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Financial Institutions and Structures for Growth in East Asia

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Introduction

The purpose of this paper is to consider whether financial regulatory structures are well-matched to the needs of growing, changing and integrating financial markets in Asia. Key to this story is the extent of regulatory restrictions on the activities of different financial institutions and the match (or mismatch) between the supervisory structures and the developing structure of the market.

The paper examines the changing size, shape and range of financial markets in the region indicates the extent to which regional markets have become more efficient and have improved in quality since the financial crisis. One question of importance is whether Asian markets are following the developing trends towards integrated financial service provision and consolidation that is observed in other countries. These trends raise several issues for efficiency and fragility of financial systems everywhere and the paper reviews some of the empirical evidence on these links. The paper also discusses the arguments for and against particular supervisory structures in the face of new market developments. Finally we consider whether supervisory structures are or should be moving towards unified supervision of these multi-function institutions and whether the supervisory structures are consistent with greater financial integration in the region.

Section I
Comparing financial systems

Deepening of markets

Financial systems around the world differ in many respects and comparing them is fraught with difficulty. Allen and Gale (2004) note that comparisons should be made across many dimensions, recognising the many functions of financial systems. Size of markets, measured by assets of particular categories, is only one aspect. They also add the allocation of household and firms' assets and liabilities by type, the size and number of institutions, the portfolio allocations of institutional investors and aspects affecting the transmission of monetary policy, such as the operation of mortgage markets and the formation of house prices. Each of these comparisons is informative about different aspects of a financial system and avoids the temptation to label systems simply as "bank dominated" or "market oriented". Furthermore, these quantitative measures and labels say little about the efficiency and stability of financial systems which, at the end of the day, is what we care about most.

Starting with simple quantitative measures, Asian financial systems have grown and deepened significantly since the crisis of 1997-98. Recent World Bank data (Ghosh, 2006) show that asset growth has been remarkable across the bank, equities and even bond markets. By comparison with countries of similar income levels Asian markets are of comparable or larger size (Table 1 and Figure 1)

Table 1

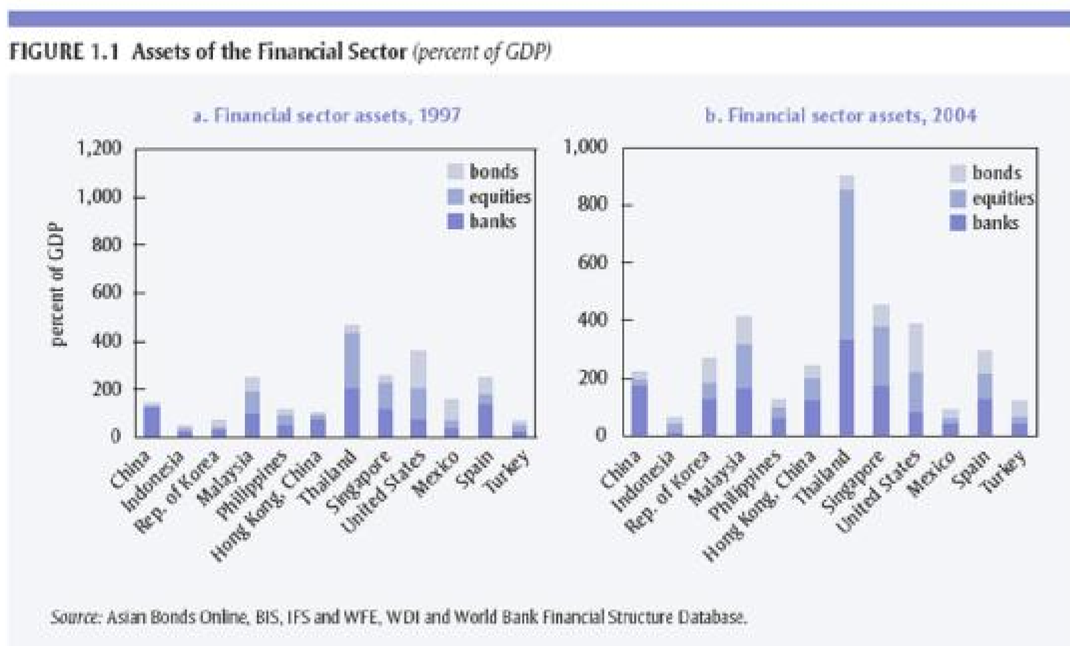
Table 4.5: Financial markets, especially securities markets, have surged since 1997

	Bank assets				Equity market capitalization				Bonds outstanding			
	$ billion		% of GDP		$ billion		% of GDP		$ billion		% of GDP	
	1997	**2005**	**1997**	**2005**	**1997**	**2005**	**1997**	**2005**	**1997**	**2005**	**1997**	**2005**
China	1,125.7	3,692.2	124.6	163.1	101.4	401.9	11.2	17.8	116.4	552.0	12.9	24.4
Indonesia	74.1	140.0	31.1	49.8	29.1	81.4	12.2	28.9	4.5	55.2	1.9	19.6
Korea	196.4	736.1	37.9	93.5	41.9	718.0	8.1	91.2	130.3	599.8	25.2	76.2
Malaysia	100.9	208.5	100.9	159.4	93.2	180.5	93.2	138.0	57.0	115.1	57.0	88.0
Philippines	46.5	62.2	56.1	63.2	31.2	39.8	37.7	40.4	18.5	36.1	22.4	36.7
Thailand	120.3	183.0	79.7	103.6	22.8	123.9	15.1	70.1	10.7	72.1	7.1	40.8
Hong Kong	361.6	790.1	205.1	444.6	413.3	1,055.0	234.5	593.6	45.8	82.9	26.0	46.6
Singapore	117.0	216.4	122.0	185.4	106.3	257.3	110.8	220.4	23.7	79.8	24.7	68.2
Total	2,142.5	6,028.5	94.6	149.5	839.2	2,857.8	37.0	70.9	406.9	1,593.0	18.0	39.5

Sources: IMF, *International Financial Statistics*; World Federation of Exchanges; BIS; ADB, *Asian Bond Indicators*; World Bank, *World Development Indicators,* and, staff calculations.

Source: Gill and Kharas, 2006, p 174

Figure 1



Source, Ghosh 2006, p 27

Observers frequently note that bond markets are still small relative to other types of finance and that the growth of bond markets has come mainly from public bond issues (frequently to restructure ailing banking systems). Comparisons across a wider universe, however, show that variations in the size of bond markets are marked across developed markets as well – the role and function of bonds appear to be a major source of difference in financial markets across the globe. Corporate bond markets remain very small in the UK and Japan as well as non-Japan Asia (see Allen, Chui and Maddaloni, 2004, figure 2). The fact that bank assets still make up a relatively large share of many Asian countries financial systems is also not unusual in global terms.

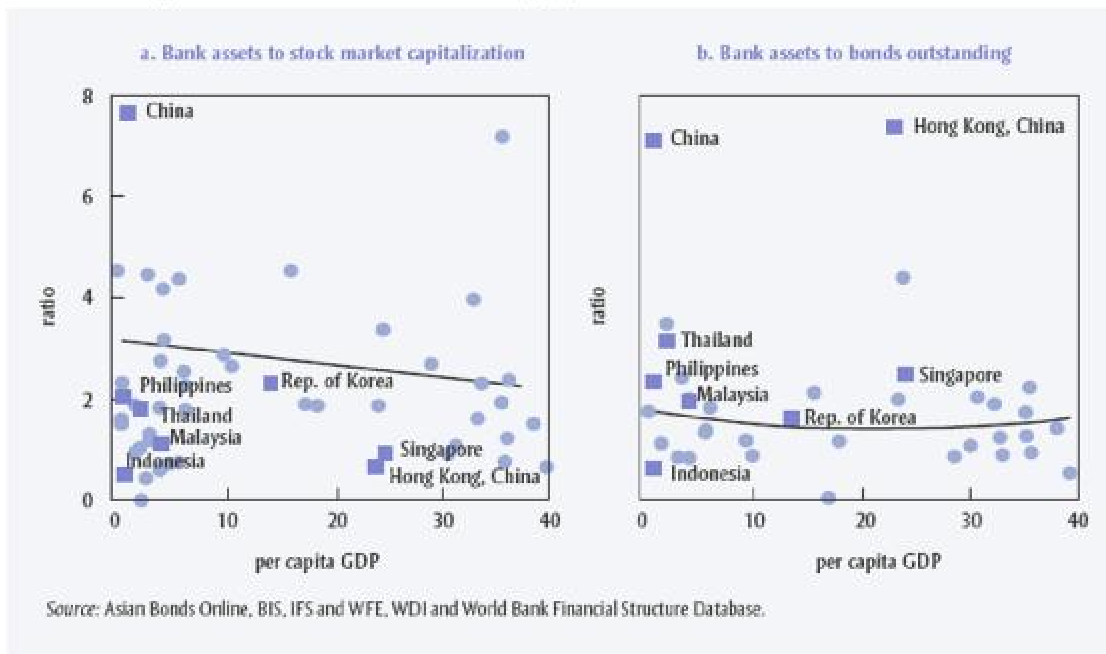
Ghosh notes

> "Despite the progress made in diversifying financial markets, the banking sector remains dominant, accounting for around 58 percent of the region's total financial assets at the end of 2005 (down from 63 percent in 1997)" (p 27)

but also shows data that imply that Asian countries (with the exception of China) are mostly not far from global averages in the ratio of bank assets to other assets when adjusted for per capita income levels (see Figure 2)

Figure 2

FIGURE 1.2 Importance of Bank Assets Relative to Equity and Bond Markets



Banking
Consolidation and Diversification

Considerable consolidation and changes of ownership structure have taken place in all countries except China. Numbers of banks have fallen in almost all countries and concentration ratios have generally risen. Immediately after the crisis, state ownership of banks rose significantly but by 2004 state ownership of the largest banks had fallen in most countries, though Indonesia and Thailand still have high levels. Importantly, foreign ownership has risen substantially (although IMF data suggests that the share of total bank assets owned by foreign banks in the East Asian region declined by 5% between 1995 and 2002, falling from a share of 18.4% to 13.4% (see IMF 2004, Table 3, p 9).

