FINANCIAL REFORMS AND BANK COMPETITION AMONG EMERGING ASIAN COUNTRIES

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ABSTRACT
Asian economies have travelled a long journey of introduction of their financial reforms in the form of interest rate deregulation, credit expansion, enhanced competition, etc. In the recent past the coining of term "too-big-to-fail" has prompted the policymakers to revisit the role of state in the banking industry. In this environment, the role of diversified portfolio of banking structure is widely acknowledged. It puts forth a scope to inquiry about the level of competition in the banking industry for leading growth pole of the World. The present study is an attempt to explore the inter-temporal behavior of competition in emerging Asian economies particularly after financial reforms period. In terms of share of top banks in total assets of banking industry, it is found that Bangladesh and India are having lesser concentration, whereas most of the select Asian economies have been observed for highly concentrated banking systems. As per the Lerner index, enhanced bank competition has been noticed for Malaysia, Indonesia, Pakistan, Philippines, Singapore and Thailand. The figures for Boone indicators suggests for higher competitive banking structure in Bangladesh, India, Singapore and Sri Lanka and lower in China and Malaysia. Hong Kong and Korean banking industries are marked with the presence of monopoly power.

Keywords: Financial Reforms, Bank, Asian Countries.

I. INTRODUCTION
In the economics literature, journey from command-based economy to market-based economy has provided meaningful experiences to the price discovery mechanism. In this direction academicians have mainly focused on understanding the dynamics of markets for smoothening functions of economic agents. In the due course competition among economic agents has gained a prominent place for adjusting the market anomalies and making the market-based system more efficient. However, the debate moves on both sides as on the one hand higher competition leads to efficiency in the system, but on the other hand high efficient firms may take the advantage of market monopoly in the system. In particular the thesis of competition-efficiency prompted the introduction of economic reforms in general and financial sector in particular. The externalities stemming from an increase in bank competition remain an open question and the occurrence of banking crises in both developing and

developed countries over the last three decades has casted doubts on the role of competition in banking.

The Asian banks have performed very well in the recent past decade and have been resilient to the severe global financial crisis of 2007-08 and Eurozone cirsis. The handling of problem of asymmetry of information and moral hazard may be observed with the asset quality of Asian banks. It was pointed out that Asian banks have been able to reduce the non-performing loans substantially for their past decade. The partial steps in the form of limiting the exposure of banks for credit are highly appreciated. Most emerging Asian countries have restricted credit exposure to a single borrower (10 to 25 percent of banks' capital) and groups of borrowers (40 to 50 percent of capital in several countries), and prohibited lending to bank shareholders (for instance, Malaysia and Thailand). Several countries have also restricted interconnected subsidiary lending or investment within a banking group and adopted rules limiting banks' exposure to high-risk businesses. For instance, according to survey data up to 2005, banks in Korea were not allowed to invest beyond 60 percent of their capital in stocks and volatile bond portfolios (excluding government securities); in the Philippines banks' exposure to real estate was limited to 20 percent of total loans; and in India aggregate exposure of banks to capital market is restricted to 40 percent of their net worth.[1] Very recently, the financial systems of Asia have been characterized by sizable non-banking financial firms, relatively stable capital flows, conservative regulatory frameworks, some macro-prudential policies, relatively bank-dominant, with smaller bond markets and modest role for securitization, derivative products, low degrees of regional financial integration in portfolio investment, limited regulatory capacity to address pro-cyclicality, exposure to activities of large global financial firms, growing non-bank financial activities, rising financial complexity over time, etc.[2] However the challenges also exist in the form of higher operating cost and net interest rate margins of Asian banks. Also, the implicit guarantee from government masks weak "stand-alone" ratings (Mohanty, 2010).

Amid the incidence of existence of moral hazard problem among banks where the too-big-to-fail hypothesis may be utilized by largest banks, it necessitates the country to have a diversified portfolio of banking structure. The recent past experiences of global financial crisis of 2007-08 is best example for highlighting the asymmetry of information and moral hazard problem in banking system. It puts forth a scope to inquiry about the level of competition stemmed from the

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1 M S Mohanty and Philip Turner (June 2010). Banks and financial intermediation in emerging Asia: reforms and new risk, BIS Working Paper No. 313. Bank for International Settlements.

2 Jae Ha Park. 22-24 May 2013. Financial Regulatory Reforms After GFC: Analysis from Asian Perspectives. Asian Development Bank. Regional 'Think 20' Seminar The G20 Leaders Process Five Years On: An Assessment From an Asian Perspectives.

introduction of key financial sector reforms in terms of deregulation of interest rate, allowing active participation of various economic players (means financial institutions in particular), etc. The emerging Asian economies have travelled almost two decades of launching of their economic and financial sector reforms. With so long period it can be apprehended that the market-based system has shown its greater presence for addressing the existing phenomenon. The present study is an attempt to explore the inter-temporal behavior of competition in emerging Asian economies particularly after financial reforms period. The assessment of competition may guide in multifold ways i.e. designing further liberalization policies, customers' welfare, new entry norms, risk management, etc. The present study also aims to explore the competitive policies pursued by Asian countries for their banking systems.

II. REVIEW OF LITERATURE

The notion of competition caught attention due to its bearing on efficiency which ultimately results to welfare in the system. Banking competition has also attained the same spirit in the financial system. According to Claessens and Klingebiel (2001), the competitive banking system can improve the distribution of consumer credit, thereby enhancing the corporate sector's access to financing mitigating the risks of financial crises. The banking sector also aims to channelize the resources to most productive and efficient projects, and thus contributes to future growth. The contribution made by a high degree of competition and efficiency can create a greater financial stability, product innovation, and access by households and firms to financial services (Hauner and Peiris, 2005). However, the competition-efficiency hypothesis has counter argument as well. Influential 'charter value hypothesis' asserts that an overly competitive banking sector will be prone to instability.

