UNIVERSITI PUTRA MALAYSIA

MARKET STRUCTURE AND BANK COMPETITION CONDITIONS IN FIVE ASIAN COUNTRIES

HAZLINA ABD KADIR

FEP 2013 18

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of Philosophy.

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Specially Dedicated to:

Muhammad Aiman Haiqal,

Muhammad Harith Iqbal,

Muhammad Aqmal Qayyum

and

Qeestina Qaisara

The love of my life.

ABSTRACT

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy.

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By

HAZLINA ABD KADIR

November 2013

Chair : Prof. Muzafar Shah Habibullah, PhD
Faculty : Faculty of Economics and Management

This study investigates the market structure of banking industry in five Asian countries from 1996–2009, using the most frequently applied measures of concentrations, the k-bank concentration ratio (CR_k) and the Herfindahl Hirschman Index (HHI). This thesis also evaluates the monopoly of banks over the fourteen years' period using the 'H-statistic', Panzar-Rosse approach. Panel data for commercial banks in Malaysia, Singapore, Thailand, Indonesia and the Philippines used in the study are extracted from the Bankscope database.

The k-concentration ratio showed Singapore as a highly concentrated market. Malaysia and Thailand were moderately concentrated market, moving to a less concentrated one. Banks in Indonesia operated under a less concentrated market. For a robust result, the Herfindahl Hirschman Index was carried out to confirm the concentration conditions in these five Asian banks. The Herfindahl Hirschman Index result showed Singapore and the Philippines had highly concentrated banks. Singapore, on the other hand, showed a constant concentration ratio throughout the period. The concentration condition for the Philippines, meanwhile, had deteriorated. For Thailand, the concentration conditions had moved from highly concentrated to moderately concentrate despite having an increase in total number of banks in the country throughout the period.

The Panzar-Rosse H-statistics suggested that banks in Singapore, Malaysia, Thailand, the Philippines and Indonesia were operating under monopolistic competition based on total interest income and total revenue as the dependent variables. In the long-run equilibrium, the Panzar-Rosse H-statistics suggested that Malaysia, Singapore, Thailand and the Philippines and Indonesia were operating under perfect competition.

The findings of this study highlight the importance of size, efficient risk management and liquidity in sustaining long run revenue and competition. The results suggest that the countries with many small banks have limited capabilities to tap the market and are at the disadvantage compared to those countries with large banks. In the context of the five Asian countries in this study, most of the banks were relatively small judging from the amount of total asset as the benchmark. In order to compete in the next era of globalization, an ongoing investment in technological aspects related to banking products and services should be one of the essential policies for these banks to prosper. Merger and acquisitions should also be encouraged to strengthen the banks' financial positions. The policy direction should also be directed towards enhancing the resiliency, productivity and efficiency, risk management and liquidity of the financial institutions with the ultimate target of intensifying the robustness and stability of the banking sector.

JEL Classification: G21; D24, L1, D40

- *Keywords*: Concentration; Market structure; Competition; Panzar-Rosse model; *k*-bank concentration ratio (CR_k) and Herfindahl–Hirschman Index (HHI)

ABSTRAK

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah.

STRUKTUR PASARAN DAN KEADAAN PERSAINGAN BANK DI LIMA NEGARA ASIA

Oleh

HAZLINA ABD KADIR

April 2014

Pengerusi : Prof. Muzafar Shah Habibullah, Phd
Fakulti : Fakulti Ekonomi dan Pengurusan

Kajian ini mengkaji struktur pasaran di lima industri perbankan dalam Asia dari tahun 1996 sehingga 2009 menggunakan kaedah yang selalu digunapakai iaitu nisbah kepekatan k-bank (CR_k) dan Indeks Herfindahl-Hirschman (HHI). Disamping itu, penilaian kuasa monopoli bank menggunakan 'H-statistik' oleh Panzar dan Rosse juga dilakukan untuk tempoh 14 tahun tersebut. Data panel untuk bank perdagangan di Malaysia, Singapura, Thailand, Indonesia dan Filippina digunakan dan diperolehi dari pengkalan data bernama Bankscope.

