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**DO CROSS LISTED SECURITIES IN THE FACE OF EXTREME EVENTS
PRESENT ANY RISK RETURN BENEFITS FOR NEW ZEALAND
INVESTORS?**

A thesis presented in partial fulfilment of the requirements for the degree of Master of Business Studies in Finance at Massey University, Auckland, New Zealand

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ABSTRACT:

Many investors are looking for alternative investment options in today's market as correlations among markets have increased, causing diversification benefits once gained to be diminished.

This thesis examines what risk return benefits can be gained by investors from international diversification, especially cross listed securities, and how these benefits may enhance the risk return relationship in the face of extreme events. Extreme events being researched are Russian Ruble Crisis in 1998, September 11 2001, and Argentina Financial Crisis in 2002.

It was found that cross listed securities held within a portfolio provided diversification benefits for investors with an improvement in the risk return relationship of lower risk and higher returns. Tested under extreme events it was found that holding cross listed securities within a portfolio mitigated some of the affects demonstrated.

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INTRODUCTION

This research examines whether cross listed securities exhibit higher levels of diversification, and show any risk return benefits over single listed securities in the face of extreme events. These questions may seem obvious due to the extensive research which has been conducted concerning international diversification, and the benefits to investors and companies gained from cross listing. Nevertheless, little research has focused on these topics in relation to extreme events.

A number of studies have been undertaken that look at the effects of individual extreme events, but such studies have generally been conducted from a US perspective. The current research is conducted from a NZ perspective, and looks at the affects of three extreme events on five world markets. This will allow an overall understanding of how extreme events affect world markets, and of what factors lead to extreme events. The markets researched were chosen to give a global perspective of the events and determine whether cross listing on various stock markets would provide investors with the same risk return advantages. The three extreme events which will be covered are the Russian Ruble Crisis in 1998, September 11 and the Argentine Crisis in 2002. The Russian Ruble Crisis was selected, as it was the first crisis to follow the largest emerging market crisis; the Asian Crisis which occurred in 1997. September 11 was chosen for the fact that it differed from other extreme events due to its unexpected nature and lack of prior warning in terms of financial indicators, as is usual with financial and economic crises. The Argentine crisis was the third event to be selected, as it is the most recent crisis to occur in the Latin American market, and the region had not fully recovered from other emerging market crises.

There are several reasons why cross listing may not enhance investors risk return benefits in the face of extreme events. Firstly, diversification benefits have been stated to have been diminishing over time as markets have become more integrated through international trade, common currencies, stock markets and shared resources. With increased market integration, correlations between the markets have also increased, lowering diversification benefits. Greater diversification benefits are gained with low or negative correlations between portfolio securities. This leads to the second factor that may lower the benefits to investors during extreme events. It is expected that markets will react in the same way to an extreme event, causing market correlations to increase and reduce diversification benefits. This expectation is especially so for cross listed securities, due to cross listed securities being exposed twice to the foreign and domestic markets, instead of only to the domestic market as for single listed securities. Nevertheless, some researchers state that cross listed securities are able to mitigate the effects of extreme events through their unique structures. Finally, there is much debate about the benefits versus the costs of cross listing and what, in real terms, can be achieved through cross listing. For example, if there are so many benefits why is it that only one in ten US companies are cross listed on a foreign market?

These questions will be raised in this research, and the thesis is split into the following sections; Literature Review, Synopsis of the three extreme events, market segmentation factors, hypothesis testing, computational methods, portfolio formation and research design, formation of the data sets employed, weighting techniques and performance measures, results and conclusions.