In an empirical study for Asia, it is pointed out that a higher degree of market power in banking industry is associated with higher bank capital ratios, higher risk taking, but also higher bank insolvency risk. Hence, although banks in less competitive markets hold more capital, the levels of capitalization are not high enough to offset the impact on default risk of higher risk taking. Furthermore, it was also shown that during crisis periods, specifically the 1997 Asian financial crisis that has directly affected Asian banks, higher market power has relatively stabilizing effect.[3] Anzoategui et. al (2010) compared the bank competition among different regions of World on the basis of H-statistics and Lerner indexes, and found that competition in Middle East and North Africa (MENA) is lower than in most other regions of World. And it has not improved significantly over time. The worse credit information environment and less contestability in the

3 Wahyoe Soedarmono, Fouad Machrouh, Amine Tarazi (2013), Bank competition, crisis and risk-taking: Evidence from emerging markets in Asia, Journal of International Financial Markets Institutions and Money, 23, pp. 196-221.

region have been attributed as the main reasons for differences in competition across countries. More recently, Fungacova et al (2010) examined market power in Russian banking between 2001 and 2007 and found modest levels of competition improvement over the period. The estimates of Lerner index are similar to those found for more developed banking systems. Clerides et al (2013) estimated the degree of competition in the banking sectors of 148 countries worldwide over the period 1997-2010 through different indices such as Lerner (1934), Koetter, Kolari and Spierdijk (2012) and Boone (2008a). It is found that on average the competitive conditions in banking sector have deteriorated during the period 1997-2006. This trend reverses until 2008, while in 2009 and 2010 market power again increases.[4] Mazid and Sufian (2007) analyzed the competition in Malaysian Islamic banking industry using Panzar-Rosse H-statistic (PRH). It is highlighted that the level of concentration has reduced over the period. Stavarek and Repkova (2011) assessed the bank competition in Czech banking industry for the period 2001-09. It was mentioned that there is a monopolistic competition in the banking system for the full sample period. However, prior to join the European Union, the banking system performed in the perfectly competitive environment. For India, Bhatacharya and Das (2003) highlighted that there has been significant change in the levels of concentrations in early 1990s and the level of competition has remained intact even in the spate of mergers in late 1990s.

III. METHODOLOGY

In the existing literature, different types of methods have been carried out for measuring market power starting from structural approaches (structure conduct performance i.e. relating the concentration level with pricing policies and performance) to non-structural approaches.[5] The so-called structure-conduct-performance paradigm assumes that there is a stable, causal relationship between the structure of the banking industry, firm conduct, and performance. According to this approach, banking concentration can be approximated by the concentration ratio—the share of assets held by the k largest banks (typically three or five) in a given economy—or the Herfindahl-Hirschman index (HHI), the sum of the squared market share of each bank in the system. However, concentration measures were challenged on the basis of not giving the exact measurement of competition in the presence of market contestability. The behavior of banks in contestable markets is determined by threat of entry and exit. Banks are pressured to behave competitively in an industry with low entry

4 Sofronis Clerides, Manthos D. Delis, Sotirios Kokas (2013). A new data set on bank competition, working paper 08-2013, University of Cyprus.

5 Barbara Casu & Claudia Girardone (2006). Bank Competition, Concentration and Efficiency in the Single European Market. The Manchester School.- Vol. 74, 4, p. 441-468

restrictions on new banks and easy exit conditions for unprofitable institutions even if the market is concentrated.

The limitation of concentration measures invoked the existence of other best measures such as Panzar-Rose H-statistic (PRH), the Lerner index, and the so-called Boone indicator. The Lerner index, is defined as the difference between output prices and marginal costs (relative to prices). Prices are calculated as total bank revenue over assets, whereas marginal costs are obtained from an estimated translog cost function with respect to output. Higher values of the Lerner index signal less bank competition. The Boone indicator measures the effect of efficiency on performance in terms of profits. It is calculated as the elasticity of profits to marginal costs. To calculate this elasticity, the log of a measure of profits (such as return on assets) is regressed against a log measure of marginal costs. The elasticity is captured by the coefficient on log marginal costs, which are typically calculated from the first derivative of a translog cost function. The main idea of the Boone indicator is that more-efficient banks achieve higher profits. The more negative the Boone indicator is, the higher the level of competition is in the market as the effect of reallocation is stronger.6 Schaeck and Cihák (2010) note that Boone indicator has a number of appealing qualities compared with other indicators such as Panzer and Rose (1987) and Lerner index. The present study utilizes the conventional as well as recent developed methods for measurement of competition in emerging Asian banking systems. The lead indicators include- concentration measures, Lerner index and Boone indicators. The study is based on secondary data and sample period ranges from 1998 to 2011. This period may be classified for best as well as challenging time for the emerging economies. Best can be used as an outcome of enhanced growth for this decade but worst is classified for happening of two economic shocks in the same period. The emerging Asian economies are classified as: newly industrialized economies (NIEs) - Korea, Taiwan Province of China, Hong Kong and Singapore; Developing Asia - China and India; ASEAN-5 - Indonesia, Thailand, Philippines, Malaysia, Vietnam and other developing economies - Pakistan and Bangladesh.7 To make things comparable and in view of availability of data, the present study has taken the sample of emerging economies- Bangladesh, China, Hong Kong, India, Indonesia, South Korea, Malaysia, Pakistan, Philippines, Singapore, Sri-Lanka and Thailand.

