented in Table 5.4. More importantly, such a finding strongly implies that connection to high level politicians is an important determinant of stock returns in Thailand.

5.8.2 LEVEL OF POLITICAL CONNECTION

There could be cases where more than one political connection could be established for a single firm. This is given that it is possible for a firm to be connected to a number of politicians from various political parties. In such cases, connection to the politician who is higher in ranking according to the political ranking scale is being recognised. This is based on the argument that a higher level politician has the ability to deliver superior private rents to a connected firm than a lower level politician. However, connection to the politician who is lower in ranking according to the political ranking scale is the one to be examined in this robustness check.

Overall, there are 121 out of 653 firms that are simultaneously connected to more than one politician at different levels of political connection. The overlap of connections is presented in Table 5.10, which shows that the largest numbers of firms have an overlap of political connections between Member of Parliament within coalition parties (MPC) and Member of Parliament within opposition parties (MPO). While the smallest numbers of firms have an overlap of political connections between Prime Minister (PM) and MPO, which is between the highest and lowest level of political connection.

Table 5.10

The overlap of political connections

This table presents the number of firms that are listed on the Stock Exchange of Thailand over the period 1987-2008 which are found with an overlap of political connections. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties.

Overlap of political connections between	Numbers of Firm
PM & CM	4
PM & MPC	6
PM & MPO	3
CM & MPC	40
CM & MPO	27
MPC & MPO	41
Total Number of Firms	121

Accordingly, for these 121 firms, connections to politicians who are lower in ranking is the one to be examined when estimating regression model [5.2]. Table B2.1 in Appendix B2 shows the results from this robustness check. The findings from the regression analysis suggest that the results are robust to such a change in the recognition of level of political connection. That is, the stock returns are significantly greater for firms that are politically connected to the PM, CM, and MPC at 0.91%, 0.50%, and 0.29% per month, respectively. There are significant differences among the stock returns of firms that are connected to PM and CM, PM and MPC, and PM and MPO at 0.41%, 0.62%, and 0.96% per month, respectively. Moreover, there are significant differences among the stock returns of firms that are connected to the CM and MPO, and, MPC and MPO at 0.55% and 0.35% per month, respectively. These findings are consistent with those in Table 5.4. However, the percentages of stock return differences appear to be smaller and the level of significance of the results also appear to decrease when the connections to politicians who are lower in ranking are used in the analysis.

5.8.3 ALTERNATIVE PROXY FOR FIRM SIZE

The third robustness check uses the log of net sales as an alternative proxy for firm size. The results are robust to such a change in proxy since there is no effect on the level of significance of the results and there remain significant differences in the stock returns of firms with different levels of political connection. The results from this robustness test are presented in Table B3.1, Appendix B3.

5.8.4 ADDITIONAL CONTROL VARIABLES ON FIRM PERFORMANCE

The last robustness check augments two additional control variables into the regression model [5.4] for the analysis of the effect of political connections on firm financial performance. These two variables are the book-to-market ratio and leverage. It is found that the results are robust to the addition of these control variables. The findings from this robustness check are presented in Table B4.1, Appendix B4.

5.9 CONCLUSIONS

This study investigates the relationship among political connectedness, stock returns, and firm values in Thailand. The sample consists of 653 firms listed on the Stock Exchange of Thailand over the period of January 1987 to December 2008. There are four null hypotheses for this essay. The first three are rejected, while the last null hypothesis is rejected for four out of six performance ratios being examined. The first part of this study highlights the nexus between political connections and stock returns. There is evidence which firmly suggests that the level of political connection has strong predictive power in explaining stock returns in Thailand. Specifically, the stock returns of firms connected to the higher level politicians are found to be greater than those connected to the lower level ones.

The second part of this study draws attention to the differences in stock returns of firms with different levels of political connection across the industries. Specifically, it is found that the level of political connection is a price factor for firms belonging to more regulated industries like Financial, Property, Resources, and Technology sectors. This can be due to the competitive advantages that these highly connected firms hold over the others since high level politicians are able to provide access to state resources and enact or change laws so as to generate economic rents or protect these firms from competitions and industrial regulations.

The last part of this study shows that there is also a significant relationship between political connections and firms' financial performance. Particularly, it is found that the level of political connectedness is an important determinant of firms' profitability and efficiency as well as their market-to-book (M/B) ratio. Such a finding complements the results of Imai (2006) and Chantrataragul (2007) who examine this aspect on Thai capital markets but over a shorter time period. Moreover, these prior studies categorise firms only into those with and without family members in the cabinet. Hence, the findings from this study draw attention to the significant difference in financial performance between firms connected to the highest level of political connection and those connected to the lowest level. Specifically, there is evidence that firms connected to the Prime Minister (PM) have higher profitability as measured by return-on-assets (ROA) ratio and price-to-earnings (P/E) ratio than those connected to Member of Parliament within opposition parties (MPO). The former also has a higher market-to-book (M/B) ratio, practices a low dividend policy, is more efficient in managing its fixed assets and uses these assets to generate more sales compared to the latter.

To address the endogeneity issue in this study, instrumental variable (IV) estimation procedure is carried out to ensure the validity of the results. It is found that the incidence of political connections is higher for firms with longer establishment. Besides, it is not only firms located in the capital city, Bangkok, which are motivated to seek political affiliation. The outcomes indicate that publicly listed firms seek political relationship regardless of where their headquarters are located in Thailand.

As part of the robustness checks, the term politically connected firms is redefined to ensure that the results are not specific to the choice of political connections measurement. This is carried out by considering the connections that are established through the shareholders and through the board of directors independently. The findings from this robustness check indicate that investors prefer and bid up stock prices when political connections are established through the shareholders rather than the board of directors and the overall results are being driven by the former type of connections. Nonetheless, it is found that the stock returns of firms connected to the highest level of political connection are greater than those connected to the lowest level one regardless of the choice of political connections measurement. This suggests that connections to high level politician are important determinant of stock returns in Thailand.

Accordingly, this study presents evidence from 21 years of observations that Thai politicians differ in their ability to deliver private rents to connected firms. Particularly, the findings show that top level politicians have superior ability to deliver economic benefits to their connected parties. This is reflected in the higher stock returns of firms connected to the higher level politicians. The findings thus provide important information for both investors and listed firms in Thailand. For investors, the evidence suggests that investing in highly connected firms yields superior returns in the long-run. For listed firms, such evidence points toward the importance in maintaining or seeking corporate political connectedness, especially with top level politicians, in order to remain competitive in the market and to continue being attractive to investors.

As a result of these findings, this study highlights the shortcomings in the Thai political and corporate governance systems wherein there remain inadequate procedures to prevent the misconducts by politicians and connected firms. Such a lack of preventative measures allows opportunities for inside information from politicians to be used to manipulate stock prices and enables connected firms to adjust corporate strategies such that it increases firm values or minimises any negative impacts on firm performance.

The findings from this study therefore provide some important implications for the Thai's Securities Exchange Commission (SEC), the legislators, and the Office of the National Anti-Corruption Commission (NACC). At the very least, the findings raise awareness of the shortcomings in the systems which need to be addressed. It is believed that this would require a regulatory reform in the Thai corporate governance system. Perhaps, the SEC needs to place more stringent requirements on the quality of the board of directors such that they consist of a pool of qualified directors who are limited to serve for only a number of years. Moreover, the SEC may have to ensure the on-going independence of all independent directors to warrant their independences from management and substantial shareholders. Possibly, the SEC can require firms to file a record of time spent on the job by their directors and/or provide prove of evidence which shows their commitment to the organisations on an annual basis. This should help to prevent and also make it more difficult for firms to allocate seats on the board of directors to unqualified politically connected persons. More importantly, the SEC may have to closely scrutinise the true identity of shareholders, especially the corporate shareholders, to ensure that they are not merely the nominees or shell-entities of politicians. Presumably, this would require setting up a special unit particularly for this operation.

As for the legislators, the law which limits any shareholding by MPs and his/her spouses in any companies to five percent may need to be revised and extended to cover the MPs' children and perhaps siblings as well. In conjunction with this, the NACC may have to endorse a new regulation which prohibits these players from taking up a role on the board of directors of any publicly listed company. These preventative measures should help to reduce the conflict of interest and assist in raising the level of transparency on the relationship between politicians and listed firms.

However, the major obstacle in reforming Thai corporate governance system is more likely to come from the Thai business culture itself. The tradition of family businesses and their dependences on political power for economic benefits have profoundly dominated the way Thais have conducted their businesses for decades. Such tradition has created an inseparable nexus between firms and politicians. Accordingly, the practice in which business tycoons and their family members run for public office has become a part of the business culture. To

address the issue of political favouritism, such a culture needs to be changed. Yet, altering one's culture is not an easy task, not to say impossible. Therefore, so long as such a culture remains embedded in the Thai society and corporate political connectedness is still not transparently observable plus there continues to be room in which politicians could provide preferential treatment to the connected firms, political patronage will likely remain prevalent in Thailand. For this reason, this study on the effect of different levels of political connection on the stock and financial performance of listed firms in Thailand could provide excellent reference for both the current and prospective investors who seek to invest in the Thai capital market.

CHAPTER SIX

CONCLUSION

This chapter concludes the thesis by providing a brief summary of the key findings from each of the three essays as well as suggesting potential areas for further research.

6.1 MAJOR FINDINGS AND IMPLICATIONS

6.1.1 ESSAY ONE

The first essay of this thesis examines the relationship between political risk and stock returns of emerging and developed markets by using a dataset which covers the period of 1984 to 2007. The results from univariate statistical analysis indicate that the magnitude of political risk change is larger in emerging markets than in developed ones, which implies that the former is politically riskier than the latter. Despite this, it is found that there is a tendency for global convergence in political risk between these two types of markets after the year 1995. To formalise the investigation, a country fixed-effects pooled regression analysis is used to estimate the stock returns of both emerging and developed markets. By controlling for possible influences on stock returns, it is found that political risk is not a more important determinant of stock returns in emerging markets than in developed ones. The results from both univariate statistical analysis and pooled regression analysis contribute to the argument by Diamonte *et al.* (1996) that, with global convergence in political risk between emerging and developed markets, one can expect to see a narrowing or no differential effect of political risk on equity returns between these two markets.

In terms of contribution, this essay expands on the current literature by comprehensively examining specific time periods in addition to specific groupings of markets such as Pacific Basin and Asian emerging stock markets. There is very limited empirical evidence on the effect of political risk on stock returns of these two groups of markets. Accordingly, this study finds evidence which shows that the aggregated relation between political risk and stock returns of Pacific Basin emerging markets is significant throughout the sampling period. For the Asian emerging markets, however, the aggregated relation between political risk and stock returns is only significant after the year 1995 and particularly during the Asian Financial Crisis period. Since political risk does not explain any of the variation in emerging and developed markets stock returns at the aggregated portfolio level, these findings add to the existing body of knowledge that Pacific Basin emerging markets are more responsive to political risk than any other markets that are examined herein.

Despite the fact that political risk does not explain any of the variation in stock returns of emerging markets for the whole sampling period, evidence shows that political risk becomes an important determinant of emerging markets stock returns subsequent to the 9/11 Terrorism Attack. Nevertheless, robustness tests suggest that this is simply because emerging markets are tracking the movement of US stock market following the shock of 9/11 event. This finding therefore contributes to the arguments by Hon *et al*. (2003), Chen and Siembs (2004), Karolyi (2006), and Chesney *et al*. (2011) that there is an increase in the relationship between US and global stock returns after the 9/11 event. More importantly, this finding signifies that political risk may, to a certain extent, be accountable for the market comovement between emerging markets and US stock market. If this is the case, investors may be able to forecast the pattern of emerging markets stock returns if changes in political risk in the US can be forecasted. However, a formal testing for market co-integration needs to be carried out before this can be concluded. This essay will leave this matter for further study.

In conclusion, this essay finds that emerging markets are politically riskier than developed markets. Despite this, the empirical findings indicate that political risk is not a significant stock price factor for either emerging or developed markets for the sampling period of 1987 to 2007. Evidence, however, indicates that political risk is a significant stock price factor for Pacific Basin emerging markets when specific groupings of markets are examined. Hence, this essay provides important implications for international investors that there are differences in political risk exposures among the different types of market. Particularly, such differences are found at the aggregated portfolio level among Pacific Basin, emerging, and developed markets. Investors therefore need to be aware that investing in Pacific Basin markets can increase the level of risk and affect the risk-return characteristic of their investment portfolios.

6.1.2 ESSAY TWO

The second essay of this thesis examines the relationship between political regimes and stock pricing. Specifically, it focuses on the impact of military regimes on stock returns of ten emerging markets. Descriptive statistics show that the average returns under military governments are higher than under civilian governments for the stock markets of Chile, Korea, Pakistan, Thailand, and Venezuela. However, to formalise the testing and to control for other variables that might influences stock returns, multivariate regression analysis is carried out.

Accordingly, the empirical findings from regression analysis indicate that there is no significant difference in stock returns between military and civilian governments for eight of the ten markets being examined. However, military rule is found to be a stock price factor for two markets being those of Pakistan and Thailand. These military returns premiums are additional to what could be explained by the economic cycle fluctuation, extreme stock market slumps, error term, and stock market volatility. Moreover, the results are robust to the control of worldwide stock market movement and to the test of spurious regression bias and randomisation-bootstrap.

It is documented by Bunbongkran (1992), Durani and Grare (2006), Maisrikod (2007), Mikami and Inoguchi (2008), and Zaidi (2009) that Pakistanis and Thais share a similar perception about military involvement in politics. That is, the general public of both countries holds a positive attitude toward military takeovers and perceives military movements as a way to resolve political turbulence. The results from this essay show some support for the above findings since such a positive attitude toward military governments is reflected in equity pricing and the military returns premiums that are found in both the stock markets of Pakistan and Thailand.

Consequently, this essay provides important implications for investors on their portfolio formations and allocations of investment since holding or investing in either Pakistani or Thai

stock markets during a period of military control does not necessarily increase the risk level of their portfolios. Furthermore, evidence suggests that there can also be an opportunity for a military returns premium. However, the findings show that this anomaly observed in Pakistan and Thailand appears to be country-specific and thus cannot be applied to all countries under military rule.

Notably, the struggle for power among political parties and politicians still plays a major role in the politics of both Pakistan and Thailand. Studies find that the root of military coups usually comes from intolerable abuse of power by political figures and corruption, especially within a government (Hopkins, 1966; Jackman, 1976; and Pinkney, 1990). In addition, it is asserted by Winichakul (2008) that corruption and abuse of power for personal interest is particularly widespread and is a common problem in the electoral politics of emerging markets. Therefore, unless there is a major reform in political structure together with a radical change in politicians' attitude and morality, these prior studies suggest that there remains a possibility for military involvement in politics in both countries. It is thus possible that the military-civilian-military political cycle will continue to be seen in the future and the findings from this essay will provide important information for investors in both markets.

6.1.3 ESSAY THREE

The third essay of this thesis emphasises the crucial role of the different levels of political connection on equity returns in Thailand by using a newly hand-collected dataset of Thai firms observed over the period 1987 to 2008. Time fixed-effects pooled regression analysis of stock returns is estimated on the political connection variables and a set of control variables. This essay finds evidence which firmly suggests that the level of political connection has a strong predictive power in explaining stock returns in Thailand. Specifically, it is found that the stock returns of firms connected to the higher level politicians are greater than those connected to the lower level ones. Such findings contribute to the argument by Imai (2006) that Thai politicians differ in their abilities to deliver private rents to connected firms.

Furthermore, this essay adds to the existing body of knowledge that the level of political connection is a price factor for firms belonging to more regulated industries in Thailand like Financial, Property, Resources, and Technology sectors. The incidence of political connections is found to be higher for firms with long establishment and firms seek political relationships regardless of where their headquarters are located in Thailand. Besides, market participants prefer and bid up stock prices if the connections are established through the shareholders as opposed to the board of directors.

In addition, the findings contribute to the argument that political connections are important for firms' performance and for obtaining loans (Imai, 2006, Chantrataragul, 2007, and Faccio, 2010). Evidence shows that there are differences in financial performance among firms with different levels of political connection. Particularly, firms connected to the Prime Minister (PM) are found to have higher profitability than those connected to lower levels of political connection. With superior financial results and more tangible assets that can be used as collateral, these explain why firms connected to the PM are able to obtain more long-term loans than others.

The findings from this essay provide important implications for investors, listed firms, Thai's Securities Exchange Commission (SEC), the legislators, and the Office of the National Anti-Corruption Commission (NACC). Evidence shows that the stock returns of firms connected to the Prime Minister are significantly greater than those connected to Cabinet Members, Member of Parliament within coalition parties, and Member of Parliament within opposition parties by 9.38%, 12.68%, and 20.98% per annum, respectively. Thus, for investors, such a finding implies that investing in highly connected firms would yield superior returns in the long-run. For listed firms, since investors would choose to invest in firms that are connected to high level politicians, this points toward the importance of maintaining corporate political connectedness in order to remain competitive in the market and to continue being attractive to investors.

