



UNIVERSITI PUTRA MALAYSIA

**EFFECT OF FINANCIAL RISK ON THE EARNINGS RESPONSE OF
BANK IN INDONESIA, THE PHILIPPINES, SOUTH KOREA AND
THAILAND**

**SOH WEI NI
FEP 2009 6**



**EFFECT OF FINANCIAL RISK ON THE EARNINGS RESPONSE OF BANK IN
INDONESIA, THE PHILIPPINES, SOUTH KOREA AND THAILAND**

By

SOH WEI NI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in
Fulfilment of the Requirements for the Master of Science
August 2009**



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chairman : Cheng Fan Fah, PhD

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The East Asian Financial crisis started at the beginning of July 1997. The crisis had a major impact on the banking industries in East Asian resulting in significant structural changes taking place in the banking sectors of the crisis-affected countries. This paper expands on the ideas of an earlier paper titled “Abnormal Returns of Bank stocks and their Factor-Analyzed Determinants” written by Cheng and Ariff (2007). This paper also attempts to analyze the Earnings Response Coefficients (ERC) for four (4) selected East Asian countries’ commercial banks and the effect of financial risks on the earnings response after the crisis and bank restructuring.

This study uses the earnings response methodology and applies Sharpe’s Market Model, naive expectation model and factored principal components analyses. The countries selected are Thailand, Korea, Indonesia and Philippine and data resources are mainly accessed from the monthly closing prices in Bankscope financial data, Company Annual



Reports, and the annual earnings announcements obtained from various Stock Exchange Central web-sites from 2000 to 2008.

The findings show that Korea and Indonesian's credit risk factors are significantly affecting their ERC and this is consistent with the results obtained for Malaysia by Cheng and Ariff (2007). Whereas additional interest risk factor and solvency factor are also significantly affecting Thailand's ERC, surprisingly results from the Philippine's show that their risk factors are not significantly affected because they are closely linked with the US and they are least affected by the financial crises. The findings provide new evidences on the effect of financial risk on ERC in banks' stocks of East Asian countries with unique historical backgrounds and financial authorities' policy decisions.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master sains

**KESAN-KESAN RISIKO KEWANGAN TERHADAP SAMBUTAN
PENDAPATAN SAHAN BANK DI INDONESIA, PHILIPPINES, SOUTH
KOREA DAN THAILAND**

Oleh

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Krisis kewangan Asia Timur bermula pada Julai 1997 dan Krisis ini merupakan kesan utama terhadap industri perbankan di Asia Timur hasil daripada signifikasi perubahan struktur dalam sector perbankan di negara-negara yang dipengaruhi krisis kewangan tersebut. Kajian ini mengembangkan idea awal daripada kajian yang bertajuk “Pulangan Abnormal Stok Bank dan Analisa Faktor-Faktor Penentu” oleh Cheng dan Ariff (2007). Kajian ini juga menganalisa Pekali Respons Pendapatan (ECR) untuk bank komersial di tempat negara Asia terpilih dan kesan risiko kewangan tersebut pada respons perbelanjaan selepas Krisis dan pembentukan bank.

Kajian ini menggunakan kaedah respons perbelanjaan dan aplikasi “Model Pasaran Shape”, model jangkaan natif dan analisa komponen prinsip factor. Negara-negara yang terpilih ialah Thailand, Korea, Indonesia, dan Filipina. Manakala sumber data merupakan harga tertutp bulanan daripada data kewangan Bankscope, Laporan Kewangan Syarikat,



dan pengistiharan pendapatan tahunan yang perolehi daripada pelbagai laman web pusat pertukaran stok daripada tahun 2000 hingga tahun 2008.

Dapatan Kajian menunjukkan factor risiko kredit Korea dan Indonesia adalah dengan signifikannya mempengaruhi ERC dan ianya konsisten dengan keputusan yang diperolehi untuk Malaysia dalam Kajian Cheng dan Ariff (2007). Tambahan pula, faktor risiko faedah dan faktor keupayaan membayar hutang juga dengan signifikannya mempengaruhi ERC Negara Thailand. Walau bagaimanapun, dapatan kajian bagi Filipina menunjukkan factor risiko adalah tidak signifikan kerana Filipina berhubungan rapat dengan Amerika Syarikat yang kurang dipengaruhi oleh krisis kewangan. Kajian ini menghasilkan bukti baharu pada kesan risiko kewangan ERC dalam stok bank di negara-negara Asia dengan belakang yang bersejarah dan keputusan polisi autoriti.



ACKNOWLEDGEMENTS

First And foremost, I would dedicate my sincere appreciation to my supervisor, Dr.Cheng Fan Fah and committee member, Professor Dr. Annuar Nasir for their helpful advices and assistance in completing this thesis. Nevertheless, my gratitude also goes to all UPM staff member, my family and loved one who contributed in some ways towards the completion of this thesis.