Keputusan kajian menunjukkan bahawa nisbah kepekatan k-bank Singapura adalah sangat tinggi. Keadaan perbankan di Thailand mempunyai tahap kepekatan yang separa dan semakin berkurangan. Bank-bank di Indonesia pula beroperasi dalam keadaan kurang kepekatan. Untuk keputusan yang lebih telus, analisa Indeks Herfindahl-Hirshman dilakukan. keputusan Indeks Herfindahl-Hirshman menunjukkan Singapura dan Filippina mempunyai kepekatan industri yang tinggi. Jika dibandingkan, Singapura mempunyai nisbah kepekatan yang konsisten sepanjang tempoh masa kajian. Namun untuk Filipina, keadaan semakin merosot dari tahun ke tahun. Untuk Thailand, ia bergerak dari kepekatan yang tinggi ke pertengahan walaupun jumlah bank bertambah sepanjang tempoh tersebut. Keputusan kajian juga mendapati bahawa Malaysia dan Indonesia mempunyai darjah kepekatan yang sederhana. Namun, darjah kepekatan ini adalah berkurangan dari masa ke semasa.

Keputusan ujian Panzar-Rosse H-Statistik menunjukkan bahawa bank di Singapura, Malaysia, Thailand , Filippina dan Indonesia beroperasi di bawah persaingan bermonopoli berdasarkan jumlah pendapatan feadah dan jumlah keuntungan sebagai pembolehubah bersandar. Namun untuk keseimbangan jangka panjang, Panzar-Rosse H-Statistik menyarankan bahawa Malaysia, Singapura, Thailand Filipina dan Indonesia beroperasi di bawah persaingan bermonopoli.

Hasil kajian ini menunjukkan kepentingan saiz, pengurusan risiko dan kecairan yang efisen dalam mengekalkan hasil jangka panjang pendapatan dan persaingan. Keputusan kajian ini juga menunjukkan bahawa negara-negara yang mempunyai banyak bank kecil mempunyai keupayaan terhad untuk meneroka pasaran dan di dalam keadaan tidak berdaya saing berbanding dengan bank yang besar dalam institusi yang ditubuhkan. Dalam konteks lima negara-negara Asia di dalam kajian ini, kebanyakan bank adalah agak kecil melihat kepada jumlah aset sebagai penanda aras. Pelan tindakan untuk mengorak langkah di masa hadapan termasuk pelaburan yang berterusan dalam aspek teknologi berkaitan dengan produk dan perkhidmatan perbankan harus menjadi salah satu daripada dasar penting untuk bersaing di dalam era globalisasi. Penggabungan dan pengambilalihan juga perlu digalakkan untuk mengukuhkan pentadbiran dan kedudukan kewangan bank-bank ini. Hala tuju dasar juga harus menjurus ke arah meningkatkan daya tahan, produktiviti dan kecekapan, pengurusan risiko dan kecairan institusi kewangan dengan sasaran utama menggiatkan kemantapan dan kestabilan sektor perbankan.

Klassifikasi JEL: G21; D24, L1, D40

• Kata Kunci: Kepekatan Pasaran struktur; Persaingan; Model Panzar-Rosse; Nisbah penumpuan k-bank (CRk) dan Indeks Herfindahl-Hirschman (HHI)

ACKNOWLEDGEMENT

Alhamdulillah, I praise Almighty Allah, the Most Merciful, for with his blessings, this study is made possible. I am thankful, grateful and blessed with a marvelous life, kind and supportive husband, energetic children and great friends around making this journey successful.

The completion of the thesis would never to be accomplished without the assistance of many special individuals. First and foremost, I would like to express my highest and deepest gratitude and appreciation to Professor Dr. Muzafar Shah Habibullah, the chairman of this thesis, for his guidance, thoughtful feedbacks and understanding throughout my study. I am indebted to him, my mentor, my teacher and my supervisor for both my master degree and my Ph.D.