For SEC, evidence highlights the shortcomings in the systems which require the SEC to place more stringent requirements on the quality of the board of directors and to ensure the on-

going independence of all independent directors as well as to closely scrutinise the true identity of corporate shareholders. Furthermore, evidence brings attention to the need for an increasing level of transparency on the relationship between politicians and listed firms. This requires the legislator to perhaps extend the law to limit any shareholding by MP's children and siblings in any companies to five percent as well as prohibit them from taking up the role of board of directors of any publicly listed firms.

Overall, the empirical findings show that business in Thailand is greatly depended upon 'who you know'. This is reflected in the equity market since stock returns are strongly influenced by the level of importance of the persons whom the firms have connections with in the parliament. So long as corporate political connectedness is still not transparently observable and there continues to be room in which politicians could provide preferential treatments to the connected firms, political patronage will likely remain prevalent in Thailand. Thus, the findings from this essay could therefore provide important reference for both the current and prospective investors who seek to invest in the Thai capital market.

6.2 FUTURE AREAS OF RESEARCH

The first essay shows that political risk is not a more important determinant of stock returns in emerging markets than in developed markets for the full sample period. However, political risk is found to explain the stock returns of emerging markets subsequent to the 9/11 Terrorism Attack. Evidence suggests that this is because emerging stock markets are tracking the movement of US stock market, which implies that there is a flow of political risk from US market to emerging markets after the 9/11 event. Such a finding highlights the possibility that political risk may to some extent be associated with the level of market integration between emerging stock markets and the US stock market.

Further analysis can therefore look into whether political risk could be one of the factors that causes emerging stock markets and the US stock market to become more integrated. This is given that political risk is found to be an important determinant of emerging stock markets

returns subsequent to the 9/11 event. However, the result from robustness test shows that emerging stock markets are simply tracking the movement of the US stock market during that period. Hence, an investigation on this topic would be very useful since, if changes in political risk in the US can be predicted, investors can perhaps forecast the pattern of emerging markets stock returns and choose to allocate their investments accordingly.

Additionally, further analysis could examine whether there is any rating spillover. For instance, if the US political risk rating decreases which implies that the country becomes politically riskier, would this have any impact on the perception of riskiness in other developed or emerging stock markets?

Moreover, since political risk rating could not explain the stock returns of emerging and developed markets with the monthly returns data, further analysis could look into whether political risk rating would have any impact on the higher moments of stock returns in these markets. This could be done by using high frequency stock market data in order to fully capture the extent of rating influence on stock returns.

Essay two finds evidence of military returns premiums in the stock markets of Pakistan and Thailand. Although this essay puts forward some possible explanations that both societies embrace a positive attitude toward military takeovers and both similarly perceive military movements as a way to resolve political turbulence, an empirical question remains as to what factors really explain the military returns premiums in these two countries. Perhaps, some psychological factor or other measurement of investors' sentiment needs to be included in the model specification to test whether this can help to explain such outcomes. An investigation from this psychological perspective would be particularly interesting. Moreover, it is questionable whether firms in any particular industry would be more responsive or react more strongly when there is a shift from civilian to military governments in Pakistan and Thailand. An examination at an industry-level would provide useful information for investment decisions during the periods of military government in these two stock markets.

Finally, essay three documents that the different levels of political connection have a strong predictive power in explaining the stock returns and firms' performance in Thailand. Hence, it would be worthwhile to carry out further investigation whether the firm's level of political connection has important influence on the pricing of the initial public offering (IPO), the magnitude of underpricing, and the fixed cost of going public. Further study could also explore the bond market by examining whether corporate political connectedness has an impact on the sales and underwriting of corporate bonds on the Bond Electronic Exchange (BEX) in Thailand. Moreover, this type of analysis could be conducted on countries with similar political system as Thailand and where political patronage is also prevalent. It would be interesting to see whether the level of corporate political connectedness has a strong predictive power in explaining stock returns of other countries, apart from Thailand.

REFERENCES

Adhikari, A., Derashid, C., & Zhang, H. (2006). Public policy, political connections, and effective tax rates: Longitudinal evidence from Malaysia. *Journal of Accounting and Public Policy*, *25*, 5, 574 - 595.

Adler, M. & Dumas, B. (1983). International portfolio choice and corporation finance: a synthesis. *The Journal of Finance, 38*, 3, 925-984.

Agrawal, A., & Knoeber, Charles R. (2001). Do some outside directors play a political role? *Journal of Law and Economics, 44*, 1, 179-198.

Aggarwal, R., Inclan, C., & Leal, R. (1999). Volatility in emerging stock markets. *Journal of Financial and Quantitative Analysis, 34*, 1, 33-55.

Alagappa, M. (Ed.). (2001). *Coercion and governance: The declining political role of the military in Asia*. Standford, California: Standford University Press.

Alba, P., Claessens, S., and Djankov, S. (1998). Thailand's corporate financing and governance structures. World Bank Policy Research Working Paper No. 2003. Available at SSRN: http://ssrn.com/abstract=604952.

Allvine, F. & O'Neil, D. (1980). Stock market returns and the presidential election cycle: Implications for market efficiency. *Financial Analysts Journal, 36*, 49-56.

Almeida, H., Campello, M., & Galvao, A. Jr., (2010). Measurement errors in investment equations. *The Review of Financial Studies, 23*, 9, 3279-3328.

Anderson, H., Malone, C., & Marshall, B. (2008). Investment returns under right- and left-wing governments in Australasia. *Pacific-Basin Finance Journal, 16*, 3, 252-267.

Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: evidence from the S&P 500. *The Journal of Finance, 58*, 3, 1301-1328.

Ang, J. S., Ding, D. K., & Thong, T. Y. (2010). Political connection and post-IPO firm values in Singapore. FMA 2010 New York Meetings Paper. Available at http://www.fma.org/NY/Papers/PoliticalConnectionsandFirmValue.txt.pdf

Arouri, M. E. H., Jawadi, F., & Nguyen, D. K. (2010). *The Dynamics of Emerging Stock Markets: Empirical Assessments and Implications*. Berlin Heidelberg: Springer-Verlag.

Bailey, W., & Chung, Y. P. (1995). Exchange rate fluctuations, political risk, and stock returns: Some evidence from an emerging market. *Journal of Financial and Quantitative Analysis, 30*, 4, 541-561.

Bailey, W., & Lim, J. (1992). Evaluating the diversification benefits of the new country funds. *Journal of Portfolio Management, 18*, 3, 74-77.

Baxter, M., & Jermann, U.J. (1997). The international diversification puzzle is worse than you think. *American Economic Review, 87*, 170-180.

BBC News Corporation. (2007). *Timeline: The Philippines.* Retrieved August 11, 2007 from the World Wide Web: http://news.bbc.co.uk/1/hi/world/asia-pacific/country_profiles/1264117.stm

Bhattacharya, U., Daouk, H., & Welker, M. (2003). The world price of earnings opacity. *The Accounting Review, 78*, 3, 641-678.

Bekaert, G., & Harvey, C. (1995). Time-varying world market integration. *Journal of Finance, 50*, 403-444.

Bekaert, G., & Harvery, C. (2000). Foreign speculators and emerging equity markets. *The Journal of Finance, 55*, 2, 565-613.

Bekaert, G. & Harvey, C. (2002). Research in emerging markets finance: looking to the future. *Emerging Markets Review, 3*, 4, 429–448.

Bekaert, G., Harvey, C., & Lumsdaine, R.L. (2002). The dynamics of emerging market equity flows. *Journal of International Money and Finance, 21*, 3, 295-350.

Berkman, H., Cole, R. A., & Fu, L. J. (2010). Political connections and minority-shareholder protection: Evidence from securities-mrket regulation in China. *Journal of Financial and Quantitative Analysis, 45*, 6, 1391-1417.

Bernhard, W. & Leblang, D. (2006). *Democratic processes and financial markets: pricing politics.* New York: Cambridge University Press.

Bertrand, M., Johnson, S., Samphantharak, K., & Schoar, A. (2008). Mixing family with business: A study of Thai business groups and the families behind them. *Journal of Financial Economics, 88*, 3, 466 – 498.

Bertrand, M., Kramarz, F., Schoar, A., & Thesmar, D. (2007). Politicians, firms and the political business cycle: evidence from France. Working paper, University of Chicago.

Bialkowski, J., Gottschalk, K., & Wisnrewski, T. (2006). Political orientation of government and stock market returns. *Applied Financial Economics Letters, 3*, 4, 269-273.

Bialkowski, J., Gottschalk, K., & Wisnrewski, T. (2008). Stock market volatility around national elections. *Journal of Banking & Finance, 32*, 1941 – 1953.

Bilson, C. M., Brailsford, T. J., & Hooper, V. J. (2001). Selecting macroeconomic variables as explanatory factors of emerging stock market returns. *Pacific-Basin Finance Journal, 9*, 4, 401-426.

Bilson, C.M., Brailsford, T.J., & Hooper, V.J. (2002). The explanatory power of political risk in emerging markets. *International Review of Financial Analysis, 11*, 1, 1-27.

Bittlingmayer, G. (1998). Output, stock volatility, and political uncertainty in a natural experiment: Germany, 1880-1940. *The Journal of Finance, 53*, 6, 2243-2257.

Black, F. (1972). Capital market equilibrium with restricted borrowing. *The Journal of Business, 45*, 3, 444-455.

Block, S. (2003). Political conditions and currency crises in emerging markets. *Emerging Market Review, 4*, 3, 287-309.

Bloomberg, S., & Hess, G. (2001). Is the political business cycle for real? *Journal of Public Economics, 87*, 1091-1121.

Bohl, M. & Gottschalk, K. (2006). International evidence on the Democrat premium and the presidential cycle effect. *North American Journal of Economics and Finance, 17*, 107-120.

Boix, C. (1998). *Political parties, growth and equality: Conservative and social democratic economic strategies in the world economy*. New York: Cambridge University Press.

Booth, J.& Booth, L. (2003). Is presidential cycle in security returns merely a reflection of business conditions?. *Review of Financial Economics, 12*, 2, 131-159.

Boubakri, N., Cosset, J.-C., & Saffar, W. (2008). Political connections of newly privatized firms. *Journal of Corporate Finance, 14*, 5, 654-673.

Boubakri, N., Cosset, J.-C., & Saffar, W. (2009). Politically connected firms: an international event study. Available at SSRN: http://ssrn.com/abstract=1242402.

Boutchkova, M., Doshi, H., Durnev, A., & Molchanov, A. (2011). Precarious Politics and Return Volatility. *Review of Financial Studies*. In Press.

Bunbongkran, S. (1992). Thailand in 1991: coping with military guardianship. *Asian Survey, 32*, 2, 131-139.

Bunkanwanicha, P., & Wiwattanakantang, Y. (2009). Big business owners in politics. *Review of Financial Studies, 22, 6, 2133-2168.*

Bunkanwanicha, P., Fan, J., & Wiwattanakantang, Y. (2008). The value of family networks: marriage and network formation in family business groups. EFA 2008 Athens Meetings Paper. Available at SSRN: http://ssrn.com/abstract=1101975. Forthcoming *Journal of Financial and Quantitative Analysis.*

Burnside, C., Eichenbaum, M., & Rebelo, S. (2001). Prospective deficits and the Asian currency crisis. *The Journal of Political Economy, 109*, 6, 1155-1197.

Burt, R. (1992). *Structural holes: the social structure of competition.* Cambridge, MA: Harvard University Press.

Cahan, J., Malone, C., Powell, J., & Wongchoti, U. (2005). Stock market political cycles in a small, two-party democracy. *Applied Economic Letters*, *12,* 12, 735-740.

Carroll, G.R., Delacroix, J., & Goodstein, J. (1988). The political environments of organisations: an ecological view. *Research in Organisation Behaviour*, 10, 359-392.

Chaithanakij, S. (2006). Cultural effects on corporate governance in Thailand: a study through the Three-pillared Model. Available at SSRN: http://ssrn.com/abstract=938375.

Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics, 51,* 1-2, 58-76.

Chantrataragul, D. (2007). *Political connection and ownership concentration: evidence from Thailand.* Unpublished master's thesis, Thammasat University, Bangkok, Thailand.

Charumilind, C., Kali, R., & Wiwattanakantang, Y. (2006). Connected lending: Thailand before the financial crisis. *Journal of Business, 79*, 1, 181-217.

Chen, D.-H., Bin, F.-S., & Chen, C.-D. (2005). The impacts of political events on foreign institutional investors and stock returns: emerging market evidence from Taiwan. *International Journal of Business, 10*, 2, 165.

Chen, D.H., Fan, J., & Wong, T.J. (2004). Political connected CEOs, corporate governance and post-IPO performance of China's partially privatized firms. Working paper, Chinese University of Hong Kong.

Chen, A. & Siembs, T. (2004). The effects of terrorism on global capital markets. *European Journal of Political Economy, 20*, 4, 349-366.

Chen, S., Sun, Z., Tang, S., & Wu, D. (2011). Government intervention and investment efficiency: Evidence from China. *Journal of Corporate Finance, 17*, 2, 259-271.

Chen, N.F. & Zhang, F. (1997). Correlation, trade, and stock returns of the Pacific-Basin markets. *Pacific-Basin Finance Journal, 5*, 5, 559-577.

Chesney, M., Reshetar, G., & Karaman, M. (2011). The impact of terrorism on financial markets: An empirical study. *Journal of Banking & Finance, 35*, 2, 253-267.

Cheung, S., Jing, L., Rau, P.R., & Stouraitis, A. (2005). Guanxi, political connections, and expropriation: the dark side of state ownership in Chinese listed companies. Working paper, City University of Hong Kong.

Chui, A., & Wei, J. (1998). Book-to-market, firm size, and the turn-of-the-year effect: evidence from Pacific-Basin emerging markets. *Pacific-Basin Finance Journal,* 6, 275-293.

Claessens, S., Dasgupta, S., & Glen, J. (1995). Return behavior in emerging markets. *The World Bank Economic Review, 9*, 1, 131-151

Claessens, S., Djankov, S., Fan, J., and Lang, L. (1999). On expropriation of minority shareholders: evidence from East Asia. Available at SSRN: http://ssrn.com/abstract=202390.

Claessens, S., Djankov, S., & Lang, L. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics, 58,* 1-2, 81-112.

Claessens, S., Feijen, E., & Laeven, L. (2008). Political connections and preferential access to finance: the role of campaign contributions. *Journal of Financial Economics, 88*, 3, 554-580.

Click, R. W. (2005). Financial and political risks in US direct foreign investment. *Journal of International Business Studies, 36*, 559-575.

Cochran, C. L. (1968). De facto and De jure recognition: Is there a difference? *The American Journal of International Law, 62,* 2, 457-460.

Cole, S. (2009). Fixing market failures or fixing elections? Agricultural credit in India. *American Economic Journal: Applied Economics, 1*, 1, 219-250.

Cooper, M., Gulen, H., & Ovtchinnikov, A. (2010). Corporate political contributions and stock returns. *The Journal of Finance, 65,* 2, 687-724.

Corhay, A., Rad, A.T., & Urbain, J.P. (1995). Long run behaviour of Pacific-Basin stock prices. *Applied Financial Economics, 5*, 1, 11-18.

Cosset, J.-C., & Suret, J.-M. (1995). Political risk and the benefits of international portfolio diversification. *Journal of International Business Studies, 26*, 2, 301-318.

Davison, A.C. & Hinkley, V.D. (1997). *Bootstrap methods and their application.* Cambridge, U.K: Cambridge University Press.

De Soto, H. (1989). *The other path: the invisible revolution in the third world.* New York: Harper and Row.

Della Porta, D. & Vannucci, A. (1997). The 'pervasive effects' of political corruption. *Political Studies, 45*, 3, 516-538.

Demirguc-Kunt, A. & Levine, R. (1995). Stock market development and financial intermediaries: stylized facts. *World Bank Policy Research Working paper no.1462.*

Diamonte, R., Liew, J., & Stevens, R. (1996). Political risk in emerging and developed markets. *Financial Analysts Journal, 52,* 3,71-76.

Dinç, I. S. (2005). Politicians and banks: Political influences on government-owned banks in emerging markets. *Journal of Financial Economics, 77,* 2, 453-479.

Dinç, I. S., & Gupta, N. (2011). The decision to privatize: Finance and politics. *The Journal of Finance, 66,* 1, 241-269.

Divecha, A., Drach, J., & Stefak, D. (1992). Emerging markets: a quantitative perspective. *Journal of Portfolio Management, 19,* 1, 41-50.

Döpke, J. & Pierdzioch, C. (2006). Politics and the stock market: evidence from Germany. *European Journal of Political Economy,* 22, 925-943.