Table 2

TABLE 4.1 Changes in the Structure and Ownership of Commercial Banks

	Number of banks (1)			Banking sector assets *(percent of GDP)* (2)		Concentration ratio of assets of top three banks *(percent)* (3)		Average state ownership in top ten banks *(percent)* (4)		Average foreign ownership in top ten banks *(percent)* (4)	
Economy	1997	2002	2004	1997	2004	1997	2004	1997–99	2004	1997–99	2004
China	86	129	135	107	162	73.2	61.0	96.4	89.7	0.02	3.2
Indonesia	222	142	134	85	62	n.a.	42.2	73.8	51.3	0.0	16.7
Malaysia	36	26	25	170	169	22.8	33.1	10.9	3.5	15.9	26.2
Rep. of Korea	16	11	8	98	106	50.7	50.6	37.2	5.8	12.2	21.3
Philippines[a]	51	24	24	104	70	29.6	29.4	7.8	5.8	11.3	9.0
Thailand	16	13	12	156	113	47.4	47.8	1.3	29.3	8.1	11.7
Hong Kong (China)[b]	361	224	208	587	485	29.7	53.4	0.0	0.3	63.1	66.5
Singapore	152	120	113	204	221	75.6	91.8	0.0	4.0	8.3	15.6
Japan[c]	148	137	129	151	148	26.9	35.3	0.0	1.3	0.2	3.6
Germany[d]	326	273	252	152	188	15.3	44.2	1.7	2.7	3.5	5.8
United Kingdom	452	385	380	302	403	23.4	31.1	0.0	0.0	2.9	12.8
United States	9,060	7,798	7,532	58	69	17.3	30.3	0.0	0.0	0.0	3.2

Sources: (1) Country sources and European Banking Federation; (2) country sources; (3) Bankscope and country sources; (4) based on shareholders disclosed in Bankscope and Bankers' Almanac.
a. Figures are for 1999 instead of 1997.
b. Registered financial institutions.
c. Domestic licensed banks.
d. All banks excluding credit cooperatives, mortgage banks, building associations, and special banks.

Source: Ghosh, 2006, p 64

In 2001 the IMF International Capital Markets Report noted that while the general drivers towards consolidation in global markets are the impact of globalisation, deregulation, liberalization of barriers to cross border entry, increased competition and the effect of technology on banking margins and profitability, in the case of Asia much consolidation has been driven by government reaction to financial crises, rather than market forces. Despite this observation there has been a number of private-led mergers as shown in Table 3.

TABLE #

APPENDIX TABLE 4.3 Number of Mergers and Acquisitions Involving Commercial Banks in East Asia, 2000–04

	Mergers			
	Government-led	Private-led	Private-led involving foreign banks	Privatization
Indonesia				
2000	1 (11)	1(2)		
2001			1(2)	
2002	1(5)			
2003			1(2)	
2004	1(3)			
Rep. of Korea				
2000	1(2)			
2001	1(5)	2(3)		
2002	1(2)			1(1)
2003			1(2)	2(2)
2004				
Malaysia				
2000		3(6)		
2001		7(14)		
2002	1(2)			
2003		5(10)		
2004				
Philippines				
2000		7(16)		
2001		3(6)		
2002		4(8)	1(2)	
2003				
2004				
Thailand				
2000				
2001				
2002	1(2)			
2003		1(2)		
2004				
Hong Kong, China				
2000		2(4)		
2001	1(10)			
2002		2(4)		
2003		3(8)	1(3)	
2004				
Singapore				
2000		1(2)		
2001				
2002		3(5)		
2003				
2004				

Sources: Central bank annual reports, Bankscope, Bankers' Almanac.
Note: Numbers of banks involved in the merger are in parentheses.

Source: Ghosh, 2006, Appendix 1, p 185

IMF (2001) reported (Table 5.2, p 127) that although consolidation was taking place at a rapid rate the impact on concentration was lower than expected. Herfindahl-Herschman

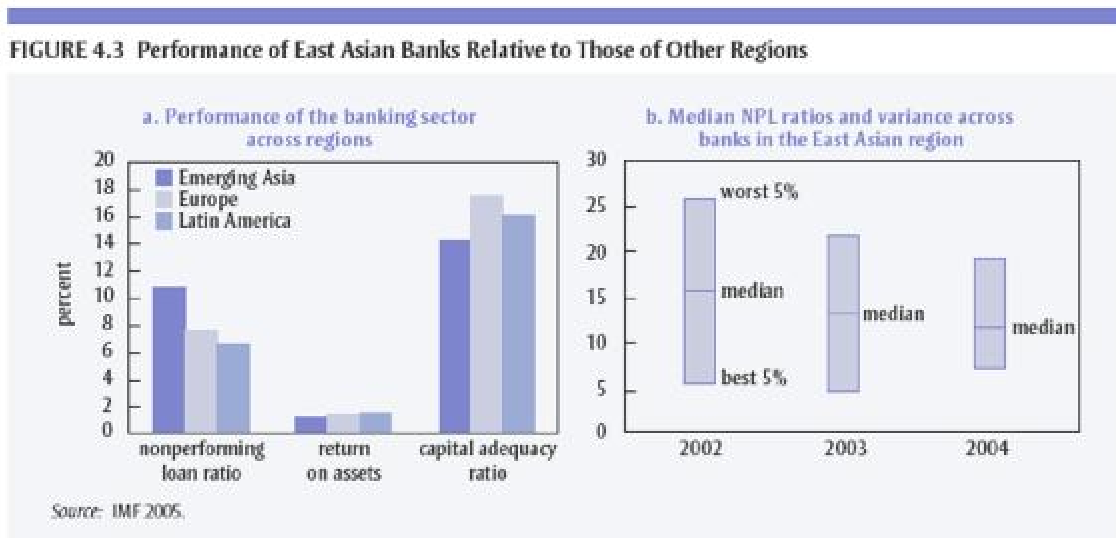
indices either rose less than would have been expected on the basis of the market shares of the pre-merged entities or, in the case of many Asian countries, actually fell, indicating an improvement in competition. Some of this may have come from the increased share of foreign-owned banks in many countries. On the other hand, Laeven (2005) constructs a measure of the degree of monopoly power (the sensitivity of output prices to input prices) and concludes that most Asian banking markets display oligopolistic competition and that they were more competitive in 1994 than in 2004.

Another key issue of concern about banking diversification these days is to do with the integration of financial service business within banks (which is discussed further below) but it should not be forgotten that banking diversification is reflected not only in non-banking sources of income but in the range and type of customers and lending activitiy. In the region post-crisis banks are lending more to governments and households and less (than in pre-crisis years) to the corporate sector. The health of the corporate sector balance sheets has also improved although there are reportedly still some large corporate customers with high debt/equity levels. This type of diversification should make banks less vulnerable to financial fragility in any one sector of the client base. On the other side of this pattern is the observation that banks are not financing corporate investment, which has still failed to recover to pre-crisis levels, to the extent they previously were.

Efficiency, and performance

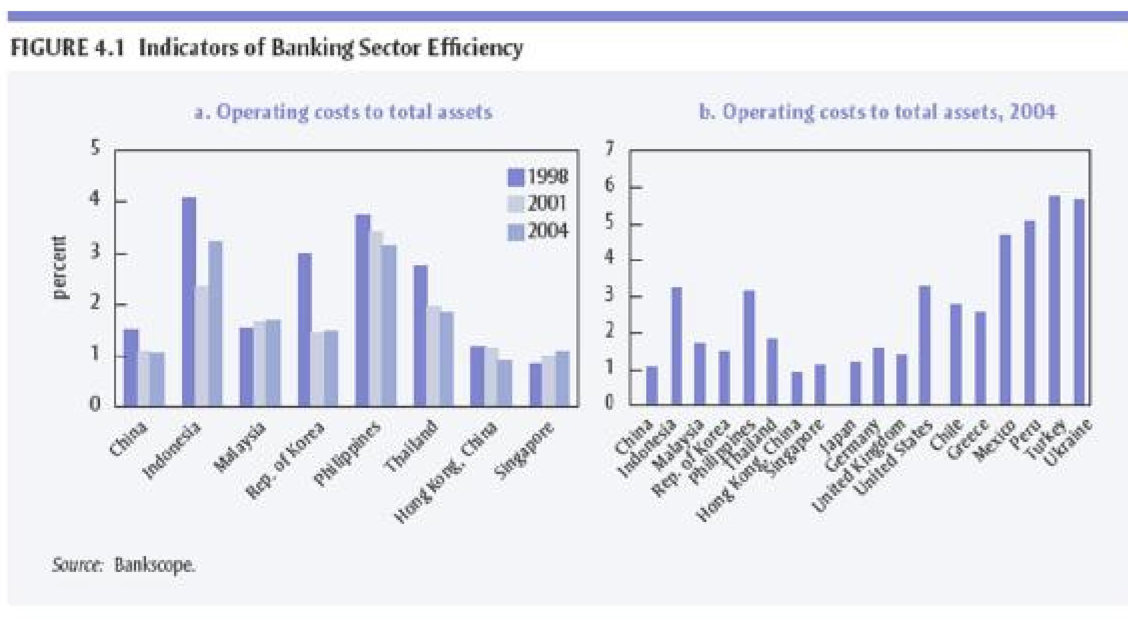
Efficiency of the banking sector has improved in terms of costs, NPLs, return on assets and capital adequacy (although data limitations and cross-country differences in accounting practices require caution here).