IV. ASIAN FINANCIAL REFORMS

The journey of embarking financial sector reforms for Asian economies has begun in early 1990s amidst the growing demand of financial services due to their movement towards emerging economies. As a part of policy reforms,

6 The World Bank. Global Financial Development Report: Financial Inclusion 2014, World Bank.

7 World Economic Outlook, (October 2009), International Monetary Fund, p. 74.

enhancing competition has been the core agenda among academicians and policy makers. Allowing the foreign banks in the financial system was the major step towards add on to the existing competition level of banks. The literature pronounces that this policy action has increased competition and efficiency in the banking system of Asia. But with the occurrence of Asian financial crisis, Asian countries have pursued the policy of recapitalization and consolidations through injecting capital and merging with private banks or selling to the private banks, respectively establishing financial holding companies, etc. as active strategies in late 1990s just to regain the functioning of banking sector in the country.8 Between 1999 and 2004, many countries closed their weaker banks or merged their banking institutions or privatized them. Between 2000 and 2004 Indonesia had sold 15 banks (accounting for 70 percent of total banking assets) in the equity market. For the same period there were five cases of mergers and acquisitions in Korea, 9 in Malaysia and 15 in the Philippines. In India, a large number of banks were divested in equity market under majority government ownership and China sold shares of 14 joint stock companies to foreign investors (Mihaljek, 2006).

With the revival of Asian economies from financial crisis they had practiced the key master-plans for financial sector reforms. These included Aristektur Perbanken Indonesia (2004), Capital Market Master Plan (2005) in Indonesia, Financial Sector Master-plan (2001) in Malaysia, Financial Sector Master Plan (2004), Capital Market Master Plan (2006), Insurance Master Plan (2006) in Thailand and Narasimham Committee Report (1998), Road Map for Presence of Foreign Banks (2005) in India. These master-plans were tuned to the promotion of greater competition of financial sector while ensuring the robustness of individual banks and financial system. As a part of master-plans, bank licensing got key attention in Thailand and India. Branch authorization, financial product authorization and information disclosure, hold the key position for financial sector reforms in Malaysia and Thailand. Bank mergers and acquisitions were well conceived in Indonesia and India. Financial conglomerate supervision has been the focus agenda for Indonesia, Malaysia, Thailand and India. Other issues for financial sector reforms under master-plans have remained including the Basel norms, prompt corrective actions, ATM network connection, consumer protection, etc.9

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8 The processes of mergers were carried out through incentivizing by way of tax concessions, selection of 10 anchor banks to lead the consolidation of smaller institutions from 54 groups into large, financially viable groups. However, the mergers of banks and bank consolidation had pains of retrenchment of employees or job loss due to shutting down of various bank branches. But its justification depends on the relative cost of loss of deposits compared to loss of job cut. It was argued that larger banks have the ability to exploit the advantages of technology and economies of scale, but even this argument is confronted with the hypothesis of too-big-to-fail.

9 Mamiko Yokoi-Arai & Takeshi Kawana (2007). Competition Policy in the Banking Sector of Asia, discussion paper series, November 2007, Financial Research and Training Centre, Financial Services Agency.

A. Financial Reforms in Newly Industrialized Economies of Asia

Chinese financial system had got confronted on the ground of pervasive government control and interference, and mismanagement by financial institutions. These include entry approval, ownership control, government guarantee for the liabilities of banks and insurance companies, etc. Until 1978, there was one single bank, People's Bank of China, and then along with its economic reforms, the Chinese government authorized four state-owned commercial banks between 1979 and 1984 with limited competition among them.10 China carried out its massive financial sector reforms in late 1990s (1997) in the form of centralizing government control of large banks, insurance companies and stock exchanges, forcing urban credit cooperatives to merge, abolishing loan quotas, establishing asset management companies to deal with non-performing loans, separating of banking and non-banking services, etc.11

Hong Kong and Singapore have experienced a cautious path towards the banking sector competition. In both the countries, most of local banks were started as family banks and found running by their controlling shareholders. But gradually these economies welcomed foreign entrants in the banking sphere while protecting the local banks through various measures. With the expansion of the economy in later 1970s, Hong Kong felt the need of developed financial system to cater the growing demand of credit. For the purpose, financial sector reforms were put in place in mid of 1980s. These reforms were targeted to deregulate the interest rate, creating a healthy competition among private players, effective monitoring, etc. For financial sector, Hong Kong had the ambitious plan to become the second largest financial centre after Tokyo in the region. The severe competition from Singapore and increasing pressure from international banks forced the economy to ease the condition of licensed banks. It led to drastic increase in the number of foreign licensed banks in the city. Singapore had provided regulatory and tax treatment for commercial banks. Though Singapore embarked financial sector reforms way back in 1960s, but proactively implemented significant reforms from 1998 onwards. These reforms included opening financial industry to generate foreign competition, banking regulatory and supervisory practices closer in line with the international best practices, among others.