Driessen, J., & Laeven, L. (2007). International portfolio diversification benefits: Cross-country evidence from a local perspective. *Journal of Banking & Finance, 31,* 6, 1693-1712.

Dumas, B. & Solnik, B. (1995). The world price of foreign exchange risk. *The Journal of Finance, 50,* 2, 445-479.

Durrani, A., & Grare, F. (2006). *Disengaging the military from politics in Pakistan.* Retrieved May 29, 2009 from the World Wide Web: http://www.carnegieendowment.org/events/index.cfm?fa=eventdetail&id=925.

Efron, B. & Tibshirani, R. (1998). *An introduction to the bootstrap monographs of statistics and applied probability #57.* New York, U.S: Chapman & Hall.

Erb, C., Harvey, C., & Viskanta, T. (1995). Country risk and global equity selection. *The Journal of Portfolio Management,* Winter, 74-83.

Erb, C., Harvey, C., & Viskanta, T. (1996). Political risk, economic risk, and financial risk. *Financial Analysts Journal, 52,* 6, 28-46.

Erikson, R.S. (1989). Economic conditions and the presidential vote. *American Political Science Review, 83,* 2, 567-573.

Errunza, V. (1983). Emerging markets: a new opportunity for improving global portfolio performance. *Financial Analysts Journal, 39,* 51-58.

Erunza, V. & Losq, E. (1987). How risky are emerging markets? Myths and perceptions versus theory and evidence. *Journal of Portfolio Management,* Fall, 62-7.

Eun, C. S., & Resnick, B. G. (1985). Currency factor in international portfolio diversification. *Columbia Journal of World Business,* 20, 2, 45-53.

Faccio, M. (2006). Politically connected firms. *American Economic Review, 96,* 1, 369-386.

Faccio, M. (2010). Differences between politically connected and nonconnected firms: a cross-country analysis. *Financial Management, 39,* 3, 905-927.

Faccio, M., & Lang, L. H. P. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics, 65,* 3, 365-395.

Faccio, M., Masulis, R.W., & McConnell, J. (2006). Political connection and corporate bailouts. *The Journal of Finance, 61,* 6, 2597-2635.

Faccio, M., & Parsley, D.C. (2009). Sudden deaths: taking stock of geographic ties. *Journal of Financial and Quantitative Analysis, 44,* 3, 683-718.

Fama, E.F., & French, K.R. (1988). Dividend yields and expected stock returns. *Journal of Financial Economics, 22,* 3-25.

Fama, E., & French, K. (1992). The cross-section of expected stock returns. *The Journal of Finance, 47,* 2, 427-465.

Fama, E., & French, K. (1995). Size and book-to-market factors in earnings and returns. *The Journal of Finance, 50,* 1, 131-155.

Fama, E.F., & MacBeth, J.D. (1973). Risk, returns, and equilibrium: empirical tests. *Journal of Political Economy, 81,* 3.

Fan, Y. (2002). Guanxi's consequences: personal gains at social cost. *Journal of Business Ethics, 38,* 4, 371-380.

Fan, J.P.H., & Wong, T.J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics, 33,* 3, 401-426.

Fan, J.P.H., Wong, T.J., & Zhang, T. (2007). Politically connected CEOs, corporate governance and post-IPO performance of China's newly partially privatized firms. *Journal of Financial Economics, 84,* 2, 330-357.

Ferguson, T., & Voth, H.J. (2008). Betting on Hitler: the value of political connections in Nazi Germany. *The Quarterly Journal of Economics, 123,* 1, 101-137.

Ferson, W. E., Sarkissian, S., & Simin, T. T. (2003). Spurious regressions in financial economics? *The Journal of Finance, 58,* 4, 1393-1414.

Finer, S. E. (1976). *The man on horseback: The role of the military in politics*. Baltimore: Penguin Books.

Fisman, R. (2001). Estimating the value of political connections. *American Economic Review, 91,* 4, 1095-1102.

Francis, B., Hasan, I., & Sun, X. (2009). Political connections and the process of going public: evidence from China. *Journal of International Money and Finance, 28,* 4, 696-719.

Fraser, R.D., Zhang, H., & Derashid, C. (2006). Capital structure and political patronage: The case of Malaysia. *Journal of Banking & Finance, 30,* 4, 1291 – 1308.

Freeman, J.R., Hays, J.C., & Stix, H. (2000). Democracy and markets: The case of exchange rates. *American Journal of Political Science, 44,* 3, 449-468.

French, K.R., & Poterba, J.M. (1991). Investor diversification and international equity markets. *American Economic Review, 81*, 222-226.

Fush-Schüdeln, N. & Funke, N. (2003). Stock market liberalizations: financial and macroeconomic implications. *Review of World Economics, 139,* 4, 730-761.

Gärtner, M., & Wellershoff, K.W. (1995). Is there an election cycle in American stock returns? *International Review of Economics and Finance,* 4, 387-410.

Geske, R. & Roll, R. (1983). The fiscal and monetary linkage between stock returns and inflation. *Journal of Finance, 38,* 1, 1-33.

Getz, K.A. (1997). Research in corporate political action. *Business & Society*, *36*, 1, 32-72.

Girard, E., & Omran, M. (2007). What are the risks when investing in thin emerging equity markets: evidence from the Arab world. *Journal of International Financial Markets, Institutions & Money*, *17*, 1, 102-123.

Glaeser, E., Johnson, S., & Shleifer, A. (2001). Coase versus Coasians*. *Quarterly Journal of Economics, 116,* 3, 853-899.

Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *Review of Financial Studies, 22,* 6, 2331-2360.

Gomez, E.T, & Jomo, K.S. (1997). Malaysia's political economy: politics, patronage and profits (1st ed.). Cambridge: Cambridge University Press.

Gupta, R., & Donleavy, G. D. (2009). Benefits of diversifying investments into emerging markets with time-varying correlations: An Australian perspective. *Journal of Multinational Financial Management, 19*, 2, 160-177.

Haendal, D., West, G. & Meadow, R.G. (1975). Overseas investment and political risk. Philadelphia: Foreign Policy Research Institute.

Haggard, S. (2000). *The Political Economy of the Asian Financial Crisis.* Washington DC: Institute for International Economics.

Hamada, R. S. (1972). The effect of the firm's capital structure on the systematic risk of common stocks. *Journal of Finance, 27*, 2, 435-452.

Hameed, A, & Kusnadi, Y. (2002). Momentum strategies: evidence from Pacific-Basin stock markets. *Journal of Financial Research, 25*, 3, 383-397.

Hannan, M.T., & Freeman, J. H. (1977). The population ecology of organizations. *American Journal of Sociology, 82*, 5, 929-964.

Hannan, M.T., & Freeman, J. H. (1989). *Organisational ecology*. Cambridge, M.A: First Harvard University Press.

Harms, P. (2002). Political risk and equity investment in developing countries. *Applied Economics Letters, 9*, 377-380.

Harrington, J. Jr. (1993). Economic policy, economic performance, and elections. *American Economic Review, 83*,1, 27-42.

Harvey, C.R. (1995). Predictable risk and return in emerging markets. *Review of Financial Studies, 8*, 773-816.

Hashmi, A., & Guvenli, T. (1992). Importance of political risk assessment function in U.S. multifunctional corporations. *Global Finance Journal, 3,* 2, 137-144.

Hellman, J. S., Jones, G., & Kaufmann, D. (2003). Seize the state, seize the day: state capture and influence in transition economies. *Journal of Comparative Economics, 31,* 4, 751-773.

Herbst, A.F., & Slinkman, C.W. (1984). Political-economic cycles in the U.S. stock market. *Financial Analysts Journal,* 40, 38-44.

Hibbs, D.A. Jr. (1977). Political parties and macroeconomic policy. *American Political Science Review, 71*, 1467-1487.

Hillman, A.J. (2005). Politicians on the board of directors: do connections affect the bottom line?. *Journal of Management, 31,* 3, 464-481.

Himmelberg, C. P., Hubbard, R. G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics, 53,* 3, 353-384.

Hobbs, G., & Riley, W. (1984). Profiting from presidential election. *Financial Analysts Journal,* 40, 46-52.

Hodrick, R. (1992). Dividend yields and expected stock returns: alternative procedures for inference and measurement. *Review of Financial Studies, 5,* 3, 357-386.

Hon, M., Strauss, J. & Yong, S. (2003). Contagion in financial markets after September 11 – myth or reality?. *Journal of Financial Research, 27,* 1, 95-114.

Hopkins, K. (1966). Civil-military relations in developing countries. *The British Journal of Sociology, 17*, 2, 165-182.

Howell, L. & Chaddick, B. (1994). Model of political risk for foreign investment and trade: an assessment of three approaches. *Columbia Journal of World Business, 29,* 70-91.

Huang, R. (1985). Common stock returns and presidential elections. *Financial Analysts Journal, 41,* 2, 58-61.

Hudson, R., Keasey, K., & Dempsey, M. (1998). Share prices under Tory and Labor governments in the UK since 1945. *Applied Financial Economics, 8*, 4, 389-400.

Huntington, S. (1968). *Political order in changing societies*. New Haven, Connecticut: Yale University Press.

Imai, M. (2006). Mixing family business with politics in Thailand. *Asian Economic Journal. 20*, 3, 241-256.

Intarakumnerd, P. (2000). *Thai telecommunication business groups: An analysis of the factors shaping the direction of their growth paths.* Doctor of Philosophy, University of Sussex, Brighton.

Intarakumnerd, P., Chairatana, P.-a., & Tangchitpiboon, T. (2002). National innovation system in less successful developing countries: the case of Thailand. *Research Policy, 31*, 8-9, 1445-1457.

Jackman, R. W. (1976). Politicians in uniform: Military governments and social change in the third world. *The American Political Science Review, 70*, 4, 1078-1097.

Janakiramanan, S. & Lamba, A.S. (1998). An empirical examination of linkages between Pacific-Basin stock markets. *Journal of International Financial Markets, Institutions, and Money, 8*, 2, 155-173.

Jenkinson, T., & Mayer, C. (1988). The privatization process in France and the U.K. *European Economic Review, 32, 482-490.*

Johnson, S. & Mitton, T. (2003). Cronyism and capital controls: evidence from Malaysia. *Journal of Financial Economics, 67,* 351-382.

Julio, B. & Yook, Y. (2011). Political uncertainty and corporate investment cycles. Forthcoming *The Journal of Finance.*

Jun, W., & Singh, H. (1996). The determinants of foreign direct investment in developing countries. *Transnational Corporations, 5,* 67-105.

Karolyi, G.A. (2006). The consequences of terrorism for financial markets: what do we know?. *SSRN.* Retrieved April 20, 2009 from the World Wide Web: http://ssrn.com/abstract=904398.

Karolyi, G. A., & Martell, R. (2006). Terrorism and the Stock Market. *SSRN.* Retrieved June 12, 2010 from the World Wide Web: http://ssrn.com/abstract= 823465.

Khan, A., & Kim, Y. (1999). *Foreign direct investment in Pakistan: Policy issues and operational implications.* Manila, the Philippines: Asian Development Bank.

Khanna, T., & Palepu, K. (2000). Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *The Journal of Finance, 55,* 2, 867-891.

Khwaja, A.I., & Mian, A. (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market. *Quarterly Journal of Economics,* 120, 1371-1411.

Kim, H.Y., & Mei, J.P. (2001). What makes the stock market jump? An analysis of political risk on Hong Kong stock returns. *Journal of International Money and Finance,* 20, 1003-1016.

Kim, M.J., Nelson, C.R., & Startz, R. (1991). Mean reversion in stock prices? A reappraisal of the empirical evidence. *Review of Economic Studies, 58,* 3, 515-528.

Kitiarsa, P. (2006). *In defense of the Thai-style democracy*. Retrieved May 5, 2009 from the World Wide Web: http://www.ari.nus.edu.sg/showfile.asp?eventfileid=188

Knight, B. (2006). Are policy platforms capitalized into equity prices? Evidence from the Bush/Gore 2000 presidential election. *Journal of Public Economics, 90,* 751-773.

Korteweg, A. (2010). The net benefits to leverage. *The Journal of Finance, 65,* 6, 2137-2170.

Kothari, S.P., & Shanken, J. (1992). Stock return variation and expected dividends: A time series and cross-sectional analysis. *Journal of Financial Economics, 31,* 2, 177-210.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance,* 54, 471-518.

Laxmi Chand, B. (1988). Debt/Equity ratio and expected common stock returns: empirical evidence. *The Journal of Finance, 43,* 2, 507-528.

Le, Q. V., & Zak, P. J. (2006). Political risk and capital flight. *Journal of International Money and Finance, 25,* 2, 308-329.

Leblang, D., & Mukherjee, B. (2005). Government Partisanship, Elections, and the Stock Market: Examining American and British Stock Returns, 1930–2000. *American Journal of Political Science, 49*, 4, 780-802.

Lemmon, M. L., & Lins, K. V. (2003). Ownership structure, corporate governance, and firm value: Evidence from the East Asian Financial Crisis. *The Journal of Finance, 58*, 4, 1445-1468.

Levine, R. (1991). Stock markets, growth, and tax policies. *Journal of Finance, 46,* 4, 1445-1465.

Levine, R. (2002). Bank based or market based financial systems: which is better?. *Journal of Financial Intermediation, 11,* 398-428.

Levine, R. & Zervos, S. (1996). Stock market development and long-run growth. *The World Bank Economic Review, 10,* 2, 323-339.

Levy, H., & Sarnat, M. (1970). International diversification of investment portfolios. *The American Economic Review, 60*, 4, 668-675.

Li, H., Meng, L., Wang, Q., & Zhou, L. (2008). Political connection, financing and firm performance: evidence from Chinese private firms. *Journal of Development Economics, 87*, 283-299.

Limpaphayom, P., & Connelly, J. T. (2004). Corporate governance in Thailand. Retrieved September 25, 2011 from the World Wide Web: http://ssrn.com/abstract= 965300.

Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The Review of Economics and Statistics, 47*, 1, 13-37.

Luez, C., & Oberholzer-Gee, F. (2006). Political relationships, global financing, and corporate transparency: Evidence from Indonesia. *Journal of Financial Economics, 81*, 2, 411-439.

Ma, C. K., & Kao, G. W. (1990). On exchange rate changes and stock price reactions. *Journal of Business Finance & Accounting, 17*, 3, 441-449.

MacIntyre, A. (2001). Institutions and Investors: The Politics of the Economic Crisis in Southeast Asia. *International Organization, 55*(01), 81-122.

Mahajan, A. (1990). Pricing expropriation risk. *Financial Management, 19*, 4, 77-86.

Maisrikrod, S. (2007). Learning from the 19 September coup: Advancing Thai-style democracy? *Southeast Asian Affairs*, 340-359.

May, R. J., Lawson, S., & Selochan, V. (1998). Introduction: Democracy and the military in comparative perspective. In R. J. May & V. Selochan (Eds.), *The military and democracy in Asia and the Pacific* (pp. 1-28). London: C.Hurst & Co. (Publishers) Ltd.

Mehdian, S., Nas, T., & Perry, M. J. (2008). An examination of investor reaction to unexpected political and economic events in Turkey. *Global Finance Journal, 18,* 3, 337-350.

Meric, I., Kim, H.J., Coopersmith, W.L. & Meric, G. (2007). Co-movement of Pacific-Basin stock markets: portfolio diversification implications. *Journal of International Business and Economy, 8,* 2, 11-34.

Mikami, S., & Inoguchi, T. (2008). Legitimacy and effectiveness in Thailand, 2003–2007: perceived quality of governance and its consequences on political beliefs. *International Relations of the Asia-Pacific, 8,* 3, 279-302.

Mitchell, H., & Joseph, S. (2010). Changes in Malaysia: Capital controls, prime ministers and political connections. *Pacific-Basin Finance Journal, 18,* 5, 460-476.

Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics, 64,* 2, 215-241.

Morck, R., Stangeland, D., & Yeung, B. Y. (2000). Inherited wealth, corporate control, and economic growth. In R. Morck (Ed.), *Concentrated corporate ownership* (Vol. III, pp. 319-369). Chicago: University of Chicago Press.

Nadeau, R. & Lewis-Beck, M.S. (2001). National economic voting in U.S. presidential elections. *Journal of Politics, 63,* 1, 159-181.

Newey, W. K., & West, K. D. (1987). Hypothesis Testing with Efficient Method of Moments Estimation. *International Economic Review, 28, 3,* 777-787.

Niederhofer, V., Gibbs, S., & Bullock, J. (1970). Presidential elections and the stock market. *Financial Analysts Journal,* 26, 111-113.

Ng, A. (2000). Volatility spillover effects from Japan and the US to the Pacific-Basin. *Journal of International Money & Finance, 19,* 2, 207-233.

Nordal, K. (2001). Country risk, country risk indices and valuation of FDI: a real options approach. *Emerging markets review,* 2, 197-217.