Figure 3



Source: IMF, Global Financial Stability report, Sept 2005, cited in Ghosh, 2006, p 68

Figure 4



Source: Ghosh, 2006, p 66

One question is whether the improved efficiency comes from changes in the structure of the banking system itself. If the consolidation described above results in economies of scale this might explain the efficiency improvements. IMF 2001 argues that there is little evidence of economies of scale for banks in the Asian economies of Korea, Malaysia, the Philippines and Thailand. Whereas evidence across a wide range of developed markets suggests that maximum economies of scale for banks are reached at asset sizes around US$10 billion (on more recent data the maximum may be reached in the range $10-25 billion) , the Asian banks achieve modest efficiency gains in the range $1 to $10 billion but decline thereafter.

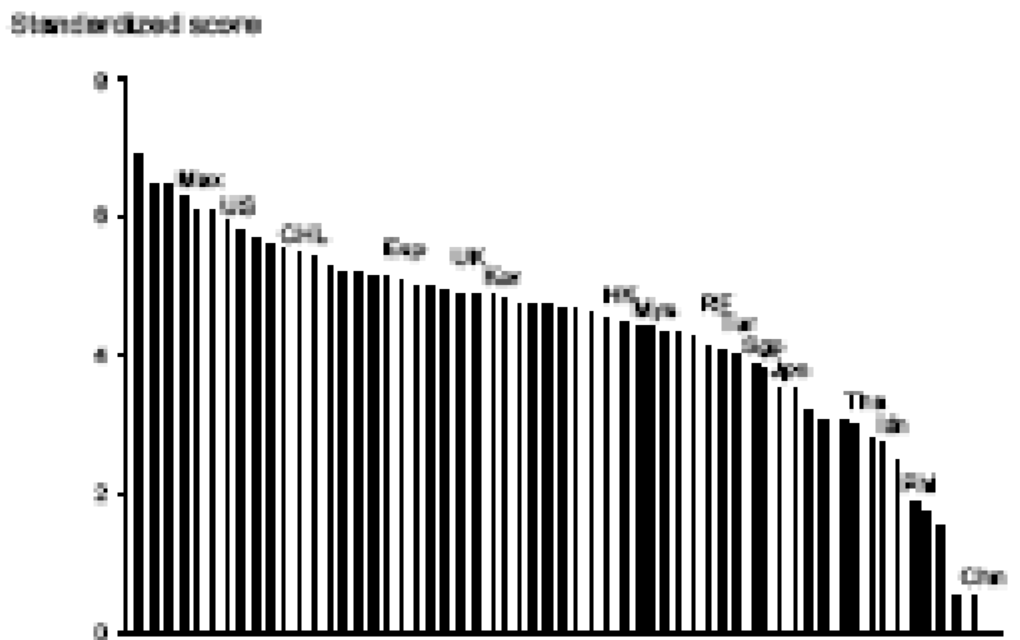
Laeven (2005), using more recent data in a regression analysis, finds no significant effect for increases in size on efficiency (though he does not test for non-linear effects). Increases in foreign ownership do,however, improve efficiency.

Securities

Ghosh and Revilla, 2007, examine securities markets in the region to assess their quality. Several aspects - liquidity, transactions costs and informational quality - are considered. They create an index of market quality using two indices; one of market liquidity and one of the information quality of the market. The informational quality index captures three measures from the World Bank Doing Business indicators i.e disclosure, director liability and shareholder suits. These three are taken to measure the strength of minority shareholder protection. Combined with the liquidity measure these create a composite index of market efficiency that indicates that most of the regions markets are well below

average standars. Figure xx shows some international comparisons. Ultimately the information quality of the markets is demonstrated by lack of synchronicity (i.e. the ability to distinguish individual movements of stocks within the market. In explaining the outcomes on information quality they find that some institutional arrangements matter but many that might be expected to have an effect do not appear important. Amongst their determinants disclosure rules are very important but so are the availability of stock lending and short selling.

FIGURE 5



Source: Ghosh and Revilla, 2007, p 11

Insurance and other financial services

It is not easy to get data on the size of markets for the whole range of financial services that now exist in developed countries so it is difficult to tell to what extent markets in Asia have expanded in sophistication and range of services. One indicator is the size of assets of institutional investors in the different segments of the market as shown in Table 4 which indicates that the markets in the region are still fairly small.

TABLE 4

TABLE 6.1 Assets of Institutional Investors

Economy	Pension		Life insurance		Mutual funds		Total	
	US$ billions	% of GDP	US$ billions	% of GDP	US$ billions	% of GDP	US$ billions	% of GDP
China	28.0	1.6	136.0	7.9	27.0	1.6	191.0	11.1
Indonesia	5.4	2.1	10.5	4.2	11.1	4.5	27.0	10.9
Rep. of Korea	161.0	21.4	133.0	17.7	186.0	24.7	480.0	63.8
Malaysia	70.0	59.2	21.0	17.8	23.0	19.4	114.0	96.4
Philippines	7.9	9.2	2.7	3.1	1.4	1.6	12.0	14.0
Thailand	20.0	12.0	17.0	10.2	19.0	11.4	56.0	33.6
Hong Kong (China)	38.0	22.9	9.0	5.4	465.6	280.3	512.6	308.6
Singapore	68.0	61.2	33.0	29.7	28.0	25.2	129.0	116.0
Total East Asia	398.2	11.8	362.2	10.8	761.0	22.6	1,521.7	45.2

Sources: HSBC 2005; Dalla 2005, BNM, BOT.

Note: Figure for mutual funds in Singapore only includes Singapore dollar funds domiciled in Singapore.

Ghosh, p 130

A particularly important indicator is the development of the insurance industry since it acts not only as an alternative savings vehicle in many of these markets but also as a risk-sharing mechanism. The most commonly used measures to assess the level of development of the sector are insurance penetration (measured as the insurance premium as a percentage of GDP) and density (measured as the premium per capita). As Ghosh notes, "There is still substantial scope for further development, particularly in China, Indonesia, the Philippines, and Thailand (Table 6.6). Distribution channels are an important factor in increasing the coverage of insurance. In most insurance markets in the region, distribution has been built on the agency sales-force model, often extending to large numbers of sales forces (with varying degrees of productivity, reflecting the extent to which agents work full- or part-time)." (p 139)

TABLE 5

TABLE 6.6 Indicators of Development of the Insurance Sector

Economy	1997		2000		2004	
	Penetration	Density	Penetration	Density	Penetration	Density
China						
life	0.8	6.1	1.1	9.5	2.2	27.3
non-life	0.6	4.7	0.7	5.7	1.1	12.9
total	1.4	10.8	1.8	15.2	3.3	40.2
Indonesia						
life	0.6	6.2	0.5	4.0	0.6	7.5
non-life	0.7	6.9	0.6	4.6	0.7	8.1
total	1.3	13.1	1.2	8.6	1.3	15.6
Rep. of Korea						
life	11.6	929.3	9.9	935.6	6.8	1,006.8
non-life	3.8	303.0	3.2	298.5	2.8	412.5
total	15.4	1,232.3	13.1	1,234.1	9.6	1,419.3
Malaysia						
life	2.2	99.0	2.1	86.4	3.5	167.3
non-life	2.2	99.8	1.6	64.6	1.9	89.3
total	4.4	198.8	3.7	151.0	5.4	256.6
Philippines						
life	0.7	8.0	0.8	7.5	0.9	9.4
non-life	0.8	9.1	0.6	6.0	0.6	6.1
total	1.5	17.1	1.4	13.5	1.5	15.5
Thailand						
life	1.2	26.2	1.5	29.8	1.9	50.8
non-life	1.2	26.3	1.0	19.4	1.6	41.4
total	2.4	52.5	2.5	49.3	3.5	92.2
Hong Kong (China)						
life	2.4	646.3	3.7	892.9	7.9	1,884.3
non-life	1.1	299.2	1.1	269.1	1.4	332.9
total	3.5	945.5	4.8	1,162.0	9.3	2,217.2
Singapore						
life	3.8	989.0	3.2	732.1	6.0	1,483.9
non-life	1.3	338.3	1.0	234.2	1.5	365.5
total	5.1	1,327.3	4.2	966.3	7.5	1,849.4

Source: Swiss Re, various issues.

Source: Ghosh, p 139

The alternative model for extending insurance is for banks to market insurance products. This model, known as bancassurance, developing rapidly in Europe, is also appearing in Asia.

A recent conference described the situation:
"Bancassurance in Asia has been a relatively recent phenomenon, drawing increasing attention as a rapidly growing distribution channel for insurance only since 2002. Notwithstanding its short history, bancassurance penetration in the region has increased tangibly to capture market shares in excess of 20% of life premium in the more developed bancassurance markets within Asia". (6th Annual Bancassurance Asia conference (http://www.marcusevans.com/events/CFEventinfo.asp?EventID=11113).[1]

Section II

Diversification and Integrated Financial Service Provision

Diversification of activities across different sectors of the financial industry has been a global phenomenon, increasingly observed in Asia as well. Banks have increasingly engaged in a variety of financial activities, providing new products and services that were previously not provided or were provided by non-bank financial institutions.

Discussion of the relative merits of allowing banks to engage in activities other than "pure banking" goes back to the early part of last century. The consensus view in the US after the Great Depression, represented by the passage of the Banking Act of 1933 (Glass-Steagal), was that it was safer to legislate for the complete separation of banking and other financial activities. This attitude persisted in the US despite the existence of other models of banking in equally successful advanced, industrialised countries such as Germany, which allowed "universal" banking. The repeal of Glass-Steagal and its replacement by Gramm-Leach-Bliley in 1999 was partly achieved because of empirical evidence suggesting that even in the US the alleged dangers of the universal banking model had been exaggerated (see Bentson, 1994 and Barth et al, 2000) and they had not played a crucial role in the Great Depression.

