

Searching for New Regulatory Frameworks for the Intermediate Financial Market Structure in Post-Crisis Asia

Sayuri Shirai

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In Asia, commercial banks are already playing an important role in the corporate bond market as issuers, underwriters, investors, and guarantors. This reflects banks' dominance of their financial markets, their high reputation, and the informational advantages they enjoy. Thus, banks should be encouraged to foster corporate bond market development and pursue a complementary role. Such a financial landscape can be characterized as an "intermediate financial market structure," which lies somewhere between a bank-dominated financial structure and a full-fledged capital market-based financial structure. This paper focuses on advantages and disadvantages that arise from banks' engagement in securities businesses and also examines regulatory frameworks that apply to the intermediate financial market structure.



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Sayuri Shirai

ABOUT THE AUTHOR

Sayuri Shirai is a visiting scholar at the Institute working in the fields of developing capital markets and strengthening financial and exchange systems. She is also an Associate Professor at Keio University and was formerly a staff economist at the International Monetary Fund.

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PREFACE

The ADB Institute aims to explore the most appropriate development paradigms for Asia composed of well-balanced combinations of the roles of markets, institutions, and governments in the post-crisis period.

Under this broad research project on development paradigms, the ADB Institute Research Paper Series will contribute to disseminating the Institute's works as a building block of the project and will invite comments and questions.

I trust that this series will provoke constructive discussions among policymakers as well as researchers about where Asian economies should go from the last crisis and current recovery.

Masaru Yoshitomi
Dean
ADB Institute

ABSTRACT

In Asia, commercial banks are already playing an important role in the corporate bond market as issuers, underwriters, investors, and guarantors. This reflects banks' dominance of their financial markets, their high reputation, and the informational advantages they enjoy. Thus, banks should be encouraged to foster corporate bond market development and pursue a complementary role. Such a financial landscape can be characterized as an "intermediate financial market structure," which lies somewhere between a bank-dominated financial structure and a full-fledged capital market-based financial structure.

When banks enter into securities and derivatives businesses in the intermediate financial market structure, however, they may experience various problems including a higher default ratio on their loans to firms, an emergence of new risk, and an aggravation of existing risk. Further, investors may suffer when conflicts of interest between investors and bank underwriters result in low quality of securities services. Issuers may also face higher switching costs, while other small firms may find it difficult to get financing from banks, particularly small ones.

Furthermore, more than ever, priority should be placed on strengthening the banking sector in the intermediate financial market structure as compared with the bank-dominated financial structure. In the case of Asia, three separate steps are required: (1) a removal of government intervention both in directing private bank credit to special industries, and in bailing out banks in distress regardless of their viability; (2) an imposition of limit on connected lending; and (3) an adoption of prudential regulation and supervision practices similar to those in industrial countries. On the third step, it should be recognized that traditional indicators frequently used in industrial countries to estimate the soundness of banks are not necessarily effective in Asia, suggesting the need to use additional indicators that reflect features specific to Asian countries.

Moreover, in order to contain various problems that may arise from banks' involvement with securities, it is important to examine the corporate form of banking organization and considers whether the problems should be mitigated by separating securities activities from banking activities through the establishment of legally separate subsidiaries. Also, regulators should gradually direct their supervisory methods toward more risk-focused monitoring than balance sheet-based monitoring. The attention should be placed on what types of risks banks are facing and how they manage those risks. As banks increasingly engage in securities and derivatives business, regulators need to coordinate in order to improve their effectiveness.