Nordhaus, W. (1975). The political business cycle. *Review of Economic Studies, 42,* 2, 169-190.

Ockey, J. (1994). Political parties, factions, and corruption in Thailand. *Modern Asian Studies, 28*(02), 251-277.

Ockey, J. (2001). Thailand: The struggle to rededine civil-military relations. In M. Alagappa (Ed.), *Coercion and governance: The declining political role of the military in Asia* (pp. 187-208). Stanford, California: Stanford University Press.

O'Kane, R. H. T. (1989). Military regimes: power and force. *European Journal of Political Research, 17*(3), 333-350.

Pástor, L. & Veronesi, P. (2010). Uncertainty about government policy and stock prices. Working paper, University of Chicago.

Patelis, A.D. (1997). Stock return predictability and the role of monetary policy. *Journal of Finance, 52,* 5, 1951-1972.

Pathmanand, U. (1998). The Thaksin Shinawatra Group: A study of the relationship between money and politics in Thailand. *The Copenhagen Journal of Asian Studies, 13*, 60-81.

Pathmanand, U. (2008). A different coup d'état?. *Journal of Contemporary Asia*, *38,* 1, 124-142.

Peltzman, S. (1987). Economic conditions and gubernatorial elections. *The American Economic Review, 77,* 2, 293-297.

Peng, M.W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: the nature of a micro-macro link. *The Academy of Management Journal, 43*, 3, 486-501.

Penman, S. H., Richardson, S. A., & Tuna, İ. (2007). The book-to-price effect in stock returns: Accounting for Leverage. *Journal of Accounting Research, 45,* 2, 427-467.

Perotti, E. C. & Van Oijen, P. (2001). Privatization, political risk and stock market development in emerging economies. *Journal of International Money and Finance, 20,* 1, 43-69.

Perez-Quiros, G., & Timmerman, A. (2000). Firm size and cyclical variations in stock returns. *Journal of Finance, 55,* 1229-1262.

Perotti, E., & Guney, S. (1993). The structure of privatization plans. *Financial Management, 22,* 84-98.

Petersen, M. A. (2008). Estimating standard errors in finance panel data sets: comparing approaches. *Review of Financial Studies, 22,* 1, 435-480.

Pfeffer, J., & Salancik, G.R., (2003). *The external control of organizations: a resource dependence perspective.* California, USA: Stanford University Press.

Phylaktis, K. & Ravazzolo, F. (2005). Stock market linkages in emerging markets: implications for international portfolio diversification. *Journal of International Financial Markets, Institutions & Money, 15,* 91-106.

Pinkney, R. (1990). *Right-wing military government*. London: Massachusetts.

Pissarides, C. (1980). British government popularity and economic performance. *The Economic Journal, 90,* 359, 569-581.

Political Risk Service Group. 2008. International Country Risk Guide. Political Risk Service Group, East Syracuse, USA.

Polsiri, P. (2004). Concentrated ownership and firm responses to a crisis: evidence from Thailand. Available at SSRN: http://ssrn.com/abstract=495388.

Polsiri, P., & Wiwattanakantang, Y. (2006). Thai business groups: Crisis and restructuring. In S-J Chang (Eds.), *Business Groups in East Asia: Financial crisis, restructuring, and new growth.* Oxford: Oxford University Press.

Pomerleano, M. (1999). The East Asia crisis and corporate finances: the untold micro story. World Bank Policy Research Working Paper No. 1990. Available at SSRN: http://ssrn.com/abstract =623936.

Pempel, T. J. (Ed.). (1999). *The politics of the Asian economic crisis.* Ithaca, New York: Cornell University Press.

Ponguudhirak, T. (Ed.). (2003). Thailand: Democratic authoritarianism. In *Southeast Asian Affairs*, 277-290. Singapore: Institute of South East Asian Studies.

Powell, J., Jing, S., Smith, T., & Whaley, R. (2007). The persistent presidential dummy. *Journal of Portfolio Management, 33,* 2, 133-143.

Powell, J., Jing, S., Smith, T., & Whaley, R. (2009). Political regimes, business cycles, seasonalities, and returns. *Journal of Banking & Finance, 33,* 6, 1112-1128.

Ramcharran, H. (2003). Estimating the impact risks on emerging equity market performance: further evidence on data from rating agencies. *The Multinational business review, 11,* 3, 77-90.

Rilley, W.B. Jr., and Lukseitch, W.A. (1980). The market prefers republicans: myth or reality. *Journal of Financial and Quantitative Analysis, 15,* 3, 541-559.

Roberts, B. (1990). A dead senator tells no lies: seniority and the distribution of federal benefits. *American Journal of Political Science,* 34, 31-58.

Robison, R., Beeson, M., Jayasuriya, K., & Kim, H.-R. (Eds.). (2000). *Politics and markets in the wake of the Asian crisis.* London: Routledge.

Salisbury, B. (1992). An analysis of political risk models. Thunderbird mimeo, 24 January.

Santa-Clara, P., & Valkanov, R. (2003). The presidential puzzle: political cycles and the stock market. *Journal of Finance, 58,* 5, 1841-1872.

Sapienza, P. (2004). The effects of government ownership on bank lending. *Journal of Financial Economics, 72,* 2, 357-384.

Sappaiboon., T. (2000). *The fifty-five most well-known families: Version 1*. Bangkok, Thailand: Nation Multi Media Group.

Sappaiboon., T. (2001). *The The fifty-five most well-known families: Version 2*. Bangkok, Thailand: Nation Multi Media Group.

Schwert, G.W. (1981). The adjustment of stock prices to information about inflation. *Journal of Finance, 36,* 1, 15-29.

Schwert, G.W. (1989). Why does stock market volatility change over time?. *Journal of Finance, 44,* 5, 1115-1153.

Schwert, G.W. (1990). Stock volatility and the crash. *Review of Financial Studies,* 3, 77-102.

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance, 19,* 3, 425-442.

Shleifer, A., & Vishny, R. (1993). Corruption. *Quarterly Journal of Economics,* CVIII, 599-618.

Shleifer, A., & Vishny, R. (1994). Politicians and firms. *Quarterly Journal of Economics,* 109, 995-1025.

Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *The journal of finance, 52,* 2, 737-783.

Shleifer, A., & Vishny, R. (1998). *The grabbing hand: government pathologies and their cures.* Harvard University Press: Cambridge, Massachusetts.

Siegel, J. (2007). Contingent political capital and international alliances: evidence from South Korea. *Administrative Science Quarterly*, 52, 621-666.

Sitthipongpanich, T. (2004). The presence and formation of business: political connections in Thailand. *Thammasat Business Journal: Journal of Business Administration, 101,* 27, 77-89.

Sivaprasad, S., & Muradoglu, Y. G. (2009). Leverage, stock returns, taxes and industry concentration. Available at SSRN: http://ssrn.com/abstract=1031987.

Snowberg, E., Wolfers, J., & Zitzewitz, E. (2007). Partisan Impacts on the Economy: Evidence from Prediction Markets and Close Elections. *The Quarterly Journal of Economics, 122,* 2, 807-829.

Sovey, A., & Green, D. (2009). Instrumental variable estimation in political science: a readers' guide. Paper prepared for the 26th Annual Society for Political Methodology Summer Conference, Yale University, July 23-25, 2009.

Speidell, L. S., & Sappenfield, R. (1992). Global diversification in a shrinking world. *Journal of Portfolio Management, 19*, 1, 57-69.

Statman, M. (1999). Behavioral finance: past battles and future engagements. *Financial Analysts Journal, 55,* 6, 18-27.

Svensson, J. (2003). Who must pay bribes and how much? Evidence from cross-section of firms. *Quarterly Journal of Economics*, 118, 207-230.

Sy, O., & Al Zaman, A. (2011). Resolving the Presidential Puzzle. *Financial Management, 40*, 2, 331-355.

Sylvia, R. D., & Danopoulos, C. P. (2003). The Chávez phenomenon: Political change in Venezuela. *Third World Quarterly, 24*, 1, 63-76.

Talmud, I. (1992). Market power, political power and state support: the case of Israeli industry. *Research in politics and society, 4*, 35-62.

Talmud, I. (1999). Corporate social capital and liability: A conditional approach to three consequences of corporate social structure. In R. Leenders and S.M. Gabbay (eds.), *Corporate Social Capital and Liability*. Norwell, MA: Kluwer Academic Publishers, pp. 106–117.

Talmud, I., & Mesh, G.S. (1997). Market embeddedness and corporate instability: The ecology of inter-industrial networks. *Social Science Research* 26, 419–441.

Tan, J., Yang, J., & Veliyath, R. (2009). Particularistic and system trust among small and medium enterprises: A comparative study in China's transition economy. *Journal of Business Venturing, 24*, 6, 544-557.

Thaler, R. H. (1999). The end of behavioral finance. *Financial Analyst Journal*, 55, 6, 12 -17.

Thaksin, Potjaman charged. (2010, February 15). Bangkok Post. Retrieved March 29, 2010 from the World Wide Web: http://www.bangkokpost.com/news/investigation/168567/thaksin-potjaman-charged

Thaksin regime's business networks. (2006, September 26). The Nation. Retrieved April 5, 2009 from the World Wide Web: http://www.nationmultimedia.com/2006/09/26/politics/politics_30014674.php

Thompson, W. R. (1975). Regime vulnerability and the military coup. *Comparative Politics, 7*, 4, 459-487.

Tian, L., & Megginson, W.L. (2007). Extreme underpricing: determinants of Chinese IPO initial returns. Available at SSRN: http://ssrn.com/abstract=891042.

Transparency International (2007). *Global corruption report 2007*. Cambridge, UK: Cambridge University Press.

Valentin, D., & Prem C, J. (2008). The value-relevance of changes in financial leverage beyond growth in assets and GAAP earnings. *Journal of Accounting, Auditing & Finance, 23,* 2, 191-222.

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics, 80,* 2, 385-417.

Vuchelen, J. (2003). Electoral systems and the effects of political events on the stock market: the Belgian case. *Economics and Politics, 1,* 15, 85-102.

Wang, Y.H., & Lin, C.T. (2009). The political uncertainty and stock market behavior in emerging democracy: the case of Taiwan. *Quality & amp; Quantity, 43,*2, 237-248.

Watts, R., & Zimmerman, J. (1978). Towards a positive theory of the determinant of accounting standards. *Accounting Review, 53,* 112-134.

Winichakul, T. (2008). Toppling democracy. *Journal of Contemporary Asia, 38,* 1, 11-37.

Wiwattanakantang, Y. (2001). The equity ownership structure of Thai firms. Hitotsubashi University, Center of Economic Institutions Working Paper No. 2001-8. Available at SSRN: http://ssrn.com/abstract=271358.

Worthington, A. (2006). Political cycles and risk and return in the Australian stock market, Menzies to Howard. *University of Wollongong, School of Accounting and Finance Working Paper Series No. 06/06, 2006.*

Wu, W., Wu, C., & Rui, O. (2010). Ownership and the value of political connections. Available at SSRN: http://ssrn.com/abstract=1639714.

Zaidi, S. (2009, February). Criticizing democracy or criticizing government? *Economic & Political Weekly, 44*, 9, 8-9.

Zolberg, A. R. (1968). The structure of political conflict in the new states of tropical Africa. *The American Political Science Review, 62*(1), 70-87.

APPENDIX A

FOR ESSAY ONE

A1 OLS REGRESSION ANALYSIS

To assess the effect of political risk on the stock returns of each stock market in emerging and developed market, the study uses an OLS regression analysis and follows the models that are used by Bilson *et al*. (2002) but with an additional control variable, namely, the size of the stock market. Bilson *et al.* (2002) build their framework on the International Market Model (IMM), which is empirically based on the International Capital Asset Pricing Model (ICAPM). Similarly to the argument of Bilson *et al.* (2002), it is not the purpose of this study to specifically test either ICAPM or IMM but rather to purely construct a framework, in order to conduct a test regarding political risk and stock returns. Thus, similar to the pooled regression analysis, the first regression model is to remove the global influence from the return series:

$$R_{it} = a_i + b_i R_{wt} + r_{it} \quad \text{where} \quad [3.5A]$$

R_{it} is the return for country *i* at time *t*;

R_{wt} is the return on world index; and

r_{it} is the residual local return for country *i* at time *t*

The dependent and independent variables used in OLS regression analysis are identical to the one used in pooled regression analysis and they come from the same sources[40]. The regression model which includes all variables is as follows:

$$r_{it} = \alpha_i + \beta_i FX_{it} + \theta_i DY_{it} + \gamma_i \sigma_{rit}^2 + \delta_i SZ_{it} + \lambda_i PR_{it-1} + e_{it} \quad \text{where} \quad [3.5B]$$

r_{it} is the residual returns from regression [3.5A], which represents local stock returns for country *i* at time *t*;

FX_{it} is the monthly percentage change in the exchange rate for country *i* at time *t*;

DY_{it} is the monthly percentage change in the dividend yields for country *i* at time *t*;

σ_{rit}^2 is the variance of monthly local market returns for country *i* at time *t*;

SZ_{it} is the ratio of market capitalization divided by nominal GDP of country *i* at time *t*;

PR_{it-1} is the change in political risk rating of country *i* at time *t-1*;

e_{it} is the residual of local stock returns for country *i* at time *t.*

Regression model [3.5A] and [3.5B] are the two models to be tested. It is expected that the results from these two regressions performing at the country-level would show which countries in emerging and developed markets, in particular, are sensitive to political risk.

[40] The returns on stock market composite (in US dollar); returns on world index; exchange rate; stock market capitalisation; national gross domestic product (GDP); and dividend yields are obtained from Global Financial Data (GFD). The monthly political risk rating is obtained from the International Country Risk Guide (ICRG) of Political Risk Service (PRS) group.

Table A1.1

Regression results of the international market model for Emerging markets

The table presents the regression results from estimating regression model [3.5A], the international market model, on emerging markets. This is for the full sample period: January 1984 – December 2007. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	MSCI World Index			
	a_i		b_i (R_{wt})	
Argentina	-0.016	(-1.12)	0.301	(0.82)
Brazil	-0.060	(-3.80)***	1.757	(5.56)***
Chile	0.004	(0.72)	0.627	(4.94)***
Colombia	0.001	(0.02)	0.428	(3.36)***
India	0.008	(1.25)	0.262	(1.89)*
Indonesia	0.002	(0.18)	0.804	(2.95)***
Israel	-0.004	(-0.64)	0.608	(5.31)***
Jordan	0.004	(0.73)	0.211	(1.30)
Korea	0.003	(0.45)	1.152	(6.50)***
Malaysia	-0.002	(-0.29)	0.895	(5.15)***
Mexico	0.003	(0.35)	1.119	(4.87)***
Morocco	0.018	(3.81)***	0.056	(0.64)
Nigeria	0.007	(0.77)	0.010	(0.04)
Peru	-0.010	(-0.71)	0.564	(1.68)*
Philippines	0.003	(0.39)	0.814	(3.28)***
South Africa	-0.004	(-0.70)	1.027	(6.27)***
Sri Lanka	0.005	(0.68)	-0.001	(-0.01)
Taiwan	0.008	(1.00)	0.938	(5.01)***
Thailand	0.300	(0.04)	1.065	(5.59)***

Table A1.2

Regression results of the international market model for developed markets

The table presents the regression results from estimating regression model [3.5A], the international market model, on developed markets. This is for the full sample period: January 1984 – December 2007. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. The sample period ranges from January 1984 to December 2007 *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively

Markets	MSCI World Index			
	a_i		b_i (R_{wt})	
Australia	0.001	(0.15)	1.021	(6.78)***
Austria	0.010*	(1.83)	0.616	(4.67)***
Belgium	0.005	(1.41)	0.856	(8.79)***
Canada	-0.002	(-0.28)	0.884	(6.49)***
Denmark	0.006	(1.57)	0.771	(6.53)***
Finland	0.007	(1.46)	1.069	(6.29)***
France	0.004	(1.16)	1.055	(7.08)***
Germany	0.003	(0.65)	1.008	(7.39)***
Greece	0.0175	(2.65)***	0.8239	(5.38)***
Hong Kong	0.0044	(1.07)	1.0674	(8.13)***
Ireland	0.0046	(1.16)	1.0800	(11.69)***
Italy	0.0048	(1.14)	0.9860	(6.62)***
Japan	-0.0019	(-0.39)	1.3066	(7.66)***
Netherlands	0.0028	(0.96)	1.0251	(11.12)***
Norway	0.0055	(1.28)	1.0776	(10.18)***
New Zealand	-0.0010	(-0.18)	0.9057	(6.22)***
Portugal	0.0111	(1.73)*	0.9830	(7.44)***
Singapore	-0.0012	(-0.28)	0.9656	(8.83)***
Spain	0.0072	(1.99)**	1.1638	(10.95)***
Sweden	0.0013	(0.35)	1.2319	(14.47)***
Switzerland	0.0055	(1.54)	0.8286	(8.79)***
United Kingdom	0.0007	(0.21)	1.0302	(10.63)***
United States	0.0008	(0.44)	0.7459	(14.04)***

The results from fitting the IMM as in regression model [3.5A] to the emerging market returns show that emerging markets are sensitive to the world index measure to a certain extent as the model explains a moderate amount of the variation in the returns. The coefficient on the world market is significant in 14 out of 19 emerging markets using the MSCI World Index. This finding indicates that other factors, such as local sources of risk, play a part in explaining return variation in emerging markets.