Because of this history, the US still lags other countries in the development of integrated financial services providers and the growth of financial conglomerates and financial holding companies. Elsewhere in the world the tendency to consolidation, conglomeration (or "convergence") and globalisation is very marked. Financial institutions are merging, both within markets and across borders, and are taking on a wide range of activities within conglomerated entities. The key drivers for the trend are usually identified as changes in regulations prohibiting cross sector activities, growing substitutability of different financial products (for example the savings product character of many insurance products), growing demand by customers for integrated provision of financial services from one provider, and new technologies that reduce the cost of providing multiple products, that allow marketing information to be provided easily to more customers and that also reduce the value of proprietary information that banks have on customers.

Models of integrated financial provision vary widely. They range from the full universal bank, which can provide all kinds of financial product, service and advice, to institutions that combine some but not all activities (e.g the crossing of banking with insurance in the *bancassurance* model, or the provision of securities and banking activities together). Some countries still insist on complete separation of all activities and maintain specialist banking alongside separate activities in other markets. In addition, even when banks are permitted to do the full range of financial activities there are several business models from delivery via wholly, or partly, owned subsidiaries to full conglomerates or financial holding companies. The result is not only a blurring of the boundaries of type of

financial product (is an insurance contract a "saving" product or not?) and service but also of type of institution. Furthermore, new technologies have introduced entirely new players into financial markets, with the advent of internet-only banks, banking activities by supermarkets and other retail outlets and the introduction of e-money and stored value cards by providers ranging from car-park operators to railways.

These developments raise a number of questions about the impact of financial structure on the efficiency of the financial sector, the development of financial markets and financial stability and for the appropriate regulatory structure. A similar set of issues is raised by the related, but conceptually separate, issue of bank – commerce links (i.e. the ability of banks to own non-financial companies and vice-versa)

Claessens (2003) notes the difficulty of finding data on the extent of integrated financial services provision even globally but particularly in emerging markets. He makes the point, however, that although banks and banking services appear to dominate the financial landscape in emerging markets it does not follow that IFSP is not occurring. Some of the integration occurs through provision of multiple services in a single institution but frequently it occurs through elaborate cross-ownership structures in financial groups (often family owned or conglomerates such as Korean chaebol and Japanese keiretsu). Such financial conglomerates have frequently been both common and important in the development of emerging financial markets. Ghosh (2006) records that at the end of 2003, of the 200 largest financial firms in the region, 111 are conglomerates, accounting for 80 percent of the total assets of those top 200 firms (p 170, no source is give for this data).

How much is happening in Asia?

There is little data on the extent of convergence activity across financial sectors at a macroeconomic, or even, industry level. Occasional industry surveys provided snapshots but the best source is bank accounting data. For international comparisons this can be problematic since accounting procedures differ and coverage is limited to those banks (usually only the listed, public companies) that are required to disclose information. This means excluding smaller banks, credit cooperatives and mutuals. Further, it gives no information on the extent of the provision of integrated services by non-banks since there is no comparable data on securities companies, insurance houses etc. However, Table z shows that there has been some increase in diversified activity in most Asian economies, taking banks' income diversification index to comparable levels to the UK and Germany. The US remains at lower levels despite the repeal of Glass-Steagal in 1999.

TABLE 6

TABLE 4.4 Measures of Consolidation and Diversification of Banking Sector Activities

Economy	Median size of assets (US$ billions)		Median size of deposits (US$ billions)		Median market share of assets (percent)		Income diversification index	
	1998	2004	1998	2004	1998	2004	1998	2004
Indonesia	0.2	0.8	0.1	0.6	0.4	0.7	0.46	0.45
Rep. of Korea	16.7	61.9	10.2	42.1	4.0	5.8	0.65	0.61
Malaysia	1.9	7.4	1.3	5.0	1.3	2.7	0.53	0.64
Philippines	0.4	1.3	0.3	0.9	0.8	2.4	0.57	0.65
Thailand	4.4	13.4	4.1	11.8	3.9	6.9	0.41	0.61
Hong Kong (China)	3.3	5.0	2.3	4.2	0.9	0.6	0.43	0.61
Singapore	2.2	0.8	1.9	0.8	0.8	0.2	0.40	0.41
Germany	1.0	1.9	0.9	1.7	0.03	0.03	0.60	0.65
United Kingdom	1.2	2.3	0.9	1.8	0.03	0.02	0.63	0.61
United States	1.4	2.2	1.0	1.5	0.01	0.01	0.46	0.49
Bolivia	0.3	0.2	0.3	0.2	n.a.	n.a.	n.a.	n.a.
Greece	4.4	3.6	3.2	3.1	n.a.	n.a.	n.a.	n.a.
Mexico	0.4	0.9	0.3	0.6	n.a.	n.a.	n.a.	n.a.
Turkey	1.0	3.7	0.8	2.6	n.a.	n.a.	n.a.	n.a.
Ukraine	0.0	0.3	0.0	0.3	n.a.	n.a.	n.a.	n.a.

Source: Bankscope.

Notes: Income diversity averaged by country. Score of 1 denotes perfect diversity between commercial banking and investment banking activities; score of 0 denotes specialization in one activity. The index is calculated as: 1 – abs [(net interest income - other operating income) / total operating income], where abs denotes the absolute value. The index is averaged by country.

n.a. = not available.

Source: Ghosh, 2006, p82

The diversification index is calculated as

1 – abs(net interest income – other operating income)/total operating income

so that if interest income and other sources of operating income are exactly equal, the index will be one, indicating perfect diversity. Any imbalance of income will reduce the index.[2]

Another view of the scale of the issues posed by financial conglomerates is given by IMF, 2004, reproduced as Table 7 below. This data shows that Asia is not significantly behind the rest of the world in terms of the share of conglomerates amongst the largest financial firms

TABLE 7

7. **In terms of regional trends, conglomeration increased in all regions depicted in Table 2 below as measured by the number of conglomerates among the largest financial firms.** The same holds true—except for the United States—if we measure the prevalence of conglomeration by total assets.

Table 2. Conglomeration Trends: by Region

	1995			2000		
	Number of	Conglomerates %)		Number of	Conglomerates (%)	
Region	Institutions	Number	Assets	Institutions	Number	Assets
Unites States	102	42.0	78.6	109	61.5	73.0
Canada	18	61.0	87.4	14	71.4	89.6
Japan	127	7.0	44.0	119	21.0	57.3
Australia	9	66.0	81.8	9	100.0	100.0
Western Europe	201	61.7	89.4	162	73.5	91.6
Eastern Europe	–	–	–	4	100.0	100.0
Latin America	5	40.0	64.6	16	93.8	96.3
Asia	32	31.3	31.2	51	64.7	68.4
Africa and Middle East	6	66.0	55.3	16	100.0	100.0
Total	500	41.8	72.1	500	59.6	80.1

Source: De Nicoló et al. (2003a), original data from Worldscope.

What are the pros and cons of integrated provision of financial services? There appear to be no studies of the costs and benefits of the trend to integrated services in emerging markets and few studies of the related, but narrower, question of the advantages of universal banks (Claessens, 2003). The key advantages of universal banks are usually claimed to be the exploitation of informational advantages (economies of scope), that they can economise on skilled labour (which may be important in developing countries with skill shortages), that they can engage in corporate restructuring more efficiently because of their specialised knowledge of clients and that they may be more stable because they can diversify risk. On the other hand, the fears are that universal banks will face conflicts of interest, will increase the volatility or fragility of financial systems, that by concentrating financial power they will restrict competition and innovation and that they pose special challenges for supervisors and regulators.

A growing body of literature addresses several of these issues for universal banks (although most of the work is for developed, industrialised countries). Conflicts of interest are common in finance, even in systems with specialised institutions but it is argued that integrated providers have greater opportunities to take advantage of specialised information and to abuse customers (these may take many forms, for example, banks promoting the securities of their borrower firms over better alternatives or banks unloading poor securities for which they are underwriters into other investment vehicles that they manage, at the expense of investors). Claessens surveys some evidence (Lehar and Randl, 2001; Gande, Puri, Saunders and Walter) that tends not to support the abuse of conflicts of interest. On the other hand, Ber, Yafeh and Yosha (2001) find that universal Israeli banks, while bringing better quality firms to market, significantly underprice their IPOs and when shares are bought by bank-managed funds they tend to pay too much. They interpret this as evidence of conflict of interest between bank

lending, underwriting and fund management. There is, however, little evidence to support the claim that universal banks limited competition in those markets where they had a long history, such as Germany.

The impact of diversification on the performance of financial systems can be assessed by direct evidence on economies of scope, that is, whether there are cost savings resulting from increased diversification of activities, or by indirect methods, looking for how the market values diversification (or mergers) of financial institutions.

Leuven (2005) examines whether diversification of activities improves bank profitability and finds evidence of a diversification “discount”. The study uses the ratio of operating income to assets as a measure of profits (while noting that higher profits measured in this way could mean higher excess profits, reflecting low levels of competition) and finds negative and significant effects of increased diversity (using both diversification in income flows and asset structures. Leuven concludes that “operating income of banks that engage in multiple activities is much lower than if those banks were broken up into financial intermediaries that specialize in the individual activities. The results are “consistent’ with the view that diversification intensifies agency problems in financial conglomerates with adverse implications on performance and these “costs” to diversification outweigh any benefits accruing from economies of scope.” Leuven and Levine (2006) use market valuations to test a similar hypothesis and again confirm the discount.

The development of integrated services, or its restriction, depends both on regulatory structures and on the market environment. And regardless of the formal structure of regulation, the manner in which integrated providers behave will depend on the effectiveness of implementation of the regulation, the quality of supervision and on the response of market participants. As Claessens notes (p 100) “markets and regulators have dealt with conflict of interest issues within the same line of business or across businesses through reputation, voluntary codes and private standards, self-regulation, and, to some extent, government regulation and supervision.”