I would also like to express my sincere appreciation to my fellow friends from Multimedia University, Zarehan Selamat, Hamsatulazura Hamzah, Norhazlin Ismail, Nahariah Jaffar, Shaista Wasiuzzaman, Mariati Norhashim and Hezlin Harris for the support through all these challenging years. Their help, support and encouragement made this study materialized. It was a fantastic journey of completing this study and at the same time very challenging to balance life with work, study and family all at once.

The appreciation also goes to my Universiti Putra Malaysia and Ph.D. colleagues, namely Dr. Baharom Abdul Hamid, Dr. Hirnissa Mohd. Tahir, Dr. Jaharudin Padli and Juliana Ibrahim for their support, assistance and input in the process of completing this thesis. Thank you to Aina Othman for her kind assistance in proofreading this writes up.

A special thank you too to Multimedia University for sponsoring parts of the tuition fees and approving my nine months study leave in 2010, one semester time off in October 2012.

Most importantly, I would like to thank my family for their love, understanding and unwavering support while pursuing this great journey. Thanks to my hardworking and patient parent, Abd. Kadir Samad and Hamidah Ahmad for the person I am now. Thank you to my husband, Mohamad Hisham Ismail and to my children, Muhammad Aiman Haiqal, Muhammad Harith Iqbal, Muhammad Aqmal Qayyum and Qeestina Qaisara for their love, sacrifice, utmost understanding and support, and providing me with the determination and courage to be at this stage.

Some names might have been inadvertently omitted, but it is by no means to undermine their contribution. Thank you all. May Allah reward you for your kindness.

APPROVAL

I certify that an Examination committee has met on 18 November 2013 to conduct the final examination of Hazlina Abd. Kadir on her Doctor of Philosophy thesis entitle "Market Structure and Bank Competition Conditions in Five Asian Countries" in accordance with Universities and College Act 1971 and the Constitution of the Universities Putra Malaysia [P.U. (A) 106] 15 March 1998. The committee recommends that the candidate be awarded the Doctor of Philosophy.

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This thesis submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of requirements for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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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, or is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institutions.

HAZLINA ABD KADIR
Date : April 2014

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INTRODUCTION

1.1 Background

Banks play a dominant role in the economic life of the nation. The condition and level of the economy is closely related to the soundness of its banking system. Bank borrowing, lending and related activities facilitate the process of production, distribution, exchange and consumption of wealth throughout the economy. In this way, bank become very effective partners in the process of economic development. Today modern banks are very important for the utilization of the resources of the country. The banks are mobilizing the savings of the people for the investment purposes. Banks are different from other types of undustries and are essential for each country's economy, since no growth can be achieved unless supply of savings are efficiently channeled into the demand of investment. If there would be no banks then a great portion of a capital of the country would remain idle. In this respect, the lack of efficient and full-fledged banking system has often been identified as a major weakness of the centrally planned economies. Loan facility provided by banks works as an incentive to the producer to increase the production. Meanwhile, other banking transactions such as the cheques, drafts bills of exchange and letters of credit are very important instruments of the banks for the customers as the banks collect these instruments drawn on banks in other cities or countries and proceeds according to the accounts of the customer's concerns. Therefore, reforming the banking sector in any country and creating a new culture of trust and confidence has been a crucial task in the process of transition to a market economy.

In the recent years, banks play a vital role, be it in a developed or underdeveloped economies. Modern banks are playing lots of new roles and making life of common consumer as well as business men easy. Modern banking institutions now offers multi investment products, various types of lending activities, brokerage, real estate, borrowing, advisory and many other functions in a very systematic manner. Via these activities, Via this role resources are evenly distributed in the economy.

Bank is also an essential contributor to the country's economic growth and well-being. Banks are leading taxpayers, progressive employers and major purchasers of goods and services as well as being good corporate citizens. For instance, Canada's banking industry is one of the highest taxed sectors in the country. Canada's six largest banks paid $8 billion in taxes to all levels of government in Canada in 2012.