For comparative purposes, the study also fits the IMM to the developed market returns. The results reveal that the coefficient on the world market is significant for all of the 23 developed markets.

Table A1.3 and A1.4 contains the results from estimating the primary regression of interest, which is regression model [3.5B], for the full sample period from January 1984 to December 2007.

Table A1.3

Regression results of political risk model, Emerging markets, January 1984 – December 2007 (Full sample period)

The table presents the results from estimating OLS regression model [3.5B] on emerging markets, for the full sample period that ranges from January 1984 to December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Argentina	-0.006 (-0.26)	-0.642 (-8.98)***	-0.028 (-0.87)	0.617 (7.26)***	0.122 (0.99)	0.602 (1.06)	0.547
Brazil	0.024 (0.65)	-0.447 (-2.88)***	-0.012 (-0.87)	-0.123 (-0.50)	0.088 (1.37)	0.847 (1.11)	0.226
Chile	0.021 (1.54)	-2.057 (-3.84)***	-0.197 (-3.86)***	0.592 (1.13)	-0.019 (-1.35)	0.601 (1.66)	0.505
Columbia	0.017 (1.65)	-2.152 (-11.26)***	-0.258 (-3.11)***	0.996 (3.34)***	-0.050 (-0.71)	0.011 (0.09)	0.536
India	-0.024 (-2.42)**	-1.339 (-2.60)**	-0.036 (-3.73)***	0.290 (0.41)	0.058 (3.73)***	0.242 (1.57)	0.158
Indonesia	-0.021 (-1.26)	-1.577 (-10.55)***	-0.047 (-1.23)	0.406 (6.92)***	0.000 (1.63)	-0.036 (-0.20)	0.766
Israel	0.013 (1.45)	-2.142 (-7.37)***	-0.017 (-0.63)	-0.722 (-0.97)	0.007 (0.63)	-0.122 (-0.58)	0.388
Jordan	-0.002 (-0.31)	-1.866 (-3.09)***	-0.053 (-2.76)***	0.452 (7.25)***	0.006 (0.60)	0.119 (1.48)	0.746
South Korea	-0.021 (-2.98)**	-1.864 (-9.66)***	-0.173 (-4.33)***	0.748 (4.44)***	0.001 (4.44)***	-0.237 (-1.04)	0.518
Malaysia	-0.007 (-0.67)	-2.458 (-2.96)**	-0.404 (-6.82)***	0.362 (2.85)**	0.005 (0.93)	-0.017 (-0.05)	0.695
Mexico	0.031 (1.88)*	-0.271 (-0.77)	-0.251 (-3.55)***	-0.222 (-0.49)	-0.080 (-1.35)	0.669 (1.81)	0.208

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	Adj. R^2
Morocco	-0.037 (-3.21)***	-0.005 (-0.02)	-0.223 (-3.72)***	1.207 (1.32)	0.586 (2.84)**	-0.300 (-1.02)	0.249
Nigeria	-0.011 (-1.12)	-0.677 (-7.33)***	-0.080 (-1.56)	0.451 (10.56)***	0.148 (2.08)**	-0.324 (-1.65)*	0.638
Peru	0.004 (0.19)	-3.245 (-5.86)***	-0.014 (-1.75)*	1.425 (4.70)***	37.207 (0.45)	0.051 (0.28)	0.377
Philip--pines	-0.002 (-0.29)	-2.194 (-6.73)***	-0.181 (-4.09)***	0.710 (6.74)***	-0.007 (-0.45)	-0.021 (-0.15)	0.602
South Africa	-0.003 (-0.38)	-1.764 (-3.06)***	-0.236 (-6.77)***	0.185 (0.70)	0.009 (2.23)**	-0.122 (-0.70)	0.726
Sri Lanka	-0.012 (-1.02)	-2.144 (-7.02)***	-0.089 (-1.90)*	0.666 (1.11)	0.088 (1.10)	-0.380 (-2.28)**	0.235
Taiwan	-0.041 (-2.58)**	-2.767 (-6.53)***	-0.103 (-2.02)**	0.430 (0.79)	0.032 (2.26)**	-0.143 (-0.29)	0.245
Thailand	-0.014 (-0.91)	-1.769 (-8.57)***	-0.271 (-5.82)***	0.536 (3.78)***	0.019 (0.79)	-0.150 (-0.59)	0.546
						Average	0.469

Table A1.4

Regression results of political risk model, Developed markets, January 1984 – December 2007 (Full sample period)

The table presents the results from estimating OLS regression model [3.5B] on developed markets, for the full sample period that ranges from January 1984 to December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Australia	-0.003 (-0.91)	1.898 (10.62)***	-0.301 (-7.31)***	0.025 (0.11)	0.006 (2.00)	0.057 (0.29)	0.751
Austria	-0.020 (-4.20)***	-1.460 (-5.79)***	-0.357 (-4.84)***	1.106 (2.84)**	0.051 (2.79)**	-0.323 (-0.23)	0.618
Belgium	-0.016 (-2.98)**	-1.434 (-6.51)***	-0.283 (-6.50)***	1.155 (3.19)***	0.014 (1.45)	-0.259 (-1.46)	0.677
Canada	-0.025 (-2.16)**	-2.028 (-7.92)***	-0.267 (-2.26)**	0.798 (1.27)	0.021 (1.38)	0.380 (0.77)	0.279
Denmark	-0.016 (-2.79)**	-1.670 (-2.87)**	-0.196 (-5.42)***	0.688 (1.96)*	0.024 (2.26)**	-0.040 (-0.18)	0.702
Finland	-0.009 (-1.22)	-0.985 (-4.21)***	-0.163 (-3.48)***	0.370 (0.69)	0.010 (1.25)	-0.026 (-0.07)	0.213
France	-0.005 (-1.08)	-1.463 (-9.13)***	-0.251 (-3.91)***	-0.181 (-0.42)	0.007 (1.24)	0.031 (0.21)	0.577
German	-0.007 (-0.68)	0.008 (0.08)	-0.070 (-1.81)*	-0.518 (-0.41)	0.022 (0.89)	-0.061 (-0.18)	0.200
Greece	-0.014 (-1.66)*	-1.309 (-5.87)***	-0.082 (-2.71)**	1.316 (10.56)***	-0.009 (-0.54)	-0.129 (-0.32)	0.454
Hong Kong	-0.0083 (-2.15)**	-2.569 (-1.48)	-0.500 (-2.77)**	0.903 (3.14)***	0.001 (1.04)	0.122 (0.65)	0.577

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	Adj. R^2
Ireland	-0.013 (-1.13)	1.288 (11.30)***-	-0.165 (-5.48)***	-0.524 (-0.53)	0.020 (1.05)	0.454 (1.41)	0.492
Italy	-0.007 (-1.08)	1.358 (-2.05)**	-0.270 (-5.95)***	0.597 (0.92)	0.000 (0.72)	0.125 (0.54)	0.443
Japan	-0.018 (-2.60)**	-1.629 (-5.68)***	-0.205 (-4.31)***	0.834 (2.77)**	0.000 (1.50)	0.243 (0.94)	0.653
Nether-lands	-0.009 (-1.91)*	-1.290 (-7.29)***	-0.212 (-5.63)***	0.070 (0.10)	0.007 (1.57)	0.123 (0.58)	0.599
Norway	-0.009 (-1.61)	-1.548 (-4.51)***	-0.248 (-7.11)***	-0.464 (-0.95)	0.033 (2.44)**	-0.188 (-1.30)	0.553
New Zealand	-0.014 (-0.87)	1.813 (2.68)**	-0.2024 (-5.37)***	0.804 (1.93)*	0.014 (0.39)	-0.076 (-0.25)	0.683
Portugal	-0.010 (-1.40)	-1.407 (-5.13)***	-0.104 (-3.36)***	-0.666 (-0.84)	0.018 (0.87)	-0.085 (-0.32)	0.464
Singa-pore	-0.021 (-2.98)**	-1.891 (-8.17)***	-0.335 (-8.28)***	0.649 (1.84)*	0.011 (3.01)***	0.486 (1.19)	0.523
Spain	-0.013 (-2.58)**	-1.282 (-3.15)***	-0.224 (-4.39)***	1.120 (2.10)**	0.009 (1.27)	-0.271 (-1.21)	0.473
Sweden	-0.005 (-0.83)	-1.340 (-6.76)***	-0.194 (-5.57)***	0.088 (0.14)	0.007 (1.14)	-0.356 (-1.17)	0.498
Switzer-land	-0.008 (-1.78)*	-1.577 (-2.71)**	-0.259 (-5.78)***	0.254 (0.63)	0.003 (1.20)	0.180 (0.65)	0.760
United Kingdom	-0.003 (-0.43)	1.527 (8.59)***	-0.125 (-2.50)**	0.148 (0.35)	-0.002 (-0.03)	-0.159 (-1.36)	0.704
United States	0.011 (1.84)*	-0.050 (-0.42)	-0.256 (-5.10)***	-5.553 (-2.40)**	-0.621 (-1.36)	-0.364 (-3.29)***	0.357
						Average	0.525

Stationary tests are conducted before estimating regression model [3.5B] and the results indicated that political risk variable is stationary for all of emerging and developed markets.

Full-sample period: January 1984 – December 2007

Emerging markets:

Table A1.3 shows the results, at the country-level analysis, for emerging markets. The coefficient estimate on the lagged political risk variable ($\lambda_{i,t-1}$), for the full sample period, is significant and of the predicted sign in two emerging markets. These are Nigeria and Sri Lanka. Further, the sign on the coefficients is generally in the right direction across nearly all markets, suggesting that returns increase when political risk scores decrease or when a country becomes politically riskier. This is logical when thinking in terms of risk-return tradeoff. That is, one would expect to receive higher returns when there is a rise in political risk, and vice versa.

The control variables appear to be reasonable proxies for the local risk factors, with the average adjusted R^2 from the model being 47% across the emerging markets. The coefficients on foreign exchange, dividend yield, local volatility, and market size variables are significant in 17, 14, 10, and 6 emerging markets, respectively. The sign of the coefficients on foreign exchange are negative across sample markets. Harvey (1995) suggests that the exposure to foreign exchange depends on the industrial structure within a country and the net flow of international funds. As expected, the coefficient on the contemporaneous dividend yield variable is consistently negative across all markets. Local variance is also significant in the majority of emerging markets indicating that it is a reasonable proxy for omitted local risk sources. Lastly, the coefficients for market size are significant in only 6 markets but are of the predicted sign. That is, stock market returns increase when market valuations increase.

Developed markets:

Table A1.4 shows the results, at the country-level analysis, for developed markets. The results reveal that the model also performs well, with the average R^2 being 53% across the markets. This is driven by the foreign exchange and dividend yield variables. The former is significant in 20 out of 23 markets; whereas, the latter is significant across all markets. Besides, the sign of the coefficients of foreign exchange varies more between positive and

negative than emerging markets. Local variance is significant in ten markets. As for the market size variable, the coefficients are significant in only 4 markets. The results for the lagged political risk variable are weaker than in the emerging markets analysis, with only the US market experiencing significant exposure. Such a result is consistent with what is found by Bilson *et al.* (2002). That is, the influence of political risk is greater in emerging markets than in developed markets.

Next, the study estimates regression model [3.5B] on both emerging and developed markets for sub-sample period 1 which ranges from January 1984 to December 1995. The results are presented in Table A1.5 and A1.6.

Sub-sample period 1: January 1984 – December 1995

Emerging markets:

Table A1.5 shows the results of sub-sample period 1, at the country-level analysis, for emerging markets. The coefficient estimate on the lagged political risk variable ($\lambda_{i,t-1}$), for sub-sample period 1, is significant in four emerging markets. These are, namely, Israel, Korea, Nigeria, and Sri Lanka.

Moreover, the results show that the control variables appear to be reasonable proxies for the local risk factors, with the average adjusted R^2 from the model being 44% across the emerging markets. The coefficients on foreign exchange, dividend yield, local volatility, and market size variables are significant in 15, 13, 11, and 3 emerging markets, respectively.

Table A1.5

Regression results of political risk model, Emerging markets, January 1984 – December 1995 (Sub-sample period 1)

The table presents the results from estimating OLS regression model [3.5B] on emerging markets, for sub-sample period 1 which ranges from January 1984 to December 1995. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Argentina	0.010 (0.31)	-0.603 (-8.62)***	-0.021 (0.48)	0.600 (6.31)***	0.132 (0.48)	1.107 (0.94)	0.582
Brazil	0.823 (1.84)*	-0.285 (-2.04)**	-0.019 (-1.54)	-0.293 (-1.09)	-0.027 (-0.25)	1.882 (1.70)	0.116
Chile	0.020 (1.29)	-2.341 (-8.07)***	-0.219 (-3.39)***	1.291 (2.36)**	-0.017 (-1.00)	0.471 (1.62)	0.471
Columbia	0.025 (1.79)*	-1.985 (-5.71)***	-0.393 (-5.08)***	1.349 (9.12)***	-0.068 (-0.76)	0.271 (0.89)	0.740
India	-0.109 (-1.78)*	-0.496 (-1.55)	-0.022 (-2.47)**	0.391 (0.35)	0.028 (1.73)*	0.517 (1.82)	0.061
Indonesia	-0.007 (-0.34)	-3.434 (-3.98)***	-0.009 (-0.77)	-0.516 (-0.32)	0.000 (0.81)	0.245 (0.30)	0.094
Israel	-0.332 (-1.03)	0.650 (0.51)	0.106 (1.25)	-3.523 (-2.95)**	0.087 (1.13)	-1.852 (-5.22)***	0.501
Jordan	0.017 (0.81)	-1.865 (-5.74)***	-0.025 (-2.31)**	0.381 (7.69)***	-0.010 (-0.31)	0.067 (1.67)	0.898
South Korea	-0.003 (-0.47)	-3.431 (-7.69)***	-0.184 (-2.44)**	0.947 (1.66)*	-0.001 (-1.21)	-0.373 (-1.58)*	0.254
Malaysia	-0.006 (-0.52)	-1.708 (-4.56)***	-0.359 (-4.45)***	-0.022 (-0.02)	0.007 (1.09)	0.326 (0.63)	0.331

Markets	**α_i**	**β_i (FX_{it})**	**θ_i (DY_{it})**	**γ_i ($local_{it}$)**	**δ_i (SZ_{it})**	**λ_i (PR_{it-1})**	**Adj. R^2**
Mexico	0.043 (1.77)*	-0.132 (-0.49)	-0.279 (-2.57)**	-0.272 (-0.54)	-0.103 (-1.30)	1.843 (1.11)	0.208
Morocco	-0.003 (-0.20)	-1.751 (-2.78)**	-0.265 (-0.85)	1.754 (10.89)***	-0.805 (-0.90)	-0.403 (-0.70)	0.542
Nigeria	-0.060 (-1.38)	-0.686 (-6.95)***	-0.002 (-0.06)	0.447 (9.69)***	0.856 (1.76)*	-0.931 (-1.86)*	0.744
Peru	-0.076 (-0.51)	-4.141 (-3.37)***	-0.171 (-2.73)**	1.534 (3.87)***	0.571 (0.72)	-0.168 (-0.50)	0.477
Philip--pines	-0.011 (-1.21)	-1.979 (-11.77)***	-0.146 (-2.74)**	0.772 (6.08)***	0.002 (0.07)	0.164 (0.81)	0.545
South Africa	-0.001 (-0.01)	-1.737 (-6.02)***	-0.258 (-5.64)***	0.192 (0.61)	0.009 (0.50)	-0.030 (-0.22)	0.679
Sri Lanka	-0.027 (-0.48)	-4.199 (-3.73)***	-0.472 (-5.71)***	0.401 (0.58)	0.147 (0.60)	-0.599 (-3.34)***	0.597
Taiwan	-0.073 (-2.63)**	-3.130 (-2.74)**	-0.081 (-1.80)*	0.318 (0.49)	0.066 (1.91)*	-0.057 (-0.12)	0.142
Thailand	-0.016 (-1.08)	1.996 (1.16)	-0.291 (-4.86)***	1.058 (3.78)***	0.011 (0.43)	0.106 (0.35)	0.317
						Average	0.437

Developed markets:

Table A1.6 shows the results of sub-sample period 1, at the country-level analysis, for developed markets. The coefficient estimate on the lagged political risk variable ($\lambda_{i,\ t-1}$), for sub-sample period 1, is significant in only one developed markets, which is Sweden. The average adjusted R^2 from the model is 54% across developed markets. This implies that the control variables appear to be reasonable proxies for the local risk factors. The coefficients on foreign exchange, dividend yield, local volatility, and market size variables are significant in 20, 20, 10, and 6 developed markets, respectively.