A number of databases have compiled information on the regulatory regimes in place covering restrictions on financial institutions to engage in integrated service provision. IMF (2001) concludes that the majority of countries (in a survey of 54 countries) allowed full universal banking (see Table A1 in Appendix A). The World Bank now has a database on over 150 countries regulatory structures. Table A2 in Appendix A has been compiled from a variety of these sources and shows the current situation in the Asian region. As in other countries the majority of Asian countries now permit banks to engage in securities and insurance business. There are more restrictions on engaging in real estate related business and some restrictions on bank-commerce links. At a more detailed level Barth, Caprio and Levine score the content of the regulations in each area. Appendix Table A3 and A 4 shows the whole sample of countries they use and the detailed definitions in the scoring. The Asian countries in the sample (Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Thailand) all scored in the

range 2 to 3.5 which puts them in the higher range among the sample (i.e. more restrictive).

Barth, Caprio and Levine, (2001 b) use these measures of restrictiveness to examine whether regulatory separation on banking and other activities has an effect on the development of markets or on bank performance. While the techniques are somewhat basic, the simple regression results suggest no statistically robust connection between restrictions (or their removal) on the development of the size and depth of financial markets. There is some evidence that restricting commercial banks from doing securities and real estate business causes an increase in net interest margins. They interpret these results as indicating a *negative* effect on bank efficiency but there is controversy over the interpretation of net interest margins. On the one hand low margins may indicate high funding costs while on the other they may indicate high lending rates – the former might imply inefficiency while the later might reflect monopoly profits and low competition. This latter interpretation would be more consistent with the findings of Laeven that diversification (i.e. the reduction of barriers to integrated services) would reduce earnings (the diversification discount). This does throw some doubt on the Barth et al stronger statement that the more restrictions are placed on banks' activities in the securities area the more inefficient banks are. In their 2001c paper they are more circumspect and claim only mixed results on the relationship between restrictiveness and banking sector development and efficiency. They also give results suggesting that restricting the mix of banking and securities increases the risk of banking crisis – so the benefits of diversifying risks, on their data, outweigh the risks of contagion across activities. Clearly there is more research needed on these important questions.

Part of the issue may be that the mere absence of preventive regulations does not guarantee that banks will take up the opportunity to diversify their activities. It is difficult to find direct tests of whether greater restrictiveness of formal regulations actually affect the extent to which banks engage in fee-based business or non-banking business[3]. Demirguc-Kunt, Leuven & Levine (2003) show that banks engaging in fee-based activities tend to have lower margins, "consistent with – though not direct evidence of – cross-subsidization of bank activities". They also add evidence to the Barth et al finding that banking restrictions increase bank margins – and by substantial amounts :

> " in countries that restrict banks from engaging in nontraditional activities, such as securities underwriting, real estate, owning non-financial firms, and insurance, margins tend to be larger. The economic size of the effect is substantial. For instance, if Mexico had the same level of restrictions on activities as Korea (2.25 instead of 3), this one-standard deviation drop in Activity restrictions would induce a full percentage point drop in net interest margins in Mexico according to regression 2 in Table 4 (0.75*1.4). Thus, a one-standard deviation drop in Activity restrictions translates into 0.6 of a standard deviation drop in the net interest margin." (p 18)

With more careful analysis, however, they show that most of these effects disappear once the general quality of institutional structures (such as property rights and economic freedom) are accounted for. They " do not interpret these results as suggesting that bank

regulations are unimportant for explaining bank margins. Rather, we interpret the findings as consistent with a strand of literature that emphasizes that policies and regulations stem from national institutions." Thus, national institutions that support private sector activity are likely also to support a less restricted and more efficient banking sector.

Cross border banking activity

In addition to the growth of cross-sector integration an important aspect, globally, and in East Asia, is the extent of integration of financial markets across borders. The literature here is vast and growing and there is not space to describe it here. The concensus view remains that economies in the region are not highly integrated with each others' financial markets (despite the discussions of contagion after the financial crisis) and are more connected and integrated with global markets than with regional. In the past, extra-regional markets were a more important source of capital flows than internal. One aspect however impacts on the regulatory and supervisory issues of concern here and that is the extent of cross-border operation of financial conglomerates. As Table w shows, there have been a significant numbers of cross-border banking investments in recent years and, where these groups continue to operate in multiple markets they pose additional regulatory and supervisory challenges. This is clearly a subject for further research.

TABLE 8

APPENDIX TABLE 2.1 Intra-Region Cross-Border Banking Investments

Year of announcement	Investor	Investee/target	Transaction details
2001	DSB Group, holding company of DBS bank (Singapore)	Dao Heng Bank (Hong Kong, China)	DBS Group bought 71% of Dao Heng Bank from Hong Kong–based Guoco Group
	HSBC (Hong Kong, China)	Bank of Shanghai (China)	HSBC acquired a % holding in Bank of Shanghai
2002	Hang Seng Bank HSBC subsidiary (Hong Kong, China) and IFC	Industrial Bank Co Ltd (China)	Hang Seng acquired 15.98% and IFC acquired a 4% equity stake
2003	Consortium led by Tamasek (Singapore) and Deutsche Bank (Germany)	Bank Danamon (Indonesia)	Majority stake
	Kookmin Bank (Korea) and Tamasek Holdings (Singapore)	Bank International Indonesia (Indonesia)	51% stake
2004	DBS Group (Singapore)	Thai Military Bank and Industrial Finance (Thailand)	16% stake
	OCBC (Singapore)	Bank NISP (Indonesia)	22.5% stake
	HSBC (Hong Kong, China)	Bank of Communications (China)	19.9% stake
	Wang Hang Bank (Hong Kong, China)	First Sino Bank (Shanghai-based, China)	5% stake
2005	Tamasek (Singapore)	Langkah Bahagia (Malaysia). Under the deal, Langkah Bahagia has sold a 15.4% stake in Malaysian Plantations, the 100% shareholder of Alliance Bank Berhad.	15.4% stake
	Tamasek (Singapore)	China Construction Bank (China) from SAFE Investments Ltd.	5.1% stake

Source: Ghosh, 2006, Appendix 1, p 182

Section III

What are the implications for financial regulators

Financial regulators were faced with a number of challenges after the Asian financial crisis that would have been difficult enough to deal with even if the financial world had not been changing around them. As described above, however, the global financial landscape has been changing and presents some challenges for regulators everywhere.

Single versus Multiple Supervisors

With the growth of integrated financial service provision and the wave of mergers creating large financial conglomerates, many countries have questioned whether the supervisory arrangements of previous decades are still appropriate. The pace of financial innovation has increased, financial conglomerates are not only complex organizations to supervise but also change the way in which risk is transmitted within the financial system. As a result both the risks in the system and the regulatory objectives have become more complex.

There is a considerable literature debating the pros and cons of single versus multiple regulators (cf World Bank, 2006; Cihak and Podpiera, 2006; Llewellyn 2006, Siregar and James, 2006,). Most of the arguments are well summarized in the following table from Ghosh, 2006, p 172

TABLE 9

TABLE 8.2 Advantages and Disadvantages of Different Models of Regulatory Structure

Model	Advantages	Disadvantages
Unified supervisor (either inside or outside the central bank)	Facilitates the supervision of financial conglomerates on a consolidated basis. Allows better monitoring of issues affecting the entire financial system, as well as rapid policy responses. Allows the development and implementation of a unified approach of regulation and supervision across the entire financial system, reducing regulatory arbitrage. Strengthens accountability of supervisors. Maximizes economies of scale and scope, contributing to a better use of resources.	The merger process may reduce supervisory effectiveness during the transition period and possibly beyond. It may undermine the overall effectiveness of supervision by not recognizing the unique characteristics of the banking, securities, and insurance industries. There are other schemes to achieve prompt information-sharing and collaboration among existing agencies. May only work in certain countries and may be more suited for developed financial systems. Gains in terms of economies of scale may not be significant.
Partially unified agencies (agencies supervising banks and securities firms, banks and insurance firms, or securities and insurance firms)	Provides some economies of scale. Does not over-concentrate power. Less costly than having one supervisor for each intermediary. Deals better with conglomerates than does the model of multiple supervisors, provided the dominant intermediary in a conglomerate is supervised by the agency.	Little chance of extracting synergies from different types of regulation. Cost still relatively high. Potential for culture clash between banking (prudential) and securities (conduct) regulators within the one agency. May involve conflict among objectives within the banking/securities regulator or between banking/insurance regulators. Still requires coordination and cooperation, especially if financial conglomerates are present. Potential for regulatory gaps, overlaps, and arbitrage remains.
Separate supervisors (at least one for banks, one for securities firms, and one for insurers)	Agencies will be better prepared to understand the unique characteristics of the business that they supervise. A system of checks and balances among supervisors can be put in place.	Difficulties in cooperation and information sharing among different agencies. Difficulties in implementing consolidated supervision. Each agency may develop its own prudential rules, allowing the potential for regulatory arbitrage. High cost of regulation and supervision.

Llewellyn (2006) notes that there are many variations of the model of unified agencies. He distinguishes integrated agencies from unified ones and from the twin peaks model. Integrated agencies supervise all types of financial institution and activity in one agency but may be limited in what aspects of the business they cover. A unified agency, in his terminology, is one that covers not only prudential supervision but also "conduct-of-business" supervision (i.e. consumer and investor protection issues such as disclosure, fairness etc). There is, furthermore, a spectrum of agencies with some covering more than one, but not all, parts of the financial system (e.g. the Australian system where APRA supervises banking and insurance but not the securities industry). The "twin peaks" model has two bodies, one to carry out prudential supervision and the other to do "conduct-of-business" supervision (consumer protection). This model raises the question of whether the Central Bank should become the prudential supervisor across the whole financial system, which may have the risk that safety nets become extended to areas beyond those for which they were originally designed. The question of what role should be played by the Central Bank is an important one, and particularly so in East

Asia where many countries still rely on the CB for supervision, but not one that we explicitly address in this paper.