Banks provide small businesses with products and services that range from accounts and merchant payment processing solutions to payroll and international trade services. In addition to that, banks also provide financing, as do a wide variety of alternative financing providers. Domestic and other banks provide approximately 67 per cent of small business financing, with other sources including credit unions and caisses populaires, finance companies, Portfolio manager, financial funds and insurance companies. Any financial turbluance, banks continued to provide financing to both consumers and businesses, including small businesses.

From social point of view, banks offers job opportunites for the citizens. For example, Canada's banks and their subsidiaries contribute significantly to employment and job creation, where 275,280 Canadians are employed by banks in Canada. The banking sector helps Canada grow, generating over $53 billion or 3.1 per cent of gross domestic product (GDP). In Bahamas, the banking sector contributes an estimated 15% of the country's Gross Domestic Product (GDP).

Most consumers in any country enjoy a wide choice of banking services and providers, as well as affordable and accessible services. As a result, they benefit from the high degree of competition and choice in the financial services marketplace. Competition isn't just among traditional deposit-taking institutions where there are domestic and foreign banks operating . Nowadays, Banks compete not only with each other, but also with a variety of other financial services providers offereing similar or complementary services offered by traditional banking.

It is well understood that monopolies tend to reduce an economy's overall social welfare. They charge higher prices and produce less than optimal amounts of goods and services, they stifle invention and innovation, and they distort resource allocation, all of which reduce capital accumulation and growth. This characterization of the negative aspects of a monopoly also applies to the banking sector.

Technological innovation in the banking industry can improve efficiencies. Efficiencies can enhance cash flows especially if coupled with an encouraging level of competition. The level of competition of an industry can affect cash flows; high level of competition may reduce the bank's business volume or reduce their service fees. As most bankers in Asia are faced with a more competitive environment, they have come to realize that new technologies will ultimately change the traditional banking business models. Some banks have acted by opting for the online bank services and mobile-phone banking.

Globalizations have resulted in policy makers relaxing more and more banking regulations. The lax in regulations has given financial institutions opportunity to capitalize on economies of scale. In this situation, some commercial banks are seen acquiring other commercial banks so that they can generate a higher volume of business which is supported by the respective country's infrastructure. By increasing the volume of services produced, the average cost of providing the services can be reduced. Relaxed regulation also helps to intensify the competition in the industry. While some commercial banks may benefit from stiff competition, other banks may lose their market share.

In the era of knowledge economy, the management skills of commercial banks have improved. Multi-skilled managers now are able to identify negative factors and revise the composition of the bank's asset and liabilities to capitalize on existing economic or regulatory conditions. Well-managed commercial banks have been seen to restructure their operations and use technology advancement in a manner that can reduce expenses. These managers can also capitalize on economies of scale by expanding specific types of businesses and by offering a diversified set of services that can accommodate specific customers.

1.2 Problem Statement

Fritzer (2004) defined concentration of banks as the ratio of a country's three largest bank's assets to the country's total banking sector assets. A highly concentrated banking sector may lead to lack of competition whereas fragmented banking markets may suffer from undercapitalized banks. Fragmented banking markets are thus at a higher risk to suffer from financial market shocks. However, both high concentrated and overly-fragmented banking sectors may have negative effects on efficiency and growth as well as financial stability.

A highly concentrated banking sector is deemed important for any economy as it may enhance the economic growth. Highly concentrated banking sector has stronger resistance to financial crises as large banks in the sector tend to spread their activities geographically (Fritzer, 2004). Banking sector concentration can also be expected to have a positive effect on bank lending. Due to its level of concentration, the sector is able to take advantage of economies of scale especially in the production of banking services by consolidating the output of different banks. This in return, may lead to banks having higher market share with a superior cost structure.