The banking system in Korea had been regulated by strict administrative direct control like interest rates, licensing for new entrants etc. But in the wake of Asian financial crisis, authorities in Korea have also advocated bank mergers on

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10 Kang H. Park (April 18, 2012). Concentration and Competition in Commercial Banking: How does China differ from South Korea?, Submitted for the KEA-KAEA Conference

11 Xinghai Fang (2005). Restructuring the micro-foundation of China's financial sector. In Ed. Financial Sector Reforms in China by Yasheng Huang, Tony Saich, And Edward Steinfeld, Harvard University Asia Center, Cambridge, Massachusetts

the grounds that domestic banks had to be large enough to compete effectively with foreign banks, especially in the domestic market. The Korean government and the Korea Deposit Insurance Corporation at the outset injected large amounts of public funds into the banking system. Banks with a capital adequacy ratio below the required 8 percent had to sell their NPLs to a government-owned asset management company at a significant discount and accept government equity, after writing down their shareholders equity to near zero. In the direction of foreign participation, the government sold its majority stake in Korea First Bank to Newbridge Capital, a US investment fund in December 1999.

B. Financial Reforms in Select ASEAN

Indonesia nationalised four banks in 1998 and seven banks in 1999, adding to the existing seven state-owned banks, all of which were taken over by the Indonesian Bank Restructuring Agency (IBRA), along with 67 private banks that were closed during 1997-2000. Public capital injections into private banks, which form part of the bank recapitalisation programme introduced in 1999, resulted in further de-facto large-scale nationalisations. Owners who wanted to keep managing these banks had to inject about 20% of new capital requirements after writing down their doubtful and bad loans, and were given the first right to buy back government shares within three years.

Malaysia had followed a gradual approach in its financial sector by completely liberalizing interest rates in 1970s. The market determined interest rate mechanism was abolished in 1985 to mitigate the world economic recession impact on Malaysia, but it was reintroduced in 1991. The adoption of liberalization policy seem to have worked well in the early stage of development however, it left the Malaysia in more vulnerable with the occurrence of Asian financial crisis. In order to boost the Malaysian banking system after the crisis, the setting up of a special agency Danamodal by Government had enhanced the capital requirement (injected the equivalent of about 14% of the banking sector's total 1998 Tier 1 capital into 10 banking institutions). The injection of capital however, was targeted to be divested with the aim of having greater presence of private banks in the system.[12]

Philippines financial system had gone through difficult period of administered mechanism that led to insufficient saving mobilization, inefficient allocation and high intermediate cost. To make financial system vibrant, interest rate was deregulated in 1980s and more liberalized measures were introduced in early 1990s. The Philippines economy had long been regarded as weak sister of Asia, but in the Asian financial crisis it remained robust. Before the occurrence of

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12 John Hawkins and Dubravko Mihaljek (2001). The banking industry in the emerging market economies: competition, consolidation and systemic stability - an overview, BIS papers, No. 4, Bank for International Settlements.

Asian financial crisis, the Philippines economy had been in the process of fixing the internal problem under central system and the same in phased manners. The process of monitoring of economy and plugging out the problem to cure internal disturbances during 1980s made policymakers well manage Asian financial crisis in advance. In presence of financial crisis, a range of incentives were offered to the merging banks, including better access to rediscount facilities and temporary relief from certain prudential requirements.

Thailand's economy had undergone deep structural changes, including the liberalization of its financial sector and the integration of its economy with global financial and product markets in early 1990s. With these reforms the economy had attracted significant amount of inflows. But the financial infrastructure was not sound enough to absorb the inflows efficiently. At the same time allocation of the credit by banks and institutions at a softer rate ignoring the merits of projects turned the economy into financial crisis in 1997-98 (Chutathong et al. 2002). In Thailand, seven out of 15 commercial banks were taken into public ownership following the outbreak of the crisis in July 1997. One of these banks was merged with an existing state-owned bank (Radhansin Bank), and along with two other nationalised banks sold at auction to both Thai and foreign investors. Another state-owned bank existing before the crisis (Krung Thai Bank) took over two of the intervened banks. Thai privatisations had been more cautious than other such efforts in the region: although foreign banks are allowed to hold more than 25% of a domestic bank's shares, after 10 years they will not be allowed to take up additional equity unless their equity share is below 49%. This limitation partly hampered the interest of foreign banks for acquisitions in Thailand.

Overall, in order to overcome the funds crunch in Asia, Association of East Asian Nations approached towards developing the domestic debt market, bond market coupled with the banking system and financial markets. Two important sources of funds in the form of Asian Bond Markets Initiative (ABMI) and the Asian Bond Funds (ABF) were developed. The ABMI was launched in 2003 by ASEAN along with the China, Japan, and the Republic of Korea. The first ABF was established in that same year by the Executives' Meeting of East Asia Pacific Central Banks (EMEAP), a group of 11 central banks in the region including five that are part of ASEAN. The same group of central banks also established a second fund in 2005. In April 2011, the ASEAN finance ministers took three more steps. First, they agreed to set up the Credit Guarantee and Investment Facility (CGIF), with a capital of $700 million, involving contributions from the China, Japan, and the Republic of Korea. Second, they launched a $495.2 million infrastructure fund later in the year to finance major infrastructure projects across ASEAN and provide a way to mobilize the region's large dollar reserves to finance its infrastructure needs, the ASEAN Infrastructure Fund was set up with

an initial equity contribution of $495.2 million (Park, 2011). Finally, the ASEAN finance ministers established the ASEAN+3 Macroeconomic Research Office (AMRO) in Singapore to conduct economic and financial surveillance in support of the Chiang Mai Initiative Multilateralized.

C. Financial Sector Reforms in Select South Asian Countries

India pursued key reforms in strengthening its banking industry like- granting of operational autonomy to public sector banks, reduction of public ownership in public sector banks by allowing them to raise capital from equity market up to 49 per cent of paid-up capital, transparent norms for entry of Indian private sector, foreign and joint-venture banks and insurance companies, permission for foreign investment in the financial sector in the form of Foreign Direct Investment (FDI) as well as portfolio investment, permission to banks to diversify product portfolio and business activities, roadmap for presence of foreign banks and guidelines for mergers and amalgamation of private sector banks and banks and NBFCs, guidelines on ownership and governance in private sector banks, etc.13 Very recently, Indiais moving ahead for enhancing competition in banking industry while granting licenses to private sector banks in the country.