A number of surveys indicate the very wide range of models around the world. Llewellyn gives the results shown in Table 10 from his own data (probably dated around 2004-5) but notes that arrangements change rapidly and cannot always be easily interpreted because of local arrangements (such as local government powers). Cihak and Podpiera, 2006, give a different sample (for 2004) in which 33% have a single prudential supervisor, 6% an agency supervising banks and securities firms, 11% one supervisor for banks and insurers and 9% one for securities firms and insurers. The remaining 44% have multiple sector supervisors. Their data indicate the difficulty of accurately categorising arrangements since they classify Australia has having a single supervisor. Martinez and Rose, 2003, correctly categorize Australia and show a distribution (for 77 countries in 2002) of 29% with a single supervisor, 8% doing banks and securities firms, 13% doing banks with insurers, 9% doing securities firms and insurers and the remaining 38% with multiple supervisors. Thus, the majority of countries are still supervising separately but the striking feature is how varied is the international experience.

Table 10

Fully Integrated	39
Central Bank	9
Other	30
Partially Integrated	23
Banks and Insurance	9
Banks and Securities	5
Insurance and Securities	9
Separate	43
TOTAL	105

Source: Llewellyn, 2006

Barth et al, 2006, note the increasing trend to integrated financial supervision but point out that interpretations of how to classify countries vary widely. They give data based on regulators own responses to a World Bank survey but still have some doubts about the reliability of the data and note that researchers may disagree about appropriate classification because the legal details are often complex. On their data, 11out of 32 countries in the Asia Pacific region have a single supervisor for the financial sector. They also add to this picture the fact that some countries have multiple supervisors for one type of financial institution (typically banks). In their sample of 153 countries, 127 had a single supervisor for banks while the remainder had multiple supervisors just for banks.

Within East Asia the picture is equally varied. Appendix Table A5 (data based on primary sources where possible) gives details of East Asian supervisory arrangements. The results are summarized here in Table 11.

TABLE 11.

Integrated	Banking & Securities	Banking and Insurance	Securities and Insurance	B, S, I separate	Central Bank supervises banks?
Singapore(1984)					Yes
		Malaysia (1988)			Y
Japan (1998)					
Korea[e] (1999)					N
Taiwan[e] (2004)					N
				China [e]	N
				Hong Kong	Y
				Indonesia[a]	Y
				Philippines[b]	Y
				Thailand [c,e]	Y
	Lao ? [d]				Y
				Cambodia	Y
				Vietnam	Y

Notes: a) Designing and debating a single regulator
b) Two banking supervisors
c) Banking supervisor also covers asset management and other financial services
d) Not clear where securities would be regulated
e) Barth et al, 2006, classifies these as having multiple bank supervisors
Source: See Appendix Table

It seems that the division within the East Asian region is broadly along income lines, with the higher income group mainly having moved, mostly quite recently, to the integrated supervision model. There are few studies of why countries choose integrated supervision. Cihak and Podpiera report the results of a handful of studies that indicate that the main reasons for adoption have to do with the presence of conglomerates, the size of the economic system (larger systems are more likely to have integrated supervisors), a recent financial crisis, possibly some effect of the legal traditions (civil vs common law) and the role of the central bank (the more the central bank is involved the less likely to have integrated supervision because of the risk to safety nets). Barth et al, 2006, provide a more elaborate political economy analysis of the choice of bank regulations (including, but not limited to, the choice of multiple vs single bank regulators but not extending to the issue of integrated supervision) and conclude that political institutional factors influence the choice of regulation but that angels do not yet govern. Typically government-dominated regulatory systems do not enhance performance – systems that privilege market discipline over regulatory discipline perform best.

Despite the considerable theoretical debate about the pattern of supervision, there are almost no empirical studies of the impact of integrated supervisors. Chihak and Podpiera, 2006, is a first attempt at assessing whether integrated supervisors have higher standards of supervision and have more consistent supervision across sectors. They also consider the evidence for cost savings in integrated supervisors, measured by reduction in staff numbers. Their results are suggestive but both the quality of data and the econometric methods are rudimentary and the results cannot be taken as robust. They use the results of World Bank-IMF surveys on compliance with international standards represented by the Basel Core Principals, the IOSCO Objectives and Principles of Securities Regulation and the International Association of Insurance Supervisors Insurance Core Principals. The data is only partly public since countries are not obliged to reveal the results of the Financial Sector Assessment Programs. They use 65 assessments, between the years 2000-2002, and calculate indices of compliance with the overall codes and with components of the codes. Using the overall compliance indicator as a quality index they give some basic regression results that suggest that there is very little impact of integrated supervision on quality. In their sample, integrated supervision is much more common amongst high income countries and those with a generally good quality government regulatory environment. Once these characteristics are accounted for there is little additional effect from integrated supervision. Similarly there is little effect on the consistency of supervision across different financial sectors (measured by the variation in particular aspects of compliance across different financial sectors) and there is little evidence of staff savings. How much can be taken from these results for making judgements about the benefits of integration remains unclear. The specification of the regressions is problematic and the results are not reported with enough detail to be meaningful. The main impression is that we still know little about the effect of integrated supervisors.

This partly explains why there is no consensus view about what system works best. The present World Bank view is that different countries may well need (or be able to get by with) different systems. Importantly they also stress that the transition from multiple, specialist supervisors to single, integrated supervisor is a complex process that can be costly and difficult (Martinez and Rose, 2003). The results of Barth et al confirm that, more important than the organisational form of supervision, a supervisory philosophy that favours a high quality regulatory environment (low corruption, transparency etc) and that supports private property rights, information transparency and market discipline are more important than the specifics of who regulates what and how. Nevertheless, as risk and complexity in financial systems rise it seems likely that governments will continue to struggle with the choice of appropriate system and that the effects of those choices may become increasingly important.

Conclusions

Asia's financial structures have changed since the financial crisis – in particular ownership structures have changed and are still changing

Markets have deepened and widened and there is a greater variety of products and services available.

Financial conglomerates have always been a feature of some markets in the region and there is evidence of growth in the diversification of activities by banking sectors. Thus the global trend to integrated financial service provision seems to occur in Asia.

Regulations do not prohibit cross-sectoral activity in many countries in the region – many countries permit banks to engage in non-banking activity to varying degrees. Overall the region falls in the mid-range of the degree of restrictiveness of its regulations.

It is not clear, from international evidence, whether integrated financial services have positive impacts on the development of financial systems (depth etc)

It is also not clear whether lower regulatory barriers on cross-section operation (e.g. prohibiting banks' operation in securities or insurance business) improve efficiency, development and soundness of financial systems. Evidence is mixed but suggests that fewer restrictions, associated generally with less government interevention in markets, improve efficiency of banks. At the firm level there is evidence of diversification discounts in financial conglomerates and of conflicts of interest.

But the trend seems set regardless so there are supervisory issues that need to be addressed: do integrated financial systems need integrated financial supervisors? Nobody knows. Within the region there has been a movement towards integrated supervision, but there is still a divide between richer and poorer countries. This could be an area for mutual support and experience sharing – also for monitoring performance.

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Appendix
TABLE A1

Table 5.4. Permissible Activities[1] for Banking Organizations in Various Emerging Markets

Country	Securities[2]	Insurance[3]	Bank Investments in Industrial Firms[4]	Industrial Firm Investments in Banks
Hong Kong SAR	Permitted, subject to limits based on bank capital	Permitted, subject to limits based on bank capital	Permitted, subject to limits based on bank capital	Permitted, subject to regulatory consent
Republic of Korea	Permitted through affiliates	Permitted through affiliates	Subject to prior approval for investments in excess of 15%	Permitted for up to 100% of the bank's capital, subject to approval
Philippines	Permitted; expanded commercial banks may engage in securities activities directly or through a subsidiary	Insurance agency and brokerage permitted through subsidiaries	Permitted with limitations	Permitted with limitations
Singapore	Banks may hold equity participation in stock-brokering firms with MAS approval	Locally incorporated banks may own insurance companies with MAS approval	Limited in the aggregate to 40% of the bank's capital	Acquisitions of 5% or more require regulatory approval
Argentina	Permitted	Permitted through pension fund affiliates	Limited	Permitted but subject to prior approval
Brazil	Permitted through subsidiaries	Permitted through subsidiaries	Limited to suppliers to the bank	Permitted
Chile	Permitted	Insurance brokerage permitted	Not permitted	Permitted for up to 10% of equity with approval
Mexico	Permitted through affiliates	Permitted through affiliates	Not permitted	Permitted for up to 20% of equity with approval
Venezuela	Permitted; stock exchange activities and mutual funds	Permitted through subsidiaries, subject to controls under the insurance laws	Limited	Acquisitions of more than 10% of a bank's voting stock with approval
Czech Republic	Subject to authorization by the Securities Commission	Insurance brokerage permitted	Controlling interests prohibited. Qualified interests (i.e. 10% to 49%) permitted, but may not exceed (i.e., individually) 15% and, in the aggregate, 60% of bank's capital	Subject to regulatory approval for acquisitions of voting shares equal to or in excess of 10%, 20%, 33%, and 50%
Poland	Permitted; dealing in securities through subsidiaries	Permitted	Permitted up to 25% of the bank's capital	Permitted

Source: Institute of International Bankers (1999).
[1]With respect to the activities described, the chart indicates which types of financial activities are permitted. The chart is not intended to summarize the complete range of prudential restrictions that may apply to any such activities.
[2]Securities activities include underwriting, dealing, and brokering of all kinds of securities and all aspects of the mutual fund business.
[3]Insurance activities include underwriting and selling insurance as principal and as agent.
[4]Including investments through holding company structures.