Concentration ratios, which are based on the fraction of the banking market served by the largest four or five banks in the country, are often used as a proxy to measure competitiveness. Table 1.1 provides an approximate measure of the concentration ratios - for the degree of competition within various countries' banking sectors in 1998 as reported by Bank for International Settlements (1999). The data generally show that, on a market-wide scale, the banks do have limited market power. The situation may be different in particular market segments or local areas. Large banks in small countries, such as Singapore and Philippine, do command substantial market shares, although in the case of some international bank, domestic business is less than half of their total business in the specific densely populated areas.

Table 1.1.1. Concentration in the world banking industry (percent) in 1998

Argentina	38
Australia	69
Brazil	52
China	70
Chec Republic	66
Chile	47
Columbia	53
Germany	17
Hong Kong	29
Hungary	57
India	42
Israel	87
Japan	22
Korea	50
Malaysia	40
Mexico	68
Peru	67
Philippine	60
Poland	43
Russia	42
Saudi Arabia	66
Singapore	39
South Africa	81
Thailand	62
United States	35
Venezuela	56

Notes: Concentrations are the five largest banks' assets as percentage of total banking system assets, except for China, which is the four largest banks' asset. Poland rose to 51 percent on January 1, 1999. Source: Bank for International Settlements (1999).

1.2.1 Competition and Concentration: Why it matters?

According to Staikourus (2010), the degree of banking competition and its association with market concentration, seem to contrast each other. If we accept the theoretical proposition , then, a more concentrated market implies a lower degree of competition due to undesirable exercise of market power by banks. Based on other theory, for instance, the contestability theory[1], it highlights that under particular conditions, competition and concentration can coexist. The theory of contestability (Baumol, 1982;

Baumol et.al., 1982) assumes that firms can enter or leave rapidly any market without losing their capital and that potential competitors possess the same cost functions as firms that already serve in the market. These characteristics imply that in the contestable market the threat of potential entry constrains firms to price their products competitively. If these conditions are met, then external conditions will dominate internal conditions and guarantee non-collusive behaviour within that market. Moreover, others, like Jansen and De Haan (2003), suggest that there is no connection between concentration and market competition.

Among other reasons why the market conditions in the banking industry deserve particular attention include due to the impact of soundness and stability of the financial sector may in various ways which may influenced the degree of competition and concentration (Yeyati and Micco, 2003). Competition may have a deleterious impact on stability if it causes banks' charter value to drop, thus reducing the incentives for prudent risk-taking behavior if we look from from a theoretical point of view. According to this view, the promise of extraordinary profits associated with the presence of market power reduces the agency problem of limited liability banks (namely, their tendency to gamble). Stiffer competition, instead, could lead to more aggressive risk taking, as documented in some empirical studies (Keeley, 1990; Cerasi and Daltung, 2000).

On the other hand, a more concentrated system, in as much as it implies the presence of a few relatively large banks, is more likely to display a "too big to fail" problem by which large banks increase their risk exposure anticipating the unwillingness of the regulator to let the bank fail in the event of insolvency problems (Hughes and Mester, 1998).

Another reported reason for bank failures is increased competition. By studying the level of competition in the banking industry, it can shed some light, if any, on the sign of bank poor performances. Deregulation has made the banking industry more competitive. When banks offer more competitive rates on deposits and loans, the result is a reduced net interest margin, and possibly failure, if the margin is not large enough to cover other noninterest expenses and loan losses. A review by The Office of the Controller of the Currency in the United States found that 81 percent out of the 162 failed banks since 1979 were due to not having a loan policy or did not closely follow their loan policy. In addition, 59 percent of these banks did not use an adequate system for identifying problem loans. From this, it can be deducted that banks can fail not only due to the economic environment but also due to their inadequate management.

Another reason why studying competition conditions in a banking industry of a particular country is deem important because of its relationship with the effectiveness of monetary policy. Given the dominant role of banks in most countries, competition may have an impact on the likely effectiveness of monetary policy. A more monopolistic banking sector is able to obtain larger interest rate margins. Monopolistic pricing by banks will not transmit changes of central bank interest rates as fully as pure competitive pricing will do. As discussed by Lensink and Sterken, 2002, this probably hampers monetary policy at least to some extent. Moreover, Kashyap and Stein (1997) and Cecchetti (1999) argued that the banking system's concentration and health are essential to the analysis of the effectiveness of monetary policy. Smaller banks are more likely to reduce lending in case of a monetary contraction, due to their weaker balance sheet structure and poorer ability to attract reasonably priced external funds.