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Executive Summary

Intermediate Financial Market Structure

1. In a number of Asian countries, commercial banks are already playing an important role in the corporate bond market as issuers, underwriters, investors, and guarantors. This reflects banks' dominance of their financial markets, their high reputation, and the informational advantages they enjoy. Thus, banks should be encouraged to foster corporate bond market development and pursue a complementary role.
2. Such a financial landscape can be characterized as an "intermediate financial market structure". This situation lies somewhere between a bank-dominated financial structure and a full-fledged capital market-based financial structure. In the former, banks provide traditional banking services by taking public savings and financing business investment. In the latter, a large number of borrowers have direct access to corporate bonds in addition to bank loans and there are numerous, diversified investors who are willing to diversify their asset portfolios. In the latter case, corporate bonds substitute for bank loans extended to large, reputable corporations.
3. In the intermediate financial market structure, "long-term credit banks" may issue relatively medium-term bank debentures (i.e., of one to five years). This may be desirable, especially when a country has a sufficiently high rate of savings. Yet investors in those countries are reluctant to diversify their portfolios given their strong preference for safe, liquid bank deposits. These banks may transform short- and medium-term funds into long-term funds, which are in great demand from private sector investment projects, if such medium-term bank debentures are bought by relatively wealthy individuals, deposit-taking commercial banks, credit unions, etc., for their portfolio investment.
4. Initially, it may be desirable for the central bank to indirectly support bank debentures by using them in open market operations or qualifying them for a central bank discount window, in order to increase liquidity and boost investors' confidence in bank debentures. This support system may make bank debentures attractive payment reserve assets for commercial banks, which perennially depend on central bank borrowings. It should be pointed out that long-term credit banks have played a crucial role in Japan during the shift in industrial structure from light to heavy industries, by providing careful screening of new, venture-style industries and making bold investments based on their demand

forecasts during the high-growth period. However, this period coincided with a low-interest policy that included bank debentures. Thus, it is still debatable whether long-term credit banks can be developed, at least initially, without pursuing such financial restraint. Also, cofinancing with commercial banks can be used to strengthen discipline on the management of these banks.

Advantages

5. Various advantages accrue to banks from their involvement with securities. First, in recent years, banks have increasingly been experiencing a decline in their income from traditional banking services as domestic banking sector and capital account liberalization has taken place. As a result, banks find it difficult to maintain profitability and acquire implicit rents that would enable them to form long-term relationships with borrowers, by offering them discretionary, repetitive, and flexible banking services. Therefore, if banks are able to maintain long-term relationships with their clients throughout the latter's lifecycles—starting with bank loans and later switching to securities underwriting—banks will be encouraged to spend more resources in generating inside information about their clients and prudently monitoring client performance. Further, the diversification of banks' asset portfolios helps lower banks' costs of funds, which in turn reduces the costs that banks charge their lending and underwriting customers.
6. Second, banks are able to handle securities more efficiently than nonbank financial institutions thanks to the good reputation and informational advantages they enjoy. A high reputation improves investor confidence and encourages investors to purchase securities underwritten by banks. Also, since banks already possess inside information about their clients through relationship lending, they do not need to spend a great deal of their resources in order to underwrite securities, so their underwriting costs can be lower than those of nonbank underwriters. This advantage is strengthened further since banks can utilize their branch networks and staff in handling securities business. A lower underwriting cost would promote firms' investment growth and high economic growth.
7. Third, banks' involvement with securities may promote mergers and conglomeration of the banking sector, thereby improving operational efficiency.

8. Fourth, the development of long-term credit banks may result in fewer maturity mismatches and help develop domestic corporate bond markets by promoting long-term lending to the private sector.

Disadvantages

9. Banks' involvement with securities business can also have disadvantages for the banking sector, ultimate borrowers, and investors. First, banks may end up lending more to small firms if large, reputable firms increasingly raise funds through securities issuance. This will be especially so for small banks if large banks expand their lending and securities dealings with large clients and cut lending relationships with small ones. This suggests that banks face a higher default ratio on average bank credit, strengthening the need to improve their internal risk management system.
10. Second, banks may be encouraged to become megabanks through acquiring smaller, weaker banks in order to exploit economies of scale and diversification benefits. As a result, the number of small banks would decline and, thus, small firms may find it more difficult to obtain funds from banks.
11. Third, as banks increase in size through financial conglomeration, there may be a concentration of power in the sector. This could deter the development of capital markets, since banks tend to give priority to lending over securities businesses. Further, the concentration of power in the banking sector may discourage financial innovation, since banks' innovation generally focuses on cost saving rather than products. This reflects the fact that banks generally place priority on building reputation, reliability, and long-term commitment to their clients rather than providing advice about new financing strategies to their customers.
12. Fourth, issuers who have formed long-term relationships with bank underwriters may find it difficult to switch to independent underwriters, resulting in high switching costs. If public investors cannot trust independent underwriters, they would discount the value of corporate bonds underwritten by even honest underwriters.