With the growing demand for financial services in Bangladesh, National Commission of Money, Banking and Credit was constituted in 1984 which was further supplemented by launching of Financial Sector Reforms Project (FSRP) in 1990. Bangladesh started its financial sector reforms in intensive way in the beginning of 1990s. These reforms include market oriented system of monetary management, privatization of banking sector, interest rate liberalization and strengthening commercial banks loan recovery. A major policy change introduced in a key policy variable was in the area of interest rate policy. In place of arbitrarily fixed interest rate, Bangladesh Bank introduced a flexible market oriented interest rate structure from January 1990. It also abolished sector specific concessional refinance facility. Interest rate bands were prescribed for different categories of loans and advances and deposits within which banks were at liberty to determine their respective rates.14

Pakistan' financial system was surrounded by various hassles in the form of funding to the only government projects, lower credit expansion to small and medium enterprises, idleness approach of bank employees, high tax rate, wrong funding and consequently pilling up of non-performing loans, etc. With these

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13 Paper presented by Mr Rakesh Mohan, Deputy Governor of the Reserve Bank of India, at the Conference on Economic Policy in Asia, organised by Stanford Center for International Development and Stanford Institute for Economic Policy Research, Stanford, 2 June 2006. Financial sector reforms and monetary policy - the Indian experience

14 Abdur Raquib Financial Sector Reform in Bangladesh - An Evaluation, available at http://www.bdresearch.org/home/attachments/article/514/BP_F_Sector.pdf

hindrances, the Central Bank initiated a slew of measures in the form of abolition of interest rates regulations, welcoming new commercial banks and non-bank financial institutions as a part of liberalization programme. All the Nationalized Commercial Banks (NCBs) under the public sector, except one, have been privatized. As a consequence the private sector owns, manages and controls about 80 percent of the banking assets in the country - a reversal of the situation since early 1990s when NCBs held 80 percent of total assets. Even in the case of National Bank of Pakistan 23.5 percent shares have been floated through Stock Market mainly aimed at small retail investors. Other measures include corporate governance, capital strengthening, improving asset quality, liberalization of foreign exchange regime, etc.15

On financial front, Sri Lanka also survived in the administered regime similar to other Asian economies. In South Asian region, Sri-Lanka was the first country to commence the financial sector reforms as it embarked these reforms in early 1980s. The main aims of implementing such reforms were to enhance economic growth while improving the efficiency of financial system to generate more benefits to the general public. The reforms were also initiated to improve the participation of private players in financial system, removal of restrictions of interest rate and loans, exchange rate regulation, opening of the financial markets for foreign and domestic competition. All these reforms might have affected the concentration power of banking industry in emerging Asia. In this environment, it becomes imperative to shed light on the competition level in banking industry for the Asian economies.

V. COMPETITION IN ASIAN BANKING SECTOR

Competition in banks of emerging Asian countries has been measured with various types of indices as mentioned below:

A. Banks' Assets Holdings

In terms of share of top five banks in the total assets, Hong Kong, Malaysia, Singapore and Sri Lanka have been observed for higher presence of concentrated banks. The financial systems of Bangladesh and India have diversified structure in terms of banking presence as the ratio of top five banks' assets is two fourth in total assets (lowest among the select Asian economies). Korea Republic, Indonesia, Pakistan and Philippines have noticed a decline in the ratio in recent years compared to their level of past decade. Chinese top banks have experienced largest hold among the basket of assets of banking institutions in the past decade. The pie of top five banks has remained stagnant for Thailand economy since last decade. The present results confirm low concentration in

15 Ishrat Husain (2005). Banking sector reforms in Pakistan, Blue-Chip- The Business People's Magazine.

Bangladesh and India, and highly concentrated banking system in rest of select Asian countries (Figure 1).

B. Asset Share of Three Largest Banks

The competition level is also assessed with the help of share of assets of three largest commercial banks as a share of total commercial banking assets. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets. In case of Bangladesh and India , the three largest banks hold almost one third of the assets in the total assest basket. For Bangladesh, there has been reported substantial decline in the asset holdings by three largest banks over the past decade. Whereas in Singapore, Hong Kong, Malaysia and Sri Lanka, the larger pie of total assests are covered by top three banks as the shares are around 90, 75, 70 and 65 percent, respectively. Indonesia, Pakistan, Philippines and Thailand have similar type of banking presences as the top three banks are contrinuting about 40 to 50 percent of total assets. There has been almost full hold of the only three banks in Korea in early 2000, however the same has declined tramendously in the recent past. More than half of assets are contributed by only three banks in China indicating higher concentration of banks in the country (Table 1). Indonesia, Korea, Malaysia and Phillipines have reported substantial decline in holdings of three banks assets after the Asian financial crisis. The result is intutive as these economeies have intensively utilized the bank consolidations measure in late 1990s to recover the banking sector from crisis. For majority of economies the assest holding of three banks has dipped in the recent years compared to the level of past decade, suggesting the relatively diversification of banking industry.