APPROVAL SHEET

I certify that an Examination Committee has met on 2009 to conduct the final examination of **Soh Wei Ni** on her **master of Science** thesis entitled “**The Effect of Financial Risk on the Earnings Response in Bank Stocks in Indonesia, The Philippines, South Korea and Thailand**” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulation 1981. The Committee recommends that the student be awarded the Master of Science.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at University Putra Malaysia or at any other institution.

Name: **SOH WEI NI**
Date : 14 January 2010



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LIST OF ABBREVIATION

ASEAN	Association of Southeast Asian Nations
ADI	Authorized Deposit-taking Institution
AEC	Asian Economic Community
ALM	Asset Liability Management
AMCs	Asset management companies
BCBS	Basel Committee
BCBS	Basel Committee on Banking Supervision
BCP	Core Principles
BLUE	Best Linear Unbiased Estimators
BOT	Bank of Thailand
BSP	Bangko Sentral ng Pilipinas
CAR	Cumulative Abnormal Return
CLRM	Classical Linear Regression Model
ERC	Earnings response coefficient
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNP	Gross National Product
ICT	Information and communication technology
IMF	International Monetary Fund
JSX	Jakarta Stock Exchange
KOSPI	Korea Composite Stock Price Index
MDAs	Master-Derivatives Agreements
NPA	Non-performing assets
NPL	Non-performing loan
OLS	Ordinary Least Squares
SET	Stock Exchange of Thailand
SUE	Standardize Unexpected Earnings



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CHAPTER ONE

BACKGROUND OF STUDY

Introduction

Financial institutions start with raising funds by accepting deposits and issuing financial instruments that promise to pay interest to surplus sectors. Then the financial institutions use these funds to lend to deficit sectors as loans to help in the economic growth of a country. This intermediate function of the financial institutions has been proven to be very effective to spur the growth of many economies. However, in the history of continuous development of the modern financial system, many problems and crisis occur that disrupt many economies and even cause the collapse of some.

Banks' Stock of East Asian Countries

Research on East Asian banks is important because they are the predominant source of finance for businesses in the private sector. Banks in this region experienced the banking crisis of 1997/1998, and bank restructuring programs continue in several of the selected East Asian countries. Indonesia, Malaysia, South Korea, Philippines and Thailand were the seriously effected by the banking financial crisis, while Hong Kong, Pakistan, Singapore, Sri Lanka and Taiwan were less affected. This paper develops on the ideas of an earlier paper titled "Abnormal returns of bank stocks and their factor-analyzed determinants" by Cheng and Ariff (2007). This study focuses on the information effect on



share prices, especially accounting earnings information for banks. It's a research on the usefulness of earnings and market-based security price. In this study, the research includes the theory of direction and magnitude effect and examines whether the Malaysia commercial banks' share returns are affected the changes in credit risk.

Investors' Valuation

Based on financial institutions management, some factors have been identified to influence the investors' valuation of banks' stock. The important factor in financial intermediation management is risk management. Financial risk management is the practice of creating economic value in a firm by using financial instruments to manage exposure to risk, particularly credit risk and market risk. Banks are evaluated using both market risk measures and accounting information. The appropriate measures for assessment depend on the purpose and the conditions within which it is applied. For example, if a well-diversified investor is considering adding a bank stock to his portfolio, the bank earnings announcement and risk management will be included under consideration for the portfolio planning. These influence of banking announcement on investor investment is written by Sweeney and Warga (1986) and Kliger and Kudryavtsev (2008). They study investors' perception on the evaluation which show investors will update their reference and influence their behavior according to the banks' earnings announcements.



Financial Risks

Several studies have been carried out on factors affecting banks' earnings since the role of banks is important and have an impact on the countries' economy. Banks provide a service as intermediaries of the capital and debt markets. They are responsible for transferring funds from investors to non-bank in need of those funds. Financial institutions generally fall under financial regulation from a government authority. Common types of financial institutions include banks, building societies, credit unions, stock brokerages, asset management firms, and similar businesses. In some countries such as Germany, banks are the primary owners of industrial corporations while in other countries such as the United States banks are prohibited from owning non-financial companies.

Banks lend money by giving advances to customers on current account, by providing installment loans, and by investing in marketable debt securities and other forms of lending. All commercial activities in the banking industry bear certain types of risks such as market risks, pricing risks and financial risks. Financial risks is the most important and influential risks which affect the banks' earnings and performances. Thus, this study examines the four main financial risk factors to assess the effect of risks on the earnings response in bank stocks.

The major financial risks identified are credit risk, liquidity risk, solvency risk and interest risk. Credit risk, also called default or asset quality risk, is the probability of



receiving cash flows from assets in the book as promised by customers. Liquidity risk, or funding risk, indicates the potential ability of a bank to fund its financial needs on a daily basis. Interest-rate risk refers to the potential negative effect on the net cash flows as well as other values of assets and liabilities resulting from unexpected interest-rate changes. Capital risk, also called solvency risk, is a function of the capital cushion a bank has to offer to protect its deposits and borrowers from declines in assets value. The better a bank's solvency, the better it is financially. When a bank is insolvent, it means that it is no longer operating and is undergoing bankruptcy.