13. Fifth, conflicts of interest between banks and investors may emerge, in instances when banks attempt to underwrite securities of troubled borrowers and the proceeds of the issues are used to pay off banks' own loans to the firms. The presence of such conflicts may weaken investor confidence in the capital market and discourage the market from developing further.
14. Sixth, when banks handle securities and derivatives on a large scale as dealers and/or end users, they face various risks, including the prospect that they will have to buy up unsold securities underwritten by them, counterparty risk, and market risk. This may weaken the banks' solvency and trigger systemic banking crises. In particular, derivatives are generally handled by a limited number of large banks, making a systemic banking crisis a plausible outcome. Further, derivatives activities may lower transparency by increasing the speed and complexity of transactions. Thus, regulators may find it increasingly difficult to contain risks associated with derivatives transactions because of the extreme difficulty in understanding the nature and risk involved, and the need for prompt international cooperation.
15. Therefore, in searching for appropriate regulatory frameworks for the intermediate financial market structure, the advantages and disadvantages described above should be carefully examined and regulatory frameworks should take into account those tradeoffs. In other words, regulatory frameworks for the intermediate financial market structure should include measures to (i) further strengthen the banking sector, (ii) contain disadvantages arising from banks' involvement with securities, (iii) cope with problems associated with derivatives, and (iv) coordinate between relevant regulators.

Strengthening the Banking Sector in Asia

16. More than ever, priority should be placed on strengthening the banking sector. First, banks face new or amplified risks because of their involvement with securities and derivatives, which potentially affects the solvency of the whole banking sector. Second, banks are likely to face a higher default ratio on their average bank credit, since large, reputable firms increasingly issue securities, meaning that only small firms without such access depend solely on bank loans.

17. But how should we strengthen the banking sector? In the case of Asia, three separate steps are required. The first is to remove government intervention both in directing private bank credit to special industries and/or selected companies, and in bailing out banks in distress regardless of their viability. Such interventions reduce banks' incentives to engage in risk management by processing idiosyncratic information about their clients and prudently monitoring borrowers' performance.
18. The second step is to limit connected lending—the offering of favorable terms to firms that are connected through shareholdings. In general, the ownership of Asian firms is highly concentrated because of family control and group affiliations, which generate a divergence between cash-flow rights and control rights. Even if ownership of cash-flow rights of each firm based on the share of stockholding is small, ownership of control rights based on voting rights can be concentrated, for example, through pyramid structures (where a firm owns a majority of the stock of one firm, which in turn holds a majority of the stock of another firm and this process can be repeated several times).
19. Banks are often incorporated in this pyramid structure, providing loans to affiliated firms without properly taking into account the risks involved. Therefore, special attention should be paid to the quality of banks' own capital, since bank shareholders—often concentrated through the pyramid structure—may constitute largely banks' affiliated firms and borrowers. It is difficult to improve the governance of the banking sector unless connected lending practices are contained through limiting such unfair transactions. At the same time, it is also important to limit mutual holdings of equity between banks and nonbank firms until banks improve their internal risk management systems.
20. While government intervention and connected lending are to be reduced, the third step is to adopt prudential regulation and supervision practices similar to those in industrial countries. This sequence is important because until the first two steps are dealt with, the soundness of the banking system will not improve meaningfully, even though sophisticated prudential regulations are introduced. One way to help contain connected lending would be to raise banks' capital requirements on such lending to a level far above those seen in industrial countries, until bank managements become clearly separated from ownership.
21. Moreover, it should be recognized that traditional indicators frequently used in industrial countries to estimate the soundness of banks (e.g., capital adequacy ratio, liquidity ratio,

and nonperforming loan ratio) are not necessarily effective in Asia. This is because accounting, auditing, and disclosure requirements are often inadequate and poorly enforced. Therefore, prudential regulations and supervision should be supplemented by market-related indicators in addition to traditional ones if the soundness of Asian banks is to be evaluated in a more realistic manner.