C. Lerner Index

The Lerner index captures the difference between output prices and marginal costs of production- that is, the markup of output prices over marginal costs (Lerner 1934). Prices are calculated as total bank revenue over assets, whereas marginal costs are obtained from an estimated translog cost function with respect to output. Lerner index is proxy for profits that accrue to bank as a result of its pricing power, so higher values mean less competition

For Bangladesh, the value for Lerner index was very low in late 1990s, but it has increased thereafter except for few years (Table 2). This outcome is not tuned to the previous result, where Bangladesh's banking system has been observed for lower concentration over the period of time. India has also experienced the similar phenomenon in this regard. Indonesia, Pakistan, Philippines, and Thailand have realized comparatively lower values in their index for past decade which suggest the greater level of competition within banking industry in these economies. For Singapore, Lerner index produces in-contrast results compared to

the past two indicators (namely asset shares of top five and three banks). For this index there is consistent substantial decline in the index as compared to its level of late 1990s, marking a sign of high competition in Singapore. Malaysia has survived with lower level of competition in early years of twenty first century but managed to create a healthy competition in the recent past. The outcome of Asian financial crisis of 1997-98 is intuitive and most of the economies showed decline in competition. This outcome may also be attributed to the financial sector policies of the then period, as most of the economies went for bank consolidation and financial restructuring. Bank consolidation was actively pursued through merging of various weaker banks in order to enhance the capital for banks in their countries. It is highlighted in the literature that the group of ASEAN economies, except Malaysia faced relatively higher level of marginal cost and lower profit. The same is visible in the declined values of Lerner index for the period followed by Asian crisis. The adverse impact on profitability is observed for Philippines and Thailand as both the economies reported negative values for the Lerner index after the crisis. It is mentioned in the existing literature that the results for Lerner index are not consistent with results using concentration as a measure of competition, and caution was put for researchers and policymakers while drawing strong conclusions about market power and credit availability based on analyses that rely exclusively on concentration as a measure of market power. Similar type of competition behavior is experienced by most of the economies during global financial crisis. It may be interpreted that banks step back from indulging into competitive and risky situations during the volatile economic fundamentals. Somehow, it can be said that banks respond quickly to the economic shocks and try to ameliorate the fragility problem associated with excessive risk taking of financial institutions. Both of crises have important message that banking institutions prompts just after the crisis which signifies their better capabilities to calibrate the financial risks in the system, but the prior cautious approach of banks may handle the financial fragility issue very well. Herein lies the scope for effective regulatory mechanism for creating stability in the financial system. Delis (2012) reported that deterioration of bank competition may have taken place in spite of financial reforms across developing economies-especially in countries with weak institutions (low bureaucratic quality and low transparency) and low levels of economic development. He highlighted that the banking sector is more competitive (the Lerner index is lower) in countries with greater contestability (lower entry barriers), greater information disclosure, better institutions, more foreign bank participation, and more liquid stock markets.

D. Boone Indicator

The level of bank competition in emerging Asian countries is also gauged by the Boone indicator. It is a measure of degree of competition based on profit-

efficiency in the banking market. The more negative the Boone indicator is the higher the level of competition is in the market.

The figures for Boone indicators produces the results similar to concentration ratios as Bangladesh and Indian banking systems are classified as highly competitive, whereas China and Malaysia have witnessed the lower level of competition as the index value stood very low (Table 3). The figures for Singapore suggest a substantial jump in the banking industry from monopoly power in late 1990s to competitive one in later half of 2000s. However, Sri Lanka has been identified with highly competitive banking system under this indicator, and more surprisingly the level of competition is highest among the select Asian countries. For Hong Kong and Korea, the value for this indicator is observed positive meaning by high incidence of monopoly power in their banking structure. More importantly, Hong Kong economy has moved from huge negative in late 1990s to positive values during 2010 for Boone indicator which means that the Hong Kong banking industry has been very competitive in early 2000s, but later on switched to monopoly power. Similar to Hong Kong, Philippines has also practiced the huge decline in the competition level in recent years. Philippines and Thailand are noticed for moderate level of competition among banking sector. As similar to the outcome of competition during Asian financial crisis underlined through Lerner index, the Boone indicator also suggests for decline in competitiveness just after the global financial crisis. Such outcome is intuitive in the sense that banks become more cautious under the uncertain environment.

VI. CONCLUSION

In sum up, it is mentioned that emerging Asia has pursued vibrant policy to maintain their financial systems. The major reforms for financial sector include- interest rate deregulation, allowing the private players in banking industry including foreign banks, expansion in credit facilities, etc. The incidence of Asian financial crisis led the authorities to go for bank consolidations, restructuring the capital, etc. In terms of bank concentration, the present results relatively confirm diversified banking structure in Bangladesh and India and concentrated banking system in most of the select Asian economies. As per Lerner index, enhanced bank competition has been noticed for Malaysia, Indonesia, Pakistan, Philippines, Singapore and Thailand. For Bangladesh and India, value has increased over period of time.

Most notable finding occurs that majority of the emerging Asian economies showed a decline in competitiveness just after the Asian and global financial crises. Such outcome may also be attributed to the financial sector policies of the then period, as most of the economies went for bank consolidation and financial restructuring. Both of crises have important message that banking institutions

prompts just after the crisis which signifies their better capabilities to calibrate the financial risks in the system, but the prior cautious approach of banks may handle the financial fragility issue very well. Herein lies the scope for effective regulatory mechanism for creating stability in the financial system. On the basis of Boone indicators, Bangladesh, India, Singapore and Sri Lanka have competitive banking structure, whereas China and Malaysia have witnessed the lower level of competition. Hong Kong and Korean banking industries are marked with the incidence of monopoly power. Philippines and Thailand are noticed for moderate level of competition among banking sector. However, the present study puts forth the scope for future research in identifying the relationship between bank competition and financial stability for Asian countries.