Source: IMF, International Capital Market Report, 2001

TABLE A2

Permissible Activities for Banking Organizations

Country	Securities[1]	Insurance[2]	Real Estate[3]	Bank Investment in Industrial Firms[4]
North East Asia				
Japan	Permitted	Permitted	Prohibited	Restricted for non-financial firms
S. Korea	Permitted but under a ceiling	Not permitted	Not Permitted (except for its own use)	Permitted but need to apply for approval
China	Not permitted	Not permitted	Not Permitted (except for its own use)	Permitted in the form of special loans with the approval of the State Council
Hong Kong	Permitted for 'Restricted Licence Banks'	N/A	N/A	N/A
Taiwan	Permitted	Permitted	Permitted	Permitted
South East Asia				
Indonesia	Permitted	Permitted	Not permitted	Not permitted
Malaysia	Permitted	Permitted	N/A	Permitted but restricted
The Philippines	Permitted for both Universal and Commercial Banks with limitations	Permitted for both Universal and Commercial Banks with limitations	Permitted with limitations for Universal banks only	Permitted with limitations for Universal banks only
Thailand	Permitted	Permitted	Permitted	Permitted but restricted

Singapore	Banks may hold equity participation in stockbrokering firms with MAS approval	Locally incorporated banks may own insurance companies with MAS approval	Limitted in the aggregate to 20% of bank's capital	Interests in the excess of 10%, or that give the bank significant influence over the management of a company, require regulatory approval. In addition, a bank may not invest more than 2% of its capital funds in any individual firm.
Mekong Region				
Cambodia	Permitted	N/A	N/A	N/A
Laos	Not permitted	N/A	N/A	N/A
Viet Nam				

Note: Foreign ban subject to all dom laws

Note: 1/ Securities activities include underwriting, daling and brokering all kinds of securities and all aspects of the mutual fund business; 2/ Insurance activities include underwriting and selling insurance principal and as agent ; 3/ Real estate activities include real estate investment, development and management; 4/ Including investments through holding company structures.

N/A: No information is available.

Source: Information on all the **South East Asian countries** is from Siregar and James (2006); **Japan -** Bank regulation and supervision, Caprio, Levine & Barth (2003), World bank database; **China** - Article 43 of 'Law of the People's Republic of China on Commercial Banks' (ref. the full document, titled 'Law of China's Commercial Banks is in the folder of the H-drive); **Korea** - 'Regulation on Supervision of Banking Business' (ref. the full document, titled 'Korea Supervisory Law' is in the folder of the H-drive); **Hong Kong -** (http://www.info.gov.hk/hkma/eng/bank/three_tier/three_tier_f.htm); **Taiwan -** Article 3 of 'The Banking Act of the Republic of China (ref. the full document with the same title is in folder of the H-drive; **Cambodia -** Article 2-4 of 'Law on Banking and Financial Institutions' (ref. the full document with the same title is in folder of the H-drive); **Laos -** Article 14 of 'Decree of the Council of Ministers pertaining to the Management and Operations of Commercial Banks and Financial Institutions' (ref. the full document, titled 'Laos Decree on Bank Operations' is in the folder of the H-drive);

APPENDIX

Table A1. Quantitative Measures of Regulatory Restrictiveness for the Countries in the Sample

Country	SECURITIES	INSURANCE	REAL ESTATE	NONFINANCIAL FIRM OWNERSHIP*	RESTRICT
Argentina	3	2	2	3	2.50
Australia	1	2	3	2	2.00
Austria	1	2	1	1	1.25
Belgium	2	3	2	3	2.50
Brazil	2	3	2	3	2.50
Canada	2	2	2	3	2.25
Chile	2	3	4	4	3.25
Colombia	2	2	2	4	2.50
Denmark	1	2	2	2	1.75
Ecuador	2	4	4	n.a.	3.33
Egypt, Arab Rep.	3	3	2	2	2.50
Finland	1	3	2	1	1.75
France	1	2	2	1	1.50
Germany	1	3	2	1	1.75
Greece	2	3	3	1	2.25
Hong Kong (China)	1	2	2	3	2.00
India	2	4	3	3	3.00
Indonesia	2	4	4	4	3.50
Ireland	1	4	1	1	1.75
Israel	1	1	1	1	1.00
Italy	1	2	3	3	2.25
Japan	3	4	3	3	3.25
Korea, Rep. of	3	3	3	4	3.25
Malaysia	1	1	1	2	1.25
Mexico	2	2	3	4	2.75
Netherlands	1	2	2	1	1.50
New Zealand	2	2	2	1	1.75
Nigeria	1	2	2	2	1.75
Norway	2	2	2	2	2.00
Pakistan	2	4	3	2	2.75
Peru	2	4	3	4	3.25
Philippines	1	2	2	2	1.75
Portugal	1	2	3	2	2.00
Singapore	2	2	2	3	2.25
South Africa	1	2	3	2	2.00
Spain	1	2	3	1	1.75
Sri Lanka			1	1	1.00
Sweden	1	2	3	3	2.25
Switzerland	1	2	1	1	1.25
Thailand	2	2	2	3	2.25
Turkey	1	2	4	3	2.50
United Kingdom	1	2	1	1	1.25
United States	3	3	3	3	3.00
Uruguay	2	3	3	4	3.00
Venezuela	2	2	3	3	2.50

Source: Authors' calculations based on Barth, Nolle, and [illegible] ([illegible]), [illegible] ([illegible]), [illegible] ([illegible]), Institute of International Bankers *Global Survey* (various years), *Euromoney Banking Yearbook* 1996, and various central bank and government sources.

TABLE A3 Source: Barth, Caprio, Levine, 2001,

TABLE A4

Table 1

Information on Bank Regulatory, Supervisory and Deposit Insurance Variables

Variable	Definition	Source and Quantification	World Bank Guide Questions
I Bank Activity Regulatory Variables			
(a) Securities Activities	The extent to which banks may engage in underwriting, brokering and dealing in securities, and all aspects of the mutual fund industry	OCC and WBG 4.1 (higher values, more restrictive) Unrestricted = 1 = full range of activities can be conducted directly in the bank; Permitted = 2 = full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted = 3 = less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited = 4 = the activity cannot be conducted in either the bank or subsidiaries.	4.1 What is the level of regulatory restrictiveness for bank participation in securities activities (the ability of banks to engage in the business of securities underwriting, brokering, dealing, and all aspects of the mutual fund industry)?
(b) Insurance Activities	The extent to which banks may engage in insurance underwriting and selling	OCC and WBG 4.2 (higher values, more restrictive) Unrestricted = 1 = full range of activities can be conducted directly in the bank; Permitted = 2 = full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted = 3 = less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited = 4 = the activity cannot be conducted in either the bank or subsidiaries.	4.2 What is the level of regulatory restrictiveness for bank participation in insurance activities (the ability of banks to engage in insurance underwriting and selling)?
(c) Real Estate Activities	The extent to which banks may engage in real estate investment, development and management.	OCC and WBG 4.3 (higher values, more restrictive) Unrestricted = 1 = full range of activities can be conducted directly in the bank; Permitted = 2 = full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted = 3 = less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited = 4 = the activity cannot be conducted in either the bank or subsidiaries.	4.3 What is the level of regulatory restrictiveness for bank participation in real estate activities (the ability of banks to engage in real estate investment, development, and management)?

Source; Barth, Caprio and Levine, 2001, p 49

TABLE A5

Asian Financial Sector Regulators, January 2007		
Regulator	**Regulated Sector(s)**	**About the Regulator**
Singapore (integrated)		
1. Monetary Authority of Singapore http://www.mas.gov.sg	*banking, securities and insurance*	The Monetary Authority of Singapore (MAS) was establied in 1984. One of MAS' objectives made clear in its organizational profile is to supervise the banking, insurance, securities and future industries. (http://www.mas.gov.sg/masmcm/bin/pt1Introduction_to_MAS.htm)
Japan (integrated)		
1. Financial Services Agencies http://www.fsa.go.jp/en/about/about01_menu.html	*banking, securities and insurance*	The Financial Supervisory Agency (FSA) was established in 1998 as an administrative organization. It is responsible for the supervision of the banks, insurance, and securities businesses. (http://www.fsa.go.jp/en/about/about01_menu.html)
Korea (integrated)		
1. Financial Supervisory Service http://english.fss.or.kr/fsseng/index.jsp	*banking, securities and insurance*	The Financial Supervisory Service was created on January 2, 1999, under the Act on the Establishment of Financial Supervisory Organizations, with the merger of the Office of Bank Supervision of Bank of Korea, Securities Supervisory Board, Insurance Supervisory Board, and Korea Non-Bank Deposit Insurance Corporation. (http://english.fss.or.kr/fsseng/eabu/gov/msg.jsp?menuName=Governor&menuIndex=0)
Taiwan (integrated)		