22. Market-related indicators include (i) deposit rates, (ii) interest rate spreads of banks, and (iii) interbank rates. The first two indicators are useful, because low interest rate spreads and high deposit rates indicate declining performance. This is because poorly managed banks attempt to increase their market share by rapidly expanding their loan portfolio through loans to risky borrowers and to gain funding by raising deposit rates. Since these banks do not increase lending rates because they know that this could cause their risky borrowers to default, their interest rate spreads decline. The third indicator is also useful, since banks may know the financial positions of other banks much better than depositors or bank shareholders because they conduct financial transactions with each other in interbank markets.

Containing Disadvantages

23. So how can the various disadvantages arising from banks' involvement with securities, such as solvency problems, conflicts of interest, high switching costs, and concentration of power be mitigated? And what corporate form should be selected? One needs to examine whether the disadvantages could be contained through a banking system where banks directly engage in securities activities. Alternatively, the disadvantages should be mitigated by separating securities activities from banking activities through the establishment of legally separate subsidiaries. The former refers to the universal banking (UB) form, while the latter is divided into two forms: (i) banks with their own subsidiaries ("bank subsidiary form"), and (ii) bank holding companies under which securities subsidiaries operate ("BHC form").
24. The UB form assumes that regulators are able to contain various risks associated with securities services and maintain the solvency of the banking sector. These can be achieved either by combining all activities within the banking entity, pooling risks, and imposing a common capital adequacy requirement on the combined businesses; or defining banking and securities activities and applying differential capital requirements on them based on definitions. The latter approach generally requires banks to set higher

capital adequacy requirements on banking services than securities services because bank services are exposed to liquidity and systemic risks. The latter includes the trading book approach adopted in the European Union, which segregates securities trading from other business and subjects the trading book alone to capital requirements.

25. In practice, however, such approaches may be difficult to implement. First, they require sophisticated accounting, auditing, and disclosure standards in order to mitigate disadvantages from securities dealings. Second, differential capital requirements among various types of services may give rise to regulatory arbitrage. Third, since banks are able to get lower funding through various safety nets compared with nonbank financial institutions, they may have stronger incentives to engage in securities business. This may lead to moral hazard problems, and worsen excessive risk taking by banks. These problems are serious, particularly in Asian developing countries where regulatory capacity and expertise are too limited to cope with the variety of problems arising from banks' securities business.

26. In this circumstance, it may be desirable for banks to engage in securities services at separate subsidiaries or legally independent firms. Thus, the choice will lie between the bank subsidiary form and the BHC form, both of which separate banking from securities with firewall provisions.

27. In Asia, the bank subsidiary form may be suitable for four reasons. The first is that banks may directly impose discipline on the management of their securities subsidiaries, while they are not able to do so under the BHC form. The second reason is that it is cheaper to establish the bank subsidiary form than the BHC form. Third, there appears to be a natural preference for the bank subsidiary form over the BHC form in countries whose banks are free to choose any form. These factors suggest that the bank subsidiary form is superior to the BHC form. Fourth, there is no strong evidence that firewall provisions of the BHC form are effective, especially in cases where nonbank affiliates fall into financial distress. This reduces, too, the advantages of the BHC form.

Managing Problems Associated with Derivatives

28. As derivatives business increases, banks—particularly large banks that originate large-scale business loans—need to enhance their internal credit rating systems. This requires both expertise and human resources, as quantitative and qualitative information

needs to be gathered on highly complicated transactions, comparing the standards for each grade of these transactions, weighting the transactions in choosing a borrower grade, and supplementing this process by establishing mathematical models. Thus, regulators should direct their supervisory methods toward more risk-focused monitoring than balance sheet-based monitoring. The attention should be placed on what types of risks banks are facing and how they manage those risks.

29. Further, regulators may be able to limit risk and problems associated with derivatives by encouraging the conduction of transactions at organized exchanges, or imposing margin requirements and/or increased collateral if transactions take place at the over-the-counter markets. Also, imposing a limit on large-scale derivatives