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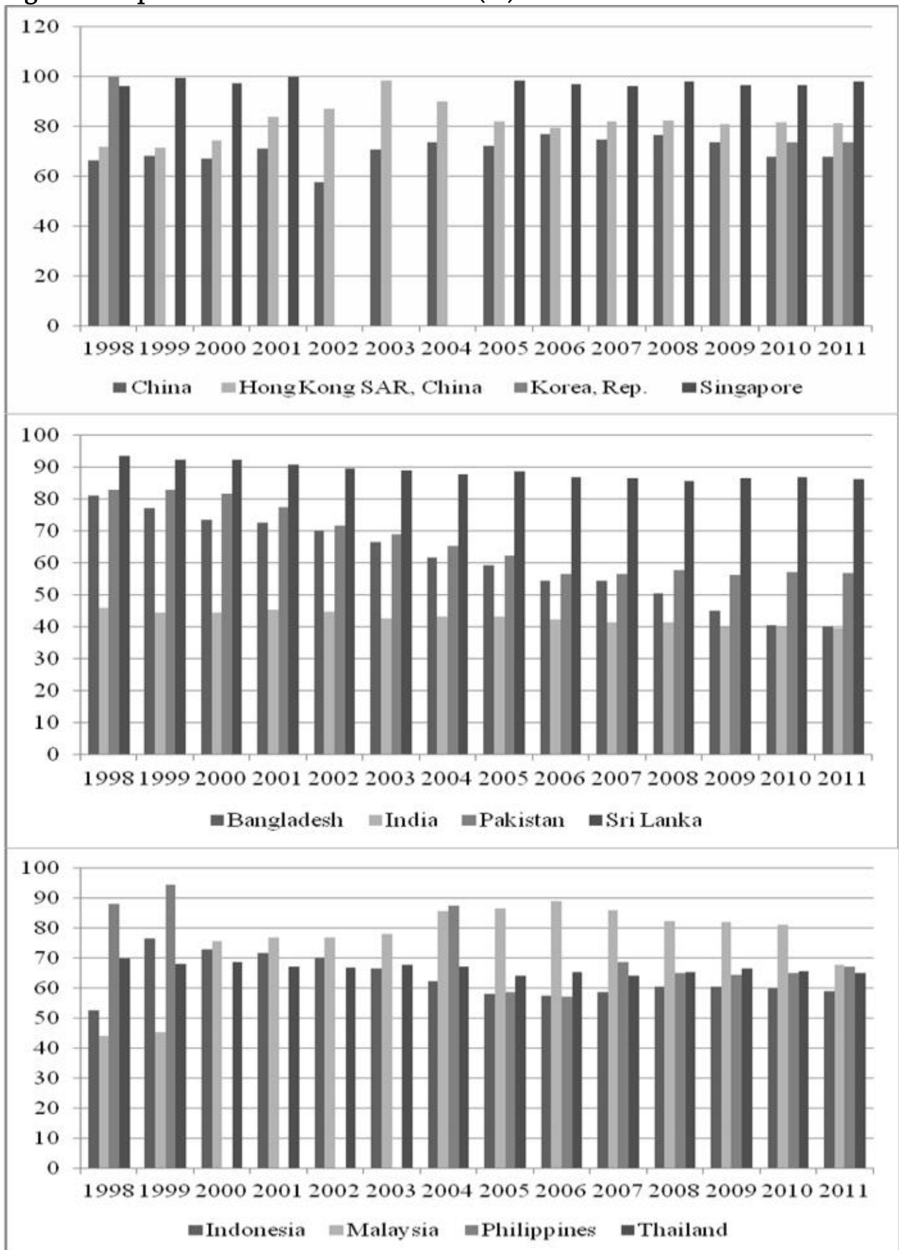
TABLES

Figure 1: Top 5-bank Asset Concentration (%)



Source: Global Financial Development, World Bank

Table 1: Bank Concentration (asset share of 3 largest banks in percentage)

Country	Bangladesh	China	Hong Kong	India	Indonesia	Korea	Malaysia	Pakistan	Philippines	Singapore	Sri Lanka	Thailand
1998	69.11	56.32	46.75	35.37	40.21	86.03	29.37	63.85	75.08	85.39	77.05	50.32
1999	66.33	56.78	47.21	34.56	68.41	92.83	29.25	62.89	80.16	95.99	74.96	49.03
2000	62.82	55.4	57.75	34.79	64.27	100	57.15	66.93	100	90.1	75.91	49.69
2001	61.25	57.18	56.25	35.73	62.6		49.12	69.15		97.79	73.48	48.44
2002	59.2	42.21	75.48	35.03	59.2		49.39	59.03	98.97	100	70.58	48.66
2003	55.6	60.8	86.57	33.11	56.27	100	52.34	53.67	98.77	100	66.92	49.22
2004	51.71	65.75	78.41	33.98	47.49	100	62.72	49.42	73.43	99.34	64.96	47.15
2005	49.8	64.15	66.6	33.92	43.13	99.89	65.98	44.99	41.26	94.77	65.1	44.17
2006	45.66	70.13	67.22	32.93	47.28	100	76.21	40.99	39.6	85.17	64.62	44.75
2007	46.03	57.24	72.98	32.52	42.48		69.97	40.96	49.97	84.95	64.25	45.15
2008	41.55	58.3	74.59	32.13	44.31		68.55	41.86	47.49	94.09	63.4	44.49
2009	36.56	55.59	73	30.22	44.96		68.17	40.47	46.67	88.78	65.33	46.03
2010	32.64	50.85	73.63	29.56	44.78	51	68.31	41.19	47.62	89.68	66.6	45.48
2011	31.95	50.8	72.15	28.91	44.04	50.58	52.75	40.91	48.39	90.94	65.29	45.28