A competitive banking market may result in more benefits to the society as a whole, such as lower prices and higher quality of financial products (Boyd and Nicolo, 2005), but on the other hand its influennce on the financial stability is not conclusive according tothe literature. There are two main rival theories on this matter. Some papers find that competition, in fact, enhances bank risk-taking behavior, since it pressures banks to operate with a minimum capital buffer (Hellman et al., 2000; Allen and Gale, 2004). Others defend the contrary by stating that crises are less likely to happen in competitive banking systems (Beck et al., 2006; Boyd and Nicolo, 2005).

Allen and Gale (2004) also affirm that this increased risk may be due to a higher bank exposure to contagion in competitive markets. An adverse shock can cause a bank to go bankrupt and, thus, it may trigger a chain reaction where all banks that were exposed to the first bank also go bankrupt and so forth. Since under perfect competition these banks are price-takers, and therefore small compared to the whole market, no bank will have an incentive to provide liquidity to the troubled bank, causing the contagion to spread. In addition, there is the matter of adverse selection is worsened in a competitive market, i.e. in the presence of many banks in the market (Broecker, 1990; Nakamura, 1993; Sha er, 1998). The chance of a poor quality borrower to apply for a loan at any bank is an increasing function of the number of banks, decreasing the quality of loan portfolio of the entire banking market.

Boyd and Nicolo (2005) show that the higher interest rates charged by banks in a less competitive market may enhance the risk-taking behavior of borrowers and, therefore, increase the probability of a systemic risk

The landscape of Asian banking has shifted rapidly in the last decade and it will continue to do so. Asian countries provide growth opportunities that are unlikely to be matched by maturing banking markets around the world (Bowers et al., 2003). Aside from Singapore, Korea and Japan, most Asian economies are marked by a wide disparity of income. In many of them, the gap is growing, resulting the formation of narrow segment of affluent customers who are the main drivers of the new banking opportunities.

In the late 1990s, most countries in Asia restricted banks activities to traditional deposit takings, payment services and lending. Today, other non-banking institutions, including mutual funds institutions, insurance companies, securities firms and a variety of financial products can all be bought from the same institutions or through the same channel. Restrictions on foreign players entering the market and allying with local players are slowly being lifted. These trends are fueling one of the revenue growth opportunities in banking globally. Across the 11 Asian markets, consumer loans grew at an average of 23 percent a year in local currency terms from 1995 to 2001.

With exception to Malaysia and China, all of the Asian region's banking market is now technically open to foreign majority ownership. Both cross-border merger and acquisition and product alliances have become common. International merger and acquisition activities have increased eight times from $1.6 billion in 1997 to $12.5 billion in 2001. Malaysia, Indonesia, Thailand and the Philippines offer a marketplace that is relatively appealing to foreign ownership. There are a number of attractive consumer segments which are largely untapped in these countries.

Sound banking is a necessity to solid fiscal and monetary policies that have been the focus of macroeconomist in the pasts. Understanding and monitoring the strength of the banking system, the quality of bank supervision, the exchange rate exposure of the financial sector and the adequacy of the legal and financial infrastructure may help ward off international financial crisis. An important implication of the relationship between financial fragility and international crisis is that financial liberalization and the development of sound financial institutions and regulatory structure should be carefully monitored. The Asian financial crisis in 1997 showed clearly that international financial stability is threaten when both domestic and foreign institutions rely on lender of last resort promises and inadequate supervision. These experiences suggest that conventional forms of bank supervision and management may not be able to hinder bank failures in all situations.