The study on banking risks in Malaysia has been done by Cheng and Ariff (2007) and their paper investigate the issue further and extend it to other East Asian countries. This study will focus on banking industries in East Asian countries that experience great changes especially in Thailand, Korea, Indonesia, and Philippine.

Problem Statement

This paper shows that credit risk significantly affects the earnings response coefficient in Malaysia banks' stock. However, the influence of risk may be different for other East Asian countries. In other words, although the countries are under the same geographical area, they have diverse characteristics and dissimilar facts which affect the banks' stock earnings. It's interesting to examine what are the risk factors affecting the earnings response coefficient and its correlation with abnormal returns of bank shares in other East Asian countries. Four broad classes of financial risk in managing banks include credit



risk, liquidity risk and interest rate risk as well as capital risk. They are the main financial risk factors included to conduct the test on the relationship between the estimated financial risk factors and the earnings on banks' stock.

Meanwhile, the factors that is important and significant in influencing the stock earnings and economic condition reduces the public interest because of the change in earnings and risk bearing of individual. What are the facts and information to be included in the investors' portfolio update, perception and analysis of banks' stock? Financial risk factors and announcement information that affect the earning response coefficient in banks' stock is essential for investors in making a decision on long-term investment.

Objective of the Study

This study covers the commercial banks in East Asian Countries to test whether the result will be similar for these countries thus contributing to the field of finance and earnings. If the result of this study is not similar with previous papers in Malaysia, this study provides proof to show countries under the same geographical segmentation can have different characteristics in their banking industry. The target countries in this study are Thailand, Korea, Indonesia and Philippine which can be considered as developed and developing countries in East Asia.

This study uses previous literature on earnings response to find out whether the relevant financial information on banking has incremental information content beyond earnings.



Earnings response coefficient is a popular researchable title and it is a very important variable due to the role of earnings in finance, accounting and business. Any related information that has incremental information content beyond earnings should be analyzed and studied to investigate the magnitude and direction of the type of information on earnings. The type of information under this study is the main financial risk factors.

Furthermore, this study extends the earnings response query as a research on banks by measuring the influence of bank-related risk determinant characteristics for East Asian countries after experiencing the financial crises and the restructuring in their banking institutions after 1997. Finally, the results of the impact of the financial risk and the recovery ability in Malaysia are compared with the results of the East Asian countries after the financial crisis and bank restructuring.

Significant of the Study

This study contributes to several groups since the issue of earnings and risk is important in the field of accounting and Finance. All business has risk, whether it's a an insured risk with an insurance company or other alternative risk transfer mechanism, it's important to understand the types and amount of risk the individual is taking. Without that knowledge, the individual may be taking more than he or she realizes. With functional information provided, an individual can make informed business decisions to avoid pitfalls and maximize returns.



A financial analyst's job is to analyze and review actual and forecasted financial results and provide written and oral reports to the relevant parties regarding variances to budget and forecast. A quality financial evaluation on the actual and forecasted scenario has to be sensitive to the existing changes and any relevant facts which differentiate the financial result based on risk factors. Financial analysts have to maintain and develop risk base pricing by credit grades, besides developing new and enhancing existing internal financial tools and applications based on the estimated effective risks. If the estimated risk factors have influence over the earning response coefficient, it may provide significant information for financial analysts.

Furthermore, the determination of the estimated risk factors that has an impact on the earnings is able to assist bankers and creditor analysts to evaluate the financial risks of other parties'. Banking and credit analysts is involved in analyzing credit data to determine the degree of risk involved in extending credit financial information and making decisions to approve or deny the extension of credit within the credit authority limit. Since this study is able to conclude that different risk factor is significant for dissimilar countries, bankers will pay more attention on certain significant risk factors in the evaluation process to avoid unnecessary mistake and reduce the possible loss.

The other parties that benefited from the study will be investors which tend to assess the investment value of shares by looking at per share earnings, dividends, sales, cash flow and book value. They also look at company fundamentals such as growth record and prospects; the stock valuation level is affected at the time of a stock purchase for



long-term investment. Stock market valuations depend on investor sentiment such as the overall beliefs of the investing public, which are in turn based on company and general news. Investors work with the stock valuations and examine how worthwhile it is to invest in the shares; therefore, any estimated risk factors that provide evidence on change or abnormal earnings of certain banks as well as the stock price should be included in investors' evaluation.

Research Questions

In this paper, the focus is to investigate the relationship between the financial risk and the earnings response in bank stocks for specific East Asian countries which experience bank restructuring in the past few years. This study applies the relevant accounting and financial ratios into this research to banks and aims to extend the earnings response query by measuring the influence of bank-related risk determinant characteristics for banks affected by the financial crisis in East Asian countries, e.g. South Korea, Philippine, Thailand and Indonesia.

In the literature, many studies hypothesize that specific events occurring during a stock's holding period influence investors' perceptions and make them update the stock's price consideration and reference. Using investor's earnings forecasts, stock price data and bank's earnings announcements, some analysts document that countries or bank's specific experiences and earnings announcements indeed affect the investor's trading decision of