Table A1.6

Regression results of political risk model, Developed markets, January 1984 – December 1995 (Sub-sample period 1)

The table presents the results from estimating OLS regression model [3.5B] on developed markets, for sub-sample period 1 which ranges from January 1984 to December 1995. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Australia	-0.011 (-0.88)	2.122 (5.67)***	-0.416 (-7.01)***	0.215 (1.01)	0.031 (0.96)	0.135 (0.59)	0.831
Austria	-0.019 (-1.45)	-1.421 (-11.82)***	-0.584 (-7.86)***	0.969 (2.88)**	0.068 (0.88)	-0.622 (-0.29)	0.706
Belgium	-0.027 (-2.15)**	-1.277 (-11.31)***	-0.240 (-3.93)***	1.563 (4.29)***	0.037 (1.04)	-0.095 (-0.39)	0.658
Canada	-0.006 (-0.13)	-1.231 (-3.58)***	-0.561 (-4.37)***	0.228 (0.24)	0.008 (0.09)	0.179 (0.30)	0.205
Denmark	-0.062 (-4.12)***	-1.801 (-7.90)***	-0.221 (-3.90)***	0.798 (2.38)**	0.198 (3.65)***	-0.151 (-0.57)	0.743
Finland	-0.001 (-0.03)	-0.993 (-3.12)***	-0.235 (-3.51)***	-0.194 (-0.29)	0.014 (0.21)	0.035 (0.06)	0.245
France	0.006 (0.57)	-1.468 (-6.77)***	-0.487 (-4.11)***	-0.231 (-0.57)	-0.036 (-1.02)	0.284 (1.20)	0.633
Germany	-0.030 (-0.47)	-0.063 (-0.40)	-0.164 (-1.46)	-2.452 (-2.30)**	0.197 (0.64)	-0.035 (-0.10)	0.114
Greece	0.000 (0.00)	-1.247 (-3.95)***	-0.062 (-2.59)**	1.384 (11.05)***	-0.127 (-1.57)	0.189 (0.34)	0.520
Hong Kong	-0.013 (-1.39)	-3.451 (-1.58)	-0.584 (-4.62)***	1.275 (4.27)***	0.002 (0.25)	0.205 (1.05)	0.684
Ireland	0.109 (3.31)**	0.955 (4.06)***	-0.055 (-0.92)	3.772 (2.93)**	-0.378 (-3.83)***	0.522 (0.77)	0.790

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	Adj. R^2
Italy	-0.001 (-0.05)	-1.362 (-8.76)***	-0.339 (-6.08)***	0.523 (0.73)	-0.000 (-0.24)	-0.214 (-0.56)	0.430
Japan	-0.026 (-2.94)***	-1.418 (-11.09)***	-0.091 (-1.67)*	1.681 (5.62)***	0.000 (0.53)	0.288 (0.96)	0.679
Nether-lands	-0.021 (-1.91)*	-1.237 (-11.97)***	-0.188 (-2.92)**	0.311 (0.35)	0.030 (1.53)	0.028 (0.06)	0.607
Norway	-0.026 (-1.63)	-1.352 (-7.97)***	-0.280 (-5.48)***	-0.280 (-0.35)	0.137 (1.74)	-0.283 (-0.60)	0.448
New Zealand	-0.049 (-2.32)**	1.785 (9.19)***	-0.234 (-4.80)***	0.999 (2.22)**	0.103 (2.10)**	0.926 (1.18)	0.627
Portugal	-0.076 (-1.77)*	-1.249 (-5.80)***	-0.066 (-2.18)**	-0.219 (-0.21)	0.392 (1.53)	-0.399 (-1.33)	0.414
Singa-pore	-0.022 (-2.56)**	-1.311 (-3.29)***	-0.330 (-8.45)***	0.546 (0.53)	0.015 (2.23)**	0.951 (1.61)	0.436
Spain	-0.012 (-0.64)	-1.117 (-8.44)**	-0.215 (-2.27)**	1.409 (2.41)**	-0.011 (-0.16)	-0.276 (-0.72)	0.416
Sweden	-0.040 (-2.46)**	-1.331 (-2.72)**	-0.280 (-5.13)***	-0.070 (-0.10)	0.090 (2.70)***	-0.871 (-2.07)**	0.532
Switzer-land	-0.019 (-1.35)	-1.540 (-8.50)***	-0.395 (-5.46)***	0.059 (0.12)	0.015 (0.97)	-0.399 (-1.08)	0.769
United Kingdom	0.002 (0.11)	1.499 (11.74)***	-0.200 (-3.17)***	0.036 (0.07)	-0.005 (-0.25)	0.085 (0.51)	0.654
United States	0.014 (-0.48)	-0.027 (-0.06)	-0.651 (-1.04)	-0.667 (-0.32)	-0.505 (0.27)	-0.249 (-0.19)	0.317
						Average	0.542

Then, the study estimates regression model [3.5B] on both emerging and developed markets for sub-sample period 2 which ranges from January 1996 to December 2007. The results are presented in Table A1.7 and A1.8.

Table A1.7

Regression results of political risk model, Emerging markets, January 1996 – December 2007 (Sub-sample period 2)

The table presents the results from estimating OLS regression model [3.5B] on emerging markets, for sub-sample period 2 which ranges from January 1996 to December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Argentina	-0.071 (-2.96)**	-1.448 (-10.25)***	-0.052 (-1.22)	1.261 (3.14)***	0.314 (2.93)**	-0.186 (-0.64)	0.529
Brazil	-0.038 (-2.50)**	-1.313 (-8.79)***	0.022 (0.55)	0.715 (6.18)***	0.046 (1.67)*	-0.126 (-0.14)	0.699
Chile	-0.002 (-0.11)	-1.663 (-8.78)***	-0.111 (-1.95)*	-0.442 (-0.55)	0.008 (0.45)	-0.436 (-1.62)	0.475
Columbia	0.019 (1.49)	-2.020 (-7.81)***	-0.198 (-2.37)**	0.193 (-2.37)**	-0.076 (-0.88)	0.078 (0.61)	0.426
India	-0.011 (-1.35)	-3.256 (-8.31)***	-0.036 (-1.01)	0.088 (0.16)	0.028 (1.99)**	-0.272 (-1.03)	0.334
Indonesia	0.008 (0.38)	-1.535 (-2.44)**	-0.205 (-3.49)***	0.357 (6.17)***	-0.000 (-0.26)	-0.005 (-0.02)	0.803
Israel	0.002 (0.27)	-2.169 (-8.10)***	-0.037 (-1.13)	0.169 (0.28)	0.001 (0.07)	-0.205 (-1.05)	0.468
Jordan	-0.006 (-1.03)	-1.807 (-2.01)**	-0.159 (-4.52)	2.556 (4.96)***	-0.005 (-0.98)	0.047 (0.19)	0.381
South Korea	-0.032 (-1.57)	-1.683 (-2.06)**	-0.143 (-3.23)***	0.627 (3.90)***	0.001 (1.55)	-0.588 (1.13)	0.568
Malaysia	0.006 (0.44)	-2.606 (-9.86)***	-0.432 (-5.37)***	0.337 (10.61)***	-0.002 (-0.27)	-0.553 (-1.19)	0.819
Mexico	0.020 (1.31)	-2.135 (-10.03)***	-0.090 (-2.42)**	0.299 (-0.54)	-0.062 (-1.30)	-0.211 (-0.65)	0.463

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	Adj. R^2
Morocco	-0.003 (-2.91)**	-0.006 (-0.03)	-0.222 (-3.70)***	1.224 (1.33)	0.569 (2.78)***	-0.305 (-1.00)	0.246
Nigeria	-0.038 (-2.93)**	-0.098 (-0.37)	-0.190 (-3.51)***	0.856 (1.15)	0.214 (2.86)***	-0.082 (-0.58)	0.141
Peru	-0.014 (-0.68)	-3.108 (-5.63)***	-0.011 (-1.72)*	1.288 (2.77)***	0.226 (0.28)	0.012 (0.05)	0.320
Philip--pines	0.011 (0.95)	-2.457 (-10.94)***	-0.254 (-4.36)***	0.505 (5.44)***	-0.016 (-0.67)	-0.196 (-0.69)	0.687
South Africa	0.001 (0.05)	-1.745 (-6.90)***	-0.167 (-3.39)***	0.166 (0.56)	0.004 (0.63)	-0.310 (-1.16)	0.750
Sri Lanka	-0.010 (-0.83)	-2.168 (-6.88)***	-0.067 (-1.76)*	0.715 (1.02)	0.112 (1.41)	-0.372 (-1.69)*	0.238
Taiwan	-0.013 (-0.68)	-2.073 (-6.84)***	-0.214 (-4.00)***	0.594 (1.35)	0.012 (0.79)	-0.136 (-0.19)	0.419
Thailand	-0.008 (-0.27)	-1.751 (-7.79)***	-0.228 (-4.26)***	0.463 (3.32)***	0.009 (0.20)	-0.057 (-0.15)	0.589
						Average	0.492

Sub-sample period 2: January 1996 – December 2007

Emerging markets:

Table A1.7 shows the results of sub-sample period 2, at the country-level analysis, for emerging markets. During these ten years period, the results for the political risk variable show that only one emerging market experiences significant exposure, which is Sri Lanka. However, the political risk coefficient is generally of the predicted sign across the markets.

Despite this, the results show that the control variables appear to be reasonable proxies for the local risk factors, with the average adjusted R^2 from the model being 49% across the emerging markets. The coefficients on foreign exchange, dividend yield, local volatility, and market size variables are significant in 17, 14, 9, and 5 emerging markets, respectively.

Table A1.8

Regression results of political risk model, Developed markets, January 1996 – December 2007 (Sub-sample period 2)

The table presents the results from estimating OLS regression model [3.5B] on developed markets, for sub-sample period 2 which ranges from January 1996 to December 2007. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	**Adj. R^2**
Australia	-0.006 (-0.81)	1.489 (7.92)***	0.046 (0.53)***	0.817 (1.86)*	-0.001 (-0.04)	-0.124 (-0.39)	0.639
Austria	-0.010 (-1.82)*	-1.633 (-4.28)***	-0.167 (-3.30)***	0.802 (1.46)	0.023 (1.55)	0.053 (0.27)	0.644
Belgium	0.008 (0.94)	-1.751 (-8.10)***	-0.301 (-6.44)***	-0.091 (-0.19)	-0.010 (-0.83)	-0.480 (-2.20)**	0.746
Canada	-0.025 (-0.66)	-2.396 (-4.80)***	0.025 (0.23)	1.088 (1.58)	0.005 (0.15)	0.310 (0.41)	0.306
Denmark	-0.003 (-0.32)	-1.511 (-5.30)***	-0.178 (-6.58)***	0.971 (1.43)	-0.002 (-0.11)	-0.170 (-0.58)	0.665
Finland	-0.016 (-1.21)	-1.229 (-6.75)***	-0.106 (-1.64)	0.585 (0.89)	0.010 (0.86)	0.236 (0.52)	0.241
France	-0.005 (-0.60)	-1.415 (-5.82)***	-0.100 (-4.09)***	-0.311 (-0.37)	0.008 (0.77)	-0.140 (-0.87)	0.622
Germany	0.001 (0.10)	0.081 (0.53)	-0.036 (-0.85)	1.320 (1.10)	-0.013 (-0.46)	0.156 (0.36)	0.031
Greece	-0.015 (-0.95)	-1.630 (-6.63)***	-0.250 (-2.13)**	1.296 (2.77)***	-0.000 (-0.00)	-0.704 (-1.03)	0.390
Hong Kong	-0.008 (-1.22)	-1.082 (-0.48)	-0.385 (-6.23)***	0.348 (0.74)	0.001 (1.23)	-0.278 (-1.34)	0.437
Ireland	-0.014 (-1.08)	1.322 (1.92)*	-0.216 (-8.31)***	-0.859 (-1.01)	0.026 (1.26)	0.307 (0.94)	0.558

Markets	α_i	β_i (FX_{it})	θ_i (DY_{it})	γ_i ($local_{it}$)	δ_i (SZ_{it})	λ_i (PR_{it-1})	Adj. R^2
Italy	-0.005 (-0.51)	-1.397 (-1.81)*	-0.216 (-4.65)***	1.094 (1.44)	0.000 (0.04)	0.285 (1.23)	0.475
Japan	-0.006 (-0.47)	-1.773 (-4.37)***	-0.374 (-5.48)***	0.107 (0.27)	0.000 (0.84)	0.063 (0.27)	0.711
Nether-lands	-0.005 (-0.49)	-1.418 (-6.25)***	-0.193 (-4.35)***	-0.581 (-0.81)	0.006 (0.73)	0.164 (0.79)	0.608
Norway	-0.004 (-0.49)	-1.870 (-6.72)***	-0.185 (-4.22)***	-0.839 (-1.55)	0.019 (1.32)	-0.081 (-0.60)	0.692
New Zealand	0.048 (2.36)**	1.738 (6.49)***	-0.121 (-1.72)*	0.433 (1.18)	-0.128 (-2.81)***	0.362 (1.01)	0.721
Portugal	-0.004 (-0.38)	-1.590 (-5.78)***	-0.2021 (-3.40)***	-1.444 (-2.60)**	0.032 (1.14)	0.317 (0.90)	0.559
Singa-pore	-0.012 (-2.56)**	-2.104 (-9.42)***	-0.338 (-0.43)	0.578 (-1.74)*	0.006 (1.08)	-0.145 (-0.41)	0.576
Spain	0.007 (0.76)	-1.499 (-5.69)***	-0.238 (-5.17)***	-0.261 (-0.40)	-0.009 (-0.73)	-0.332 (-1.32)	0.599
Sweden	0.002 (0.20)	-1.410 (-4.38)***	-0.093 (-2.25)**	0.336 (0.33)	-0.003 (-0.31)	0.332 (0.91)	0.530
Switzer-land	-0.015 (-1.49)	-1.632 (-4.67)***	-0.199 (4.54)***	0.623 (1.58)	0.006 (1.49)	0.540 (1.37)	0.759
United Kingdom	-0.006 (-0.83)	1.544 (5.35)***	-0.133 (-4.44)***	0.892 (2.25)**	0.001 (0.20)	-0.276 (-2.63)**	0.805
United States	0.014 (2.52)**	0.045 (0.36)	-0.154 (-2.87)***	-0.527 (-3.79)***	-1.098 (-2.65)**	-0.322 (-3.47)***	0.344
						Average	0.550

Developed markets:

Table A1.8 shows the results of sub-sample period 2, at the country-level analysis, for developed markets. The coefficient estimate on the lagged political risk variable ($\lambda_{i,\ t-1}$), for sub-sample period 2, is significant in three developed markets. These are Belgium, the United Kingdom and the United States. This is interesting as developed markets outnumber emerging markets in terms of the significant exposure to political risk for this sub-period. The

results from the country-level analysis thus suggest that developed markets are more prone to the changes in political risk despite the fact that they are politically safer than emerging markets. The average adjusted R^2 from the model is 55% across developed markets. This implies that the control variables appear to be reasonable proxies for the local risk factors. The coefficients on foreign exchange, dividend yield, local volatility, and market size variables are significant in 20, 19, 6, and 2 developed markets, respectively.

A2 PACIFIC BASIN EMERGING MARKETS

This appendix examines whether political risk is an important influence of Pacific Basin emerging markets stock returns during the Asian Financial Crisis period which ranges from July 1997 – December 1999. The results are presented in Table A2.1:

Table A2.1

Aggregate portfolio tests of the political risk model using pooled regression for Pacific Basin emerging markets

The table shows the results from estimating pooled regression model [3.2] on Pacific Basin emerging markets and other 13emerging markets. The sample period is the Asian Financial Crisis, which ranges from July 1997 to December 1999. FX denotes percentage change in the exchange rate. DY denotes percentage change in the dividend yield. Local is the variance of local market returns. SZ denotes market size and is measured as market capitalization divided by nominal GDP. PR is the change in political risk rating. Standard errors are corrected using the Newey and West (1987) procedure for both autocorrelation and heteroskedasticity of an unknown form. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Markets	**α**	**β (FX_t)**	**θ (DY_t)**	**γ ($local_t$)**	**δ (SZ_t)**	**λ (PR_{t-1})**	**Adj. R^2**
Asian Financial Crisi: July 1997 - December 2007							
Pacific Basin	-0.033 (-2.55)**	-1.694 (-4.14)***	-0.358 (-4.00)***	0.489 (4.74)***	0.000 (1.78)*	-0.476 (-1.91)*	0.789
Other 13 emerging markets	-0.043 (-3.82)***	-1.829 (-2.46)**	-0.215 (-2.61)**	0.731 (5.33)***	0.142 (3.86)***	-0.009 (-0.15)	0.438

The results suggest that political risk is an important determinant of stock market returns for Pacific Basin emerging markets portfolio but not for the other 13 emerging markets during the Asian Financial Crisis period.