In late 1997, Southeast Asia's economies experienced meltdown. Thailand's currency, the Baht, collapsed first, followed by the Indonesian Rupiah. Malaysia and the Philippines were less affected by the financial turmoil, but their economies were put to a halt. These two countries have since bounced back into growth but their recovery has been modest and fragile. The governments of the countries affected have restructured their banking system and economies since the crisis varies widely. Central Bank of Malaysia forced 58 domestic institutions to merge into 10 groups of bank in 1999 by 2001. Meanwhile, Indonesia closed more than 80 institutions following the episode of 1997 financial crisis. Malaysia and Indonesia created their own asset management companies, to take over the defaulted loans from the banks, restructure them and sell them off. Some of the banks were recapitalized.

Driven by telecommunication advances, easing of regulatory barriers, and global economic integration, foreign banks have dramatically increased their cross-border lending to, and investment in, developing countries. The presence of foreign banks today constitutes an important structural feature of the banking industry in many developing countries and Asian countries are also having this trend.

A financial institution is expected to operate in a manner that will maximize the value of its owners. The value of financial institutions is closely tied to its growth, profitability, structure of capital and risk management. In the early 1970s, commercial banks served as the key lenders of short-term corporate funds, while securities firms helped corporations obtain long-term funds. Other institutions, meanwhile, specialized in mortgages or insurance. During this period, there was limited the competition between the financial institutions as these institutions had their own niche products. For the consumers, they have very little competition in obtaining funds during those decades.

In the banking world today, financial institutions offer a greater variety of products and services in order to diversify their business. Not only these institutions offer loans such as term deposits but they also offer other banking products related to risk management, investments and retirement plans. As a result, their services overlap and competition between the institutions increased.

The advancement in technology has also changed the banking environment. The internet has promoted more intense competition among financial institutions. Institutions offering online banking services can reduce costs, increase efficiency and intensify the banking competition. The use of internet also has made it possible for non-banking institutions to compete with securities firms by conducting security offerings online and selling directly to investors. Internet has, indirectly, forced banking institutions to offer more competitive services to the cunsumers.

Regardless of the level or the competitiveness of the environment, a commercial bank's performance needs to be monitored closely. A commercial bank is monitored for various reasons. From an early detection of slow growth in their performance, the bank regulators can identify banks that are experiencing problems so that they could be remedied. In addition, commercial banks also evaluate their own performance over time to determine the outcomes of previous management decision so that changes can be made where appropriate. In the Asian region, almost all countries are affected during the late 1997 financial crisis. Some banks in Indonesia and Thailand had to be closed, unable to stand the financial turmoil. Thus, assessing the performance of commercial banks is important. Without consistent monitoring, existing problems may go unnoticed and may cripple the institution's growth in the future. The scope of performance measurement varies and can be from the profit, productivity, efficiency, market power as well as the level of the institution's competitiveness.

Competition in the banking sector is an important factor as as it can affect the efficient management of banks (Berger and Hannan, 1998); competition allows the access of firms to external financing (Beck et al., 2004); competition creates the stability of the financial system (Allen and Gale, 2004); and competition can foster economic growth (Cetorelli and Gamberra, 2001, and Claessens and Laeven, 2005). From a social point of view, the existence of market power implies a net loss of social welfare.

Allen and Gale (2004) have shown that perfect competition leads to efficiency. If financial markets are complete and contracts between intermediaries and their customers are comprehensive then the allocation is also efficient. In this case, competition is consistent with financial stability. If financial markets are complete but contracts are not comprehensive, the relationship between competition and financial stability differ. A deviation from competition may increase financial stability but is likely to reduce welfare. Since competition is generally viewed as being desirable because it leads to allocational efficiency, however, this perceived trade-off lead to calls for increased regulation of the banking sector to ensure the coexistence of competition and financial stability.

It has been estimated that increases in foreign bank entry increase competition and, therefore, act to compel domestic banks to operate more efficiently (Terrel, 1986; Bhattacharaya, 1993; McFadden, 1994; Levine, 1996; Kroszner, 1998; Claessens and Jansen, 2000; Claessens et al., 2001).