Source: Global Financial Development, World Bank

Table 2: Lerner Index for Emerging Asian Countries

Country	Bangladesh	China	Hong Kong	India	Indonesia	Korea	Malaysia	Pakistan	Philippines	Singapore	Sri Lanka	Thailand
1996	0.002		0.1799	0.1419	0.08	0.2316	0.2582	0.1187	0.2317	0.4278	0.2191	0.1574
1997	0.028	0.3949	0.1911	0.1537	0.1142	0.2162	0.2517	0.1497	0.2546	0.3206	0.2089	0.0696
1998	0.0876	0.3422	0.203	0.1411	0.1003	0.1764	0.245	0.0799	0.2562	0.4051	0.2013	-0.3711
1999	0.1928	0.2062	0.2082	0.172	0.0423	0.2616	0.3627	0.0268	0.1604	0.4835	0.1955	-0.4554
2000	0.2316		0.2288	0.1718	0.1176	0.2802	0.4441	0.0493	-0.1533	0.2849	0.1634	-0.2099
2001	0.2341	0.2225	0.2006	0.2017	0.1046	0.3303	0.4876	0.0494	-0.0587	0.213	0.1254	-0.0199
2002	0.2491	0.4828	0.2745	0.2485	0.1312	0.323	0.5196	0.1762	0.2134	0.3743	0.1606	0.1542
2003	0.2399	0.5456	0.2365	0.314	0.1294	0.3021	0.469	0.2961	0.266	0.2982	0.2305	0.1655
2004	0.1176	0.4386	0.3932	0.2878	0.2355	0.3496	0.4052	0.3501	0.1006	0.2538	0.2253	0.3198
2005	0.3483	0.258	0.3401	0.2735	0.1952	0.315	0.1374	0.3022	0.0768	0.1361	0.2311	0.2461
2006	0.2414	0.2986	0.3046	0.2652	0.1851	0.3436	-0.0121	0.2062	0.0575	0.0379	0.2247	0.0271
2007	0.1339	0.4108	0.3016	0.2404	0.2168	0.3052	0.0801	0.1557	0.1132	0.0976	0.2083	0.1379
2008	0.3755	0.3504	0.2728	0.2534	0.1813	0.3151	0.0742	0.1279	0.0228	0.0758	0.1831	0.2347
2009	0.3891	0.3589	0.3976	0.2502	0.1723	0.3037	0.211	0.0367	0.1705	0.1953	0.2008	0.265
2010	0.4662	0.4119	0.457	0.2676	0.2328	0.335	0.435	0.0793	0.2237	0.2027	0.2711	0.2991
2011	0.4602	0.3878		0.2372	0.2066		0.2647	0.0743	0.2207	0.1333		0.2747

Source: Global Financial Development, World Bank

Table 3: Boone Indicator for Emerging Asian Countries

Country	Bangladesh	China	Hong Kong	India	Indonesia	Korea	Malaysia	Pakistan	Philippines	Singapore	Sri Lanka	Thailand
1999	-0.0241	-0.027	-0.3762	-0.0863	-0.0634	0.2012	-0.0478	-0.0594	-0.4423	0.0161	-0.1764	-0.0385
2000	-0.0715	-0.0134	-0.3219	-0.0674	-0.0391	0.1176	-0.0418	-0.0386	-0.342		-0.1949	-0.0603
2001	-0.064	-0.0118	-0.2673	-0.0674	-0.0267	0.0676	-0.0536	-0.0414	-0.5092	0.0083	-0.2109	-0.0495
2002	-0.0616	-0.0039	-0.2414	-0.0658	-0.0507	0.0642	-0.0345	0.0796	-0.1908	0.1269	-0.156	-0.0509
2003	-0.0679	-0.0048	-0.1832	-0.0647	-0.0314	0.0607	-0.0311	-0.0408	-0.13	-0.0987	-0.1249	-0.0521
2004	-0.0664	-0.0093	-0.1737	-0.0445	-0.0274	0.0371	-0.0258	-0.0251	-0.175	-0.0219	-0.1337	-0.0555
2005	-0.0662	-0.0143	0.0814	-0.0523	-0.0294	0.0269	-0.0247	-0.0387	-0.0724	-0.0284	-0.168	-0.0562
2006	-0.0732	-0.0189	0.0892	-0.0621	-0.0367	0.0547	-0.032	-0.0507	-0.0778	-0.0421	-0.1787	-0.062
2007	-0.0751	-0.0261	0.0789	-0.0731	-0.0314		-0.0319	-0.0408	-0.0748	-0.0479	-0.1949	-0.0577
2008	-0.0799	-0.0274	0.1216	-0.0592	-0.019		-0.0283	-0.0278	-0.0542	-0.0064	-0.2095	-0.0531
2009	-0.0823	-0.0168	0.1074	-0.0541	-0.0195		-0.0195	-0.0224	-0.0549	-0.0088	-0.21	-0.0446
2010	-0.0825	-0.0225	0.0799	-0.0604	-0.0234	0.0375	-0.0259	-0.0517	-0.0588	-0.0169	-0.1796	-0.0476
2011	-0.0777	-0.0289	0.0677	-0.0604	-0.0207		-0.0264	-0.0465	-0.0609	-0.0143	-0.178	-0.0484

Source: Global Financial Development, World Bank

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