1. Taiwan Financial Supervisory Commission *http://www.fscey.gov.tw/ct.asp?xItem=508412&CtNode=2225&mp=5*	banking, securities and insurance	In order to promote an integrated financial supervision, the Financial Supervisory Commission was established on 1 July 2004. The primary objectives of the Commission are to consolidate the supervision of banking, securities and insurance sectors, and to act as a single regulator for all of these industries. (http://www.fscey.gov.tw/ct.asp?xItem=508412&CtNode=2225&mp=5)
Malaysia (partially integrated)		
1. Bank Negara Malaysia http://www.bnm.gov.my	*banking and insurance*	Bank Negara Malaysia, the central bank of Malaysia, was established in 1959. It is the regulator of the banking sector (Cihak and Podpiera 2006). The insurance industry was brought under the supervision of BNM in 1988. (http://www.bnm.gov.my)
2. Securities Commission http://www.sc.com.my	*securities*	The Securitiries Commission (SC) established in 1993 under the Securities Commission Act 1993, is a self-funding statutory body with investigative and enforcement powers. The SC's regulatory functions include, for example, to approve authority for corporate bond issues and to regulate all matters relating to securities and futures contracts. (http://www.sc.com.my)
China (separate)		
1. China Banking Regulatory Commission *http://www.cbrc.gov.cn/mod_en00/jsp/en001000.jsp*	*banking*	The China Banking Regulatory Commission (CBRC) was established in 2003. The CBRC issues licences for and undertakes examinations on banks, asset management companies, investment trust companies and non-banking financial institutions (http://www.cbrc.gov.cn/mod_en01/jsp/en010001.jsp). Before that, the People's Bank of China supervised the bankig sector (Cai 1999).
2. *China Securities Regulatory Commission* *http://www.csrc.gov.cn/en/homepage/index_en.jsp*	securities	Created in 1998 as a minister-level organization, the China Securities Regulatory Commission (CSRC) oversees securities and futures markets; and investigates unfair transactions of listed companies, investment trust companies and investment advisory companies. (http://www.csrc.gov.cn/en/homepage/index_en.jsp)

3. *China Insurance Regulatory Commission* *http://www.circ.gov.cn/Portal45/default2727.htm*	insurance	The China Insurance Regulatory Commission (the "CIRC"), established on November 18, 1998, is authorized by the State Council to conduct administration, supervision and regulation of the Chinese insurance market, and to ensure that the insurance industry operates stably in compliance with law. (http://www.csrc.gov.cn/en/homepage/index_en.jsp)
Hong Kong (separate)		
1. *Hong Kong Monetary Authority* *http://www.info.gov.hk/hkma/eng/hkma/index.htm*	banking	The Hong Kong Monetary Authority (HKMA) was established in 1993. One of its policy objectives is to promote the safety and stability of the banking system through the regulation of banking business and the business of taking deposits, and the supervision of authorised institutions (http://www.info.gov.hk/hkma/eng/hkma/index.htm)
2. *Securities and Futures Commission* *http://www.sfc.hk/sfc/html/EN/*	*securities*	HKSFC is an independent statutory body established by the Securities and Futures Commission Ordinance (SFCO). It is responsible for administering the laws governing the securities and futures markets in Hong Kong. It regulates licensed corporations and individuals carrying out such regulated activities as dealing in securities, dealing in futures contracts, advising on securities, advising on futures contracts, advising on corporate finance, and securities margin financing. (http://www.sfc.hk/sfc/html/EN/aboutsfc/regulate/regulate.html)

3. *Office of the Commissioner of Insurance* http://www.oci.gov.hk/about/index.html	insurance	The responsibilities of the Office are (1) processing applications for authorization of general insurance business, (2) supervision of insurers carrying on general insurance business, (3) liaison with industry and professional bodies on matters relating to the regulation and development of the general insurance industry, (4) operation of the Government Terrorism Facility in respect of employees' compensation insurance, and (5) publishing insurance statistics on the Hong Kong general insurance market. (http://www.oci.gov.hk/about/index03.html)
Indonesia (separate)		
1. Bank Indonesia http://www.bi.go.id/web/en/	*banking*	The central bank as stated in Article 8 of Law 23/1999 is responsible for the tasks of regulating and supervising the banking sector (Siregar and James, 2004).
2. Capital Market Supervisory Agency (BAPEPAM) http://www.bapepam.go.id/old/E_index.htm	*securities*	According to the Law of the Republic of Indonesia No. 8 concerning the Capital Market, guidance, regulation, and day-to-day supervision of capital market is provided by Bapepam in order to implement an orderly, fair, and efficient capital market activities and protect the interests of investor and public (Siregar and James, 2004).
3. The Ministry of Finance http://www.depkeu.go.id/Ind/	*insurance*	Articulated in the Article 8 of Law 23/1999, the ministry of finance is responsible for the insurance sector (Siregar and James, 2004).
Philippines (separate) (Guinigundo, 2006)		
1. Bangko Sentral ng Pilipinas (Central Bank of the Philippines) http://www.bsp.gov.ph/	*banking*	The Bangko Sentral has supervision over the operations of banks and exercises such regulatory powers as provided in the New Central Bank Act and other pertinent laws over the operations of finance companies and non-bank financial institutions performing quasi-banking functions. (http://www.bsp.gov.ph/banking/overview.asp)
2. the Philippine Deposit Insurance Corporation (http://www.pdic.gov.ph/)	*banking*	Under the Department of Finance, the PDC is an insurer of deposits, co-regulator of banks, receiver and liquidator of closed banks. (http://www.pdic.gov.ph/mcv.asp#M)

3. Securities and Exchange Commission http://www.sec.gov.ph/	*securities*	The SEC was established on 26 Oct 1936 by virtue of the Commonwealth Act No. 83 or the Securities Act. Its major functions included registration of securities, analysis of every registered security, evaluation of the financial condition and operations of applicants for security issue, screening of applications for broker's or dealer's license and supervision of stock and bond brokers as well as the stock exchanges. The agency was abolished during the Japanese occupation and was replaced with the Philippine Executive Commission. It was reactivated in 1947. (http://www.sec.gov.ph/)
4. Insurance Commission http://www.insurance.gov.ph/	*insurance*	Its mandate is to regulate and supervise the insurance industry in accordance with the provisions of the Insurance Code. It authorizes insurance companies and other insurance intermediaries to transact business in the country, it also conducts examinations for insurance agencies either by walk-in or periodically in designated testing centers. (http://www.insurance.gov.ph/htm/_about_mandate.asp)
Thailand (separate)		
1. Bank of Thailand http://www.bot.or.th/bothomepage/index/index_e.asp	banking	The Bank of Thailand started operations on December 10, 1942. The BOT supervises, monitors and examines the operations of commercial banks, financial and credit foncier companies, international banking facilities, asset management companies, non-banks' credit card business and credit bureau to enhance the stability and transparency of the financial institutions system and to ensure that their operations meet internationally accepted standards. (http://www.bot.or.th/bothomepage/BankAtWork/AboutBOT/Response/History/Response_E.pdf)
2. Securities and Exchange Commission, Thailand http://www.sec.or.th/en/index.php	securities	The Securities and Exchange Commission,Thailand was established in 1992 and performs the functions of the capital market supervisory agency with the status of an independent state agency. The SEC was founded under the promulgation of the Securities and Exchange Act B.E. 2535. (http://www.sec.or.th/en/misc/sec/aboutsec/intro_e.shtml)

3. The Insurance Department *http://www.doi.go.th/*	insurance	Thailand's insurance regulator (http://www.nortonrose.com/html_pubs/view.asp?id=11239)
Cambodia (separate)		
1. National Bank of Cambodia *http://www.nbc.org.kh/*	banking	NBC was established in 1954. It supervises the banking system and its related activities. (http://www.nbc.org.kh/law.asp?id=7#14)
2. Securities and Regulations Working Committee	securities	There is no homepage found for this organization. It is documented in the link below http://law.utoledo.edu/students/financialregulators/asia.htm#CAMBODIA
3. The Ministry of Economy and Finance *http://www.mef.gov.kh*	insurance	The Insurance Law articulates that the Ministry of Economy and Finance shall be responsible for the control and supervision of the insurance business. http://www.cambodiainvestment.gov.kh/law%20on%20Insurance.asp
Laos (separate)		
1. Bank of the Lao P.D.R. *http://www.bol.gov.la/*	banking	The Decree on Bank Operations dictates that all activities of a commercial bank and a financial institution (except the State Treasury, Pension Fund, Insurance Companies) shall be under the supervision and control of the Bank on the Lao PDR. (http://www.law.nyu.edu/centralbankscenter/texts/Laos;%20Commercial%20Banks.html)
2. Insurance Department, Ministry of Finance *http://www.laoembassy.com/news/laoorga.html*	insurance	There is no homepage found for this organization. It is documented in the link below http://law.utoledo.edu/students/financialregulators/asia.htm#LAOS
3. No information is available for securities regulators.		
Vietnam (separate)		

1. State Bank of Vietnam *http://www.sbv.gov.vn/home/index.asp*	banking	The English-version homepage is under construction. It is documented as below, http://law.utoledo.edu/students/financialregulators/asia.htm#VIETNAM
2. State Securities Commission of Vietnam *http://www.ssc.gov.vn/ssc/defaulte.aspx?tabid=710)*	securities	The State Securities Commission (SSC) is an organization under the Ministry of Finance, charged with the functions of exercising the States regulation of securities and securities market, direct regulation and supervision of activities in securities and securities market, management of public services in the fields of securities and securities market in accordance with applicable laws. (http://www.ssc.gov.vn/ssc/Detaile.aspx?tabid=748)
3. Department of Insurance, Ministry of Finance *http://www.mof.gov.vn/DefaultE.aspx?tabid=197*	insurance	Source: 'Decision Promulgating the System of Supervisory Indicators for Insurers', http://www.mof.gov.vn/DefaultE.aspx?tabid=551(type 'insurance' in 'Search for Content' box)

Sources: As shown in table text, compiled directly from country information

ENDNOTES

[1] A Swiss Re report of 2002 gives some indication of the size of the sector: (with papers on effects of consolidation)

[2] See also ICMR 2001 p 147 Economies of Scope Table 5.3 non int inc by size. P 143

[3] Claessens (2003) attributes to Demirguc-Kunt, Leuven and Levine (2003) a result that severity of restrictions are negatively related to the share of non-fee income (p 117) which seems counter-intuitive but in fact that result is not contained in the cited paper (and I have not been able to find it in other work by these authors). It appears that this has not been directly researched and seems to be an obvious area for further work