1.3 Objectives of the Study

This study seeks to evaluate the degree of competition in the Asian banking sector. This study also aims to test the market power of five Asian banking sectors using the concentration ratio and Herfindahl Hirschman Index. It will estimate the competitive level for Malaysian, Indonesian, Thailand, the Philippines and Singaporean banks.

This study will also review the changes in the competitive structure in the five Asian banking markets and will measure the current level of market contestability that may have been facilitated by the ongoing financial liberalization and deregulation process. The study will analyze whether competition yields significant benefits in terms of greater product sophistication and cost reduction. The most common and popular competition assessment will be used which is the Panzar-Rosse model.

Specific objectives of this study are:

i. To assess the k-concentration ratio conditions in five countries namely Malaysia, Thailand, Singapore, Indonesia and the Philippines.
ii. To analyze the market power conditions of Asian banking industries using the Herfindahl-Hirschman Index.
iii. To examine the competition conditions and their determinants of the banking industries in Malaysia, Thailand, Singapore, Indonesia and the Philippines, specifically using the Panzar-Rosse method.

1.4 Significance of the Study

Performance measurements are used by bank regulators to identify banks that are experiencing severe problems so that they can be remedied; for the shareholders to determine whether they should buy or sell the banks' stocks and for investment analysts to advise prospective investors on investment possibilities. The banks themselves use performance measurements to evaluate their performance over time to determine the outcome of previous management decisions allowing them to make appropriate adjustments. Without persistent performance monitoring, problems will remain unnoticed and may lead to financial downfall in the future.

A strong consensus has emerged in the last decade that well functioning financial intermediaries have a significant impact on economic growth. The importance of this financial sector role has received much attention in the recent literature on economic growth. Goldsmith (1969), for example, found a positive relationship between economic growth and financial development. While some of these relationships between competition and banking system performance and stability have been analyzed in the theoretical literature, empirical research on the issue of competition is still minimal.

Recently, the traditional view that high concentration of business activity in the hands of a few usually results in monopolistic behavior has been challenged by economists. These economists have shown that, if a market is contestable (with low entry and exit barriers), intense competition is possible even with few competitors or high concentration. Some observers believe that recent regulatory and technological changes have made local banking markets more contestable. Others argue that meaningful barriers to competition still exist and that substantial increases in concentration should be prevented.

Other rationale underlying the awakening of competition analyses in banking economics have to do with the safety and soundness of financial systems, as an adequate degree of competition and concentration is supposed to safeguard financial stability. Indeed, it has become a great interest among central bank regulators and supervisors, who are in need of devices for monitoring the evolution of banking competition

Banks play a prominent role in the allocation of economic resources. In addition, they exert a fundamental influence on asset transformation, provision of liquidity insurance and access to payment services, and thereby, are a key to economic growth and development. In this context, the need for reliable analytical instruments devoted to the measurement of the level of competition prevailing in banking markets appears to be broadly justified.

Despite the great number of investigations devoted to the topic, it should be highlighted that evidence is still rather mixed. The bulk of empirical studies report the existence of monopolistic competition for every single country under consideration albeit to varying degrees. To date, studies of competitive conditions especially in the developed economies and banking market are voluminous. Yet, there have been relatively scant studies conducted for the developing countries. Hence, this study is conducted as to fill the gap and extend the previous study on bank performance in Asian countries (Abd.

Kadir et al., 2005; Abd. Kadir et al. , 2010; Khatib and Matthews, 2000; Abdul Majid and Sufian, 2007). This empirical result will be timely and helpful for policymakers and the bank's top management to better understand how their decisions affect both market behavior and the performances of financial institutions under their supervision. The results obtained may assist the banking industry in its effort to provide the required strategic response to maintain competitiveness and profitability.

1.5 Organization of the thesis

This thesis will be organized into six chapters. Chapter one is the introduction of the thesis. Chapter two to five are the theoretical framework, literature review, methodology and findings and analysis. The final chapter is the recommendation and conclusion.

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