APPENDIX B

FOR ESSAY THREE

B1 POLITICAL CONNECTIONS MEASUREMENT

To ensure that the results are not specific to the choice of political connections measurement, this section of the appendix provides the results from the robustness check where the connections to the board of directors and to the shareholders is each considered independently. Section B1.1 presents the evidence where a politically connected firm is redefined as any firm with political connections through board of directors. Section B1.2 then presents the evidence where a politically connected firm is redefined as any firm with political connections through shareholders.

B1.1 BOARD OF DIRECTORS

Table B1.1 presents the results from estimating the time fixed-effects model [5.2] of stock returns on political connection variables and control variables. Only the political connections that are established through the board of directors are considered herein.

Panel A of Table B1.1 shows that stock returns are significantly greater for firms with connections to the Prime Minister (PM) and Cabinet Members (CM) when such connections are established through the board of directors at 0.80% and 0.40% per month, respectively. The test for equal coefficient in Panel B shows that there is a significant difference among the stock returns of firms that are connected to the PM and Member of Parliament of opposition parties (MPO), and, Member of Parliament of coalition parties (MPC) and MPO at 0.79% and 0.42% per month, respectively.

Table B1.1

Monthly stock returns under different levels of political connection (Connections through the Board of Directors)

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables. The political connections are those that are established through the Board of Directors. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T*-statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

	Panel A		Panel B		
	Returns		Test for equal coefficients		
	Coefficients	T-stat		Differences	F-Stat
C	-0.002	(-0.39)	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.001	(0.07)
PM	0.008	(1.78)*	$\beta_1 - \beta_2 = 0$	0.004	(0.68)
CM	0.004	(2.37)**	$\beta_1 - \beta_3 = 0$	0.005	(1.40)
MPC	0.002	(1.42)	$\beta_1 - \beta_4 = 0$	0.008	(2.99)*
MPO	-0.001	(-0.04)	$\beta_2 - \beta_3 = 0$	0.002	(0.57)
SIZE	-0.001	(-0.48)	$\beta_2 - \beta_4 = 0$	0.004	(3.57)*
B/M	0.002	(0.64)	$\beta_3 - \beta_4 = 0$	0.003	(1.40)
LEV	-0.008	(-3.89)***			
	R-squared = 0.21		Industry Dummies = Yes		

Next, the stock returns of firms with different levels of political connection across the eight industries that are classified by the SET are examined. To test this, regression model [5.3] is estimated and the results are reported in Table B1.2.

Table B1.2

Monthly stock returns of firms, with different levels of political connection, across eight industries (Connections through Board of Directors)

The table reports the test for equal coefficient of the monthly stock returns of firms, with different levels of political connection, among the eight industries. These coefficients are estimated from time fixed-effects pooled regression model [5.3] of stock returns on the interactive dummy variables and control variables. The political connections are those that are established through the Board of Directors. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage (LEV) is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T*-statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.3]:

$r_{it} = \alpha + \sum_{i=1}^{a} \beta_a \, PM \, . \, Industry_{it} + \sum_{i=1}^{b} \beta_b \, CM \, . \, Industry_{it} + \sum_{i=1}^{c} \beta_c \, MPC \, . \, Industry_{it} + \sum_{i=1}^{d} \beta_d \, MPO \, . \, Industry_{it} + \sigma_{it} \, SIZE_{it} + \theta_{it} \, B/M_{it} + \gamma_{it} \, LEV_{it} + \varepsilon_{it}$.

	Panel A: Returns		Panel B: Test for equal coefficients		
	Coeff.	T-stat		Diff.	F-stat
C	0.003	(0.62)	Across all interactive political dummies	-0.086	(3.36)*
Agro & Food					
PM	0.019	(1.03)	Across PM dummies	-0.057	(2.65)*
CM	-0.001	(-0.12)			
MPC	0.007	(1.43)	Across CM dummies	-0.034	(6.11)**
MPO	0.006	(1.53)			
			Across MPC dummies	0.004	(0.10)
Consumer Product					
PM	-0.020	(-0.80)	Across MPO dummies	0.026	(3.87)**
CM	0.007	(1.84)*			
MPC	0.007	(2.12)**			
MPO	-0.002	(-0.75)			
			R-squared	0.20	
Financials					
PM	0.019	(6.71)***	D-W Statistics	1.98	
CM	0.004	(1.07)			
MPC	0.001	(0.17)			
MPO	-0.003	(-0.65)			
Industrials					
PM	0.087	(12.22)***			
CM	0.009	(1.71)*			
MPC	0.001	(0.22)			
MPO	0.002	(0.47)			

	Panel A		Panel B	
	Returns		Test for equal coefficients	
	Coeff.	T-stat	Diff.	F-stat
Property				
PM	-0.028	(-2.32)**		
CM	0.001	(0.21)		
MPC	-0.001	(-0.25)		
MPO	-0.002	(-0.32)		
Resources				
PM	0.022	(3.57)***		
CM	0.007	(1.49)		
MPC	-0.008	(-1.63)		
MPO	-0.005	(-2.85)***		
Services				
PM	-0.003	(-2.87)***		
CM	0.009	(3.20)***		
MPC	0.001	(0.36)		
MPO	0.002	(0.47)		
Technology				
PM	-0.002	(-0.26)		
CM	-0.003	(-0.54)		
MPC	0.003	(0.37)		
MPO	-0.012	(-1.70)*		
SIZE	-0.002	(-1.93)*		
B/M	0.001	(5.60)***		
LEV	-0.004	(-3.38)***		

The test for equal coefficients in Panel B of Table B1.2 suggests that there is a significant difference in the stock returns of firms with different levels of political connection across the industries at -8.59%, per month. In particular, there are differences in the stock returns of firms which are connected to the PM, CM, and MPO across the different industries at -5.65%, -3.35%, and 2.63% per month, respectively. The results from investigating the differences in stock returns across the industries are therefore robust to the choice of political connections measurement since these results are consistent with those reported in Table 5.5 of section 5.6.1.

Next, an industrial analysis is performed by determining whether there are any differences in the stock returns of firms with different levels of political connection within each industry. To test this, regression model [5.2] is estimated on each industry and the results are reported in Table B1.3. The results from Panel A indicate that stock returns are significantly greater for firms that are politically connected to the PM in Financial, Industrial, and Technology

sector. Besides, stock returns are also significantly greater for firms that are politically connected to the CM in Industrial, Services, and Technology sector.

Table B1.3

Monthly stock returns of firms, with different levels of political connection, within each industry (Connections through Board of Directors)

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables for each of the eight industries classified by the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. The political connections are those that are established through the Board of Directors. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage (LEV) is measured as total debt over total assets. White cross-section standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. α_i , β_i , γ_i , and δ_i are the coefficients of PM, CM, MPO, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

Panel A: General Results

	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
PM	-0.0070	-0.0440	0.0177	0.0687	-0.0124	0.0040	0.0030	0.0416
	(-0.85)	(-1.56)	(2.64)***	(3.34)***	(-0.68)	(0.35)	(0.14)	(3.80)***
CM	-0.0060	0.0023	0.0055	0.0095	0.0129	0.0041	0.0138	0.0195
	(-1.03)	(0.33)	(1.41)	(1.73)*	(1.57)	(0.82)	(3.06)***	(1.84)*
MPC	0.0007	0.0042	0.0031	-0.0007	0.0162	-0.0066	0.0064	0.0174
	(0.15)	(0.59)	(0.72)	(-0.19)	(1.64)	(-1.20)	(1.15)	(1.19)
MPO	0.0022	-0.0013	0.0036	-0.0013	0.0006	-0.0024	-0.0001	0.0035
	(0.34)	(-0.18)	(0.76)	(-0.28)	(0.06)	(-0.39)	(-0.02)	(0.28)
SIZE	0.0035	-0.0237	-0.0077	-0.0068	-0.0606	0.0018	-0.0243	-0.0369
	(0.97)	(-1.76)*	(-0.48)	(-2.56)**	(-4.01)***	(0.54)	(-2.43)**	(-3.03)***
B/M	0.0066	0.0073	0.0064	0.0115	0.0113	0.0083	0.0098	0.0049
	(4.44)***	(2.98)***	(4.31)***	(4.75)***	(3.70)***	(6.98)***	(5.57)***	(2.11)**
LEV	-0.0079	-0.0302	-0.0097	-0.0010	-0.0287	-0.0002	-0.0127	-0.0317
	(-1.88)*	(-1.98)	(-1.94)*	(-0.20)	(-1.86)*	(-0.02)	(-1.17)	(-1.89)*
Intercept	-0.0308	0.1445	-0.0143	0.0224	0.3792	-0.0369	0.1330	0.2293
	(-1.42)	(2.79)***	(-1.25)	(1.38)	(3.93)***	(-1.43)	(2.10)**	(2.85)***
R^2 adj.	0.1879	0.1663	0.3517	0.2005	0.3311	0.3640	0.2125	0.3181

Panel B: Test of equal coefficients								
	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	-0.0039 (0.10)	-0.0493 (2.43)	0.0054 (0.34)	0.0613 (6.39)**	-0.0420 (2.67)	0.0089 (0.30)	-0.0171 (0.51)	0.0012 (0.00)
$\beta_1 - \beta_2 = 0$	-0.0010 (0.01)	-0.0463 (2.51)	0.0122 (3.52)*	0.0593 (6.72)***	-0.0253 (1.64)	-0.0001 (0.00)	-0.0109 (0.27)	0.0221 (3.97)**
$\beta_1 - \beta_3 = 0$	-0.0078 (0.88)	-0.0482 (2.83)*	0.0145 (4.27)**	0.0694 (10.86)***	-0.0286 (2.16)	0.0105 (0.71)	-0.0034 (0.03)	0.0242 (2.02)
$\beta_1 - \beta_4 = 0$	-0.0093 (0.79)	-0.0427 (2.18)	0.0140 (3.91)**	0.0701 (10.70)***	-0.0130 (0.45)	0.0064 (0.22)	0.0031 (0.02)	0.0038 (5.94)**
$\beta_2 - \beta_3 = 0$	-0.0068 (0.73)	-0.0019 (0.04)	0.0024 (0.24)	0.0102 (2.80)*	-0.0033 (0.14)	0.0107 (2.34)	0.0074 (1.85)	0.0021 (0.02)
$\beta_2 - \beta_4 = 0$	-0.0083 (0.73)	0.0036 (0.21)	0.0019 (0.13)	0.0108 (2.34)	0.0123 (0.96)	0.0065 (0.97)	0.0140 (3.73)*	0.0160 (0.95)
$\beta_3 - \beta_4 = 0$	-0.0015 (0.05)	0.0280 (3.83)*	-0.0005 (0.01)	0.0006 (0.01)	0.0156 (2.34)	-0.0041 (0.47)	0.0065 (0.84)	0.0139 (0.48)

The results from Panel B show that there are significant differences in the stock returns of firms that are connected to the different levels of political connection in five out of eight industries. These consist of: (1) Consumer; (2) Financial; (3) Industrial; (4) Services, and (5) Technology sector.

Overall, the results from individual sector analysis show that the differences in the stock returns are greatest between firms connected to the PM and MPO, which is between the highest level of political connection and the lowest one. Besides, the degree of differences lessens when the returns of firms connected to the second highest level of connection (CM) is compared to those of the lowest one (MPO). These conclusions are consistent with what is reported by the original model in Table 5.5 of section 5.6.1.

B1.2 SHAREHOLDERS

Table B1.4 presents the results from estimating the time fixed-effects model [5.2] of stock returns on political connection variables and control variables. Only the political connections that are established through the shareholders are considered herein.

Table B1.4

Monthly stock returns under different levels of political connection (Connections through Shareholders)

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables. The political connections are those that are established through the shareholders. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

	Panel A		Panel B		
	Returns		Test for equal coefficients		
	Coefficients	T-stat		Differences	F-Stat
C	0.308	(9.55)***	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.006	(0.57)
PM	0.024	(4.30)***	$\beta_1 - \beta_2 = 0$	0.015	(6.79)***
CM	0.009	(3.11)***	$\beta_1 - \beta_3 = 0$	0.011	(3.66)*
MPC	0.013	(3.79)***	$\beta_1 - \beta_4 = 0$	0.028	(6.97)***
MPO	-0.004	(-0.85)	$\beta_2 - \beta_3 = 0$	-0.004	(0.78)
SIZE	-0.048	(-9.77)***	$\beta_2 - \beta_4 = 0$	0.013	(6.99)***
B/M	0.004	(4.50)***	$\beta_3 - \beta_4 = 0$	0.016	(10.69)***
LEV	-0.015	(-3.33)***			
R-squared = 0.21			Industry Dummies = Yes		

Panel A of Table B1.4 shows that the stock returns are significantly greater for firms with connections to the PM, CM, and MPC when such connections are established through the shareholders at 2.40%, 0.90% and 1.30% per month, respectively. The test for equal coefficient in Panel B shows that there is a significant difference among the stock returns of firms that are connected to the PM and CM, PM and MPC, and, PM and MPO at 1.50%, 1.14% and 2.80% per month, respectively. Moreover, there is also a significant difference among the stock returns of firms that are connected to the CM and MPO, and, MPC and MPO at 1.30% and 1.60% per month, respectively. The results from this robustness test therefore show that it is the connections through the shareholders that primarily drive the main results reported in Table 5.4 of section 5.6.1. Such findings imply that investors react more strongly if the connections are established through the shareholders rather than the board of directors.

Next, the stock returns of firms with different levels of political connection across the eight industries that are classified by the SET are examined. To test this, regression model [5.3] is estimated and the results are reported in Table B1.5.

Table B1.5

Monthly stock returns of firms, with different levels of political connection, across eight industries (Connections through shareholders)

The table reports the test for equal coefficient of the monthly stock returns of firms, with different levels of political connection, among the eight industries. These coefficients are estimated from time fixed-effects pooled regression model [5.3] of stock returns on the interactive dummy variables and control variables. The political connections are those that are established through the shareholders. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage (LEV) is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T*-statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.3]:

$$r_{it} = \alpha + \sum_{i=1}^{a} \beta_a \, PM \,.\, Industry_{it} + \sum_{i=1}^{b} \beta_b \, CM \,.\, Industry_{it} + \sum_{i=1}^{c} \beta_c \, MPC \,.\, Industry_{it} + \sum_{i=1}^{d} \beta_d \, MPO \,.\, Industry_{it} + \sigma_{it} \, SIZE_{it} + \theta_{it} \, B/M_{it} + \gamma_{it} \, LEV_{it} + \varepsilon_{it} \,.$$

	Panel A Returns			Panel B Test for equal coefficients	
	Coeff.	T-stat		Diff.	F-stat
C	0.309	(9.63)***	Across all interactive political dummies	-0.251	(10.68)***
Agro & Food					
PM	-0.026	(-4.46)***	Across PM dummies	-0.129	(13.63)***
CM	0.014	(-2.15)**			
MPC	0.006	(0.65)	Across CM dummies	-0.056	(5.36)**
MPO	0.003	(0.21)			
			Across MPC dummies	-0.056	(3.11)*
Consumer Product					
PM	-0.036	(-4.99)***	Across MPO dummies	0.038	(1.15)
CM	0.009	(2.39)**			
MPC	-0.011	(-0.97)			
MPO	-0.001	(-0.06)			
			R-squared	0.21	
Financials					
PM	-0.001	(-0.19)	D-W Statistics	1.98	
CM	0.002	(0.32)			
MPC	0.002	(0.31)			
MPO	-0.027	(-3.07)***			
Industrials					
PM	0.026	(2.32)**			
CM	0.030	(3.09)***			
MPC	0.024	(2.09)**			
MPO	0.017	(1.90)*			
Property					
PM	0.036	(2.09)**			
CM	0.011	(0.96)			
MPC	0.022	(2.38)**			
MPO	-0.001	(-0.08)			
Resources					
PM	0.047	(4.11)***			
CM	0.005	(0.85)			
MPC	0.009	(0.44)			
MPO	-0.004	(-0.40)			
Services					
PM	0.004	(0.16)			
CM	0.006	(1.10)			
MPC	0.007	(1.13)			
MPO	0.002	(0.20)			
Technology					
PM	0.027	(2.97)***			
CM	0.008	(0.53)			
MPC	0.011	(1.02)			
MPO	-0.020	(-1.17)			
SIZE	-0.049	(-9.98)***			
B/M	0.004	(4.91)***			
LEV	-0.004	(-1.39)			

The test for equal coefficients in Panel B of Table B1.5 suggests that there is a significant difference in the stock returns of firms with different levels of political connection across the industries at -25.10%, per month. In particular, there are differences in the stock returns of firms which are connected to the PM, CM, and MPC across the different industries at -12.90%, -5.61%, and -5.67% per month, respectively. Given that there is a significant difference in the stock returns of firms with different levels of political connection across the industries, such a result is consistent with those reported in Table 5.5 of section 5.6.1.

Next, an industrial analysis is performed by determining whether there are any differences in the stock returns of firms with different levels of political connection within each industry. To test this, regression model [5.2] is estimated on each industry and the results are reported in Table B1.6. The results from Panel A indicate that stock returns are significantly greater for firms that are politically connected to the PM in almost all sectors except those in Agro & Food, Consumer product, and Services. The stock returns are also found to be significantly greater for firms that are connected to the CM in Industrial sectors.

Table B1.6

Monthly stock returns of firms, with different levels of political connection, within each industry (Connections through shareholders)

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables for each of the eight industries classified by the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. The political connections are those that are established through the shareholders. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage (LEV) is measured as total debt over total assets. White cross-section standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. α_i , β_i , γ_i , and δ_i are the coefficients of PM, CM, MPO, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

Panel A: General Results

	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
PM	-0.0261	0.0419	0.0105	0.0080	0.0338	0.0172	-0.0075	0.0302
	(-0.46)	(1.41)	(1.73)*	(2.04)**	(1.93)*	(1.79)*	(-1.23)	(3.01)***
CM	0.0070	0.0040	0.0032	0.0120	0.0154	-0.0006	-0.0022	0.0125
	(0.70)	(0.89)	(0.66)	(2.00)**	(1.29)	(-0.07)	(-0.68)	(0.83)
MPC	0.0093	-0.0082	0.0110	0.0101	0.0184	0.0110	0.0018	0.0118
	(0.99)	(-0.84)	(1.69)*	(1.75)*	(1.85)*	(1.65)*	(0.43)	(1.11)
MPO	-0.0004	-0.0070	-0.0218	0.0089	-0.0082	-0.0009	0.0037	-0.0182
	(-0.04)	(-0.79)	(-2.87)***	(1.39)	(-0.47)	(-0.16)	(0.72)	(-1.01)
SIZE	-0.0089	-0.0019	-0.0036	-0.0058	-0.0738	-0.0014	0.0011	-0.0553
	(-0.60)	(-0.47)	(-2.05)**	(-2.24)**	(-5.31)***	(-0.01)	(0.71)	(-5.70)***
B/M	-0.0043	0.0038	0.0024	0.0004	0.0008	0.0053	0.0011	0.0002
	(1.28)	(2.03)**	(2.01)*	(1.13)	(3.77)***	(2.68)***	(0.81)	(0.73)
LEV	-0.0120	-0.0182	-0.0042	-0.0043	-0.0203	0.0182	-0.0044	-0.0260
	(-1.27)	(-2.23)**	(-0.86)	(-0.97)	(-1.64)*	(1.98)**	(-0.80)	(-1.46)
Intercept	0.0568	0.0084	0.0081	0.0278	0.4797	-0.0285	-0.0132	0.3605
	(0.61)	(0.32)	(0.65)	(1.74)*	(5.18)***	(-1.42)	(-1.43)	(5.50)***
R^2 adj.	0.1524	0.1263	0.3098	0.1720	0.3247	0.2688	0.1850	0.2877

Panel B: Test of equal coefficients

	AGRO	CON	FIN	IND	PROP	RES	SER	TECH
$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	-0.0418 (0.48)	0.0530 (2.45)	0.0180 (2.41)	-0.0229 (4.59)**	0.0082 (0.12)	0.0077 (0.01)	-0.0107 (1.45)	0.0242 (0.83)
$\beta_1 - \beta_2 = 0$	-0.0329 (0.34)	0.0378 (1.58)	0.0072 (1.02)	-0.0040 (0.33)	0.0184 (1.15)	0.0178 (3.10)*	-0.0052 (0.67)	0.0177 (1.53)
$\beta_1 - \beta_3 = 0$	-0.0354 (0.38)	0.0501 (2.56)	-0.0006 (0.01)	-0.0020 (0.10)	0.0154 (0.67)	-0.0005 (0.00)	-0.0092 (1.69)	0.0185 (1.80)
$\beta_1 - \beta_4 = 0$	-0.0257 (0.20)	0.0488 (2.36)	0.0328 (12.68)***	-0.0009 (0.02)	0.0420 (4.05)**	0.0181 (4.75)**	-0.0111 (1.90)	0.0485 (5.87)**
$\beta_2 - \beta_3 = 0$	-0.0025 (0.07)	0.0123 (1.21)	-0.0078 (0.86)	0.0020 (0.05)	-0.0030 (0.04)	-0.0183 (2.05)	-0.0040 (0.74)	0.0021 (0.00)
$\beta_2 - \beta_4 = 0$	0.0072 (0.35)	0.0110 (1.36)	0.0250 (10.04)***	0.0031 (0.15)	0.0236 (1.43)	0.0009 (0.01)	-0.0059 (0.93)	0.0308 (1.51)
$\beta_3 - \beta_4 = 0$	0.0097 (0.61)	-0.0013 (0.01)	0.0323 (11.31)***	0.0012 (0.02)	0.0266 (1.82)	0.0119 (3.12)*	-0.0019 (0.07)	0.0299 (2.80)*

The results from Panel B show that there are significant differences in the stock returns of firms that are connected to the different levels of political connection in five out of eight industries. These consist of: (1) Financial; (2) Industrial; (3) Property, (4) Resources; and (5) Technology sector.

On the whole, the results from individual sector analysis contribute to the argument that the differences in the stock returns are greatest between firms connected to the PM and MPO, which is between the highest level of political connection and the lowest one. This is consistent with what is reported by the original model in Table 5.7 of section 5.6.1.

B2 LEVEL OF POLITICAL CONNECTION

This section presents the robustness test on the level of political connection. It is found that there are 121 out of 653 firms that are simultaneously connected to more than one politician at different levels of political connection. Accordingly, for these 121 firms, connections to politicians who are lower in ranking according to the political ranking scale are the one to be examined when estimating regression model [5.2]. The results for this robustness check are presented in Table B2.1, as follow:

Table B2.1

Monthly stock returns under different levels of political connection (Overlap of political connections)

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables. However, connections to the politicians who are lower in political ranking scale are being considered when firms are simultaneously connected to more than one politician. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size (SIZE) is measured as the log of total assets. B/M denotes the book-to-market ratio. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. PM stands for Prime Minister; CM stands for Cabinet Ministers; MPC stands for Member of Parliament within coalition parties; and, MPO stands for Member of Parliament within opposition parties.*, **, *** indicates significance at the 10%, 5%, and 1% level, respectively. Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

	Panel A Returns			Panel B Test for equal coefficients	
	Coefficients	T-stat		Differences	F-Stat
C	-0.006	(-0.95)	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.002	(0.12)
PM	0.009	(2.13)**	$\beta_1 - \beta_2 = 0$	0.004	(2.90)*
CM	0.005	(3.15)***	$\beta_1 - \beta_3 = 0$	0.006	(3.40)**
MPC	0.003	(1.85)*	$\beta_1 - \beta_4 = 0$	0.010	(4.61)**
MPO	-0.001	(-0.29)	$\beta_2 - \beta_3 = 0$	0.002	(1.07)
SIZE	-0.001	(-0.52)	$\beta_2 - \beta_4 = 0$	0.006	(6.41)**
B/M	0.002	(3.90)***	$\beta_3 - \beta_4 = 0$	0.004	(2.78)*
LEV	-0.008	(-4.01)***			
	R-squared = 0.21			Industry Dummies = Yes	

The results from Table B2.1 suggest that the main findings which are presented in Table 5.4 are robust to the overlap of political connections. However, the percentages of stock return differences appear to be smaller and the level of significance of the results also appear to decrease when the connection to politicians who are lower in ranking is used in the analysis.

By controlling for firms' size, book-to-market ratio, and leverage as well as taking into account industrial effects on stock returns, the results on Panel A of Table B.2.1 suggest that the stock returns are significantly greater for firms that are politically connected to the PM, CM, and MPC at 0.90%, 0.50% and 0.30% per month, respectively. The results for the test for equal coefficients on Panel B further suggest that there are significant differences among the stock returns of firms that are connected to the PM and CM, PM and MPC, and, PM and MPO at 0.40%, 0.60% and 1.00% per month, respectively. These are equivalent to 4.91%, 7.44%, and 12.68% per annum, respectively.

Moreover, there are also significant differences among the stock returns of firms that are connected to the CM and MPO, and, MPC and MPO at 0.60% and 0.40% per month, or equivalent to 7.44% and 4.91% per annum, respectively. The control variables for the book-to-market ratio and leverage are also significant in this regression, with a higher book-to-market ratio being associated with higher returns, and higher leverage with lower returns. Moreover, the inclusion of industry dummies does not decrease the level of significance of the coefficients on political connection variables. Hence, the null Hypothesis 1 of no differences among the different levels of political connection on stock returns of firms in Thailand can be robustly rejected based on these findings.

B3 ALTERNATIVE PROXY FOR FIRM SIZE

To ensure that the results are not specific to the choice of proxy for firm size, this section of the appendix provides the results from robustness test where the log of sales is used as an alternative proxy for firm size. The results are presented in Table B3.1.

Table B3.1

Monthly stock returns under different levels of political connection
With log of net sales as a proxy for firm size

The table reports coefficient estimates from time fixed-effects pooled regression model [5.2] of stock returns on political connection variables and control variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008. Firm size is measured as the log of sales. B/M denotes the book-to-market ratio. Leverage is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. *F*-statistics are reported in parentheses in the right-hand column for the test for equal coefficients. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.Regression model [5.2]:

$$r_{it} = \alpha + \beta_1 PM_{it} + \beta_2 CM_{it} + \beta_3 MPC_{it} + \beta_4 MPO_{it} + \sigma_{it} SIZE_{it} + \theta_{it} B/M_{it} + \gamma_{it} LEV_{it} + \sum_{i=1}^{8} Industry_{it} + \varepsilon_{it}.$$

	Panel A Returns		Panel B Test for equal coefficients		
	Coefficients	T-stat		Differences	F-Stat
C	-0.032	(-6.25)	$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.007	(1.89)
PM	0.010	(2.40)**	$\beta_1 - \beta_2 = 0$	0.006	(1.98)
CM	0.004	(2.58)***	$\beta_1 - \beta_3 = 0$	0.008	(3.37)*
MPC	0.002	(1.97)**	$\beta_1 - \beta_4 = 0$	0.013	(8.42)***
MPO	-0.003	(-1.57)	$\beta_2 - \beta_3 = 0$	0.002	(0.71)
SIZE	-0.004	(-1.18)	$\beta_2 - \beta_4 = 0$	0.007	(9.39)***
B/M	0.001	(5.01)***	$\beta_3 - \beta_4 = 0$	0.006	(6.13)**
LEV	-0.009	(-4.47)***			
R-squared = 0.21			Industry Dummies = Yes		

Table B2.1 shows that the results are strongly robust to the change in proxy for firm size since they are consistent with the original model reported in Table 5.4 of section 5.6.1.

B4 ADDITIONAL CONTROL VARIABLES ON FIRM PERFORMANCE

In this section, two additional control variables are augmented into regression model [5.4] to analyse the effect of corporate political connections on firm performance. These two control variables are the book-to-market ratio and leverage. The results are presented in Table B4.1. Generally, the results are robust to the addition of control variables since they are consistent with the original model reported in Table 5.8 of section 5.6.2, with one exception of PE ratio. Panel B of Table B4.1 shows that the differences in the PE ratio of firms with different levels of political connection lose its statistical significance. Nevertheless, when comparing the adjusted R^2, Akaike info criterion, and Schwarz criterion between the models, the original model appears to have higher adjusted R^2 and smaller Akaike and Schwarz criterion which indicate that it is superior in fitting the data. Therefore, the results of the original model reported in Table 5.8 are satisfactory in terms of their strength.

Table B4.1

Monthly financial performance under different levels of political connection

Panel A reports coefficient estimates from time fixed-effects pooled regression model [5.4] of firms' financial performance on political connection variables and control variables. The sample size is 653 listed firms on the Stock Exchange of Thailand. The sample period ranges from January 1987 to December 2008.The dependent variables are ROA, PE, M/B, DY, AT, and FE. ROA denotes the return-on-assets ratio. PE stands for price-to-earnings ratio. M/B is the market-to-book ratio. DY denotes the dividend yield. AT is the fixed-to-total assets. FE represents the sales-to-assets ratio. Firm size is measured as the log of total assets. B/M denotes the book-to-market ratio. And, leverage (LEV) is measured as total debt over total assets. White period standard errors and covariance is used to correct for heteroskedasticity. *T* statistics appear in parentheses and are a test of the null hypothesis that the coefficient is equal to zero. Panel B reports the test for equal coefficients. *F*-statistics appear in parentheses and are a test of the null hypothesis that the differences among coefficients are equal to zero. β_1, β_2, β_3, and β_4 are the coefficients of PM, CM, MPC, and MPO, respectively. *, **, *** indicates significance at the 10%, 5%, and 1% level, respectively.

Regression model [5.4]: $\text{Performance}_{it} = \alpha + \beta_1 \text{PM}_{it} + \beta_2 \text{CM}_{it} + \beta_3 \text{MPC}_{it} + \beta_4 \text{MPO}_{it} + \sigma_{it} \text{SIZE}_{it} + \delta_{it} \text{B/M}_{it} + \gamma_{it} \text{LEV}_{it} + \sum_{i=1}^{8} \text{Industry}_{it} + \varepsilon_{it}$

Panel A: General Results

	ROA	PE	M/B	DY	AT	FE
Intercept	0.076 (2.26)**	18.474 (6.46)***	1.366 (3.26)***	-0.014 (-1.93)*	0.523 (5.42)***	3.055 (8.51)***
PM	0.033 (1.85)*	4.064 (1.73)*	0.893 (2.65)***	-0.006 (-1.77)*	0.097 (3.15)***	0.048 (5.96)***
CM	-0.001 (-0.13)	1.479 (2.34)**	0.007 (0.10)	-0.002 (-0.81)	0.021 (1.25)	0.012 (3.18)***
MPC	-0.004 (-0.71)	0.822 (1.28)	0.084 (1.16)	-0.003 (-2.32)**	0.026 (1.53)	0.047 (2.24)***
MPO	0.002 (0.27)	-0.152 (-0.23)	-0.026 (-0.38)	0.002 (1.07)	0.048 (2.61)***	0.021 (5.24)***
SIZE	0.002 (0.40)	-1.392 (-1.16)	0.103 (1.95)*	0.003 (3.27)***	-0.014 (-1.04)	-0.307 (-6.33)***
B/M	0.001 (1.55)	1.722 (1.18)	0.171 (6.34)***	0.002 (5.05)***	0.013 (3.58)***	-0.016 (-3.23)***
LEV	-0.064 (-7.30)***	2.592 (8.74)***	-0.376 (-3.04)***	0.002 (1.13)	0.200 (6.19)***	-0.094 (-10.33)***
R^2 adj.	0.10	0.11	0.18	0.11	0.36	0.33
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Test of equal coefficients

	ROA	PE	M/B	DY	AT	FE
$\beta_1 - \beta_2 - \beta_3 - \beta_4 = 0$	0.036 (3.04)*	1.914 (0.59)	0.828 (5.10)**	-0.003 (0.34)	0.003 (0.01)	-0.032 (8.91)***
$\beta_1 - \beta_2 = 0$	0.034 (3.54)*	2.585 (1.23)	0.886 (6.66)***	-0.004 (1.02)	0.076 (5.79)**	0.037 (20.67)***
$\beta_1 - \beta_3 = 0$	0.037 (4.20)**	3.242 (1.90)	0.809 (5.67)**	-0.003 (0.62)	0.071 (5.09)**	0.001 (0.02)
$\beta_1 - \beta_4 = 0$	0.031 (2.87)*	4.216 (3.20)*	0.919 (7.21)***	-0.008 (4.69)**	0.050 (3.40)*	0.028 (10.87)***
$\beta_2 - \beta_3 = 0$	0.003 (0.42)	0.657 (0.79)	-0.078 (0.89)	0.001 (0.29)	-0.005 (0.08)	-0.034 (1.79)
$\beta_2 - \beta_4 = 0$	-0.002 (0.15)	1.631 (5.10)**	0.036 (0.19)	-0.004 (1.85)	-0.027 (2.28)	-0.009 (1.29)
$\beta_3 - \beta_4 = 0$	-0.006 (0.76)	0.974 (2.00)	0.110 (2.42)	-0.005 (6.96)***	-0.022 (1.81)	0.026 (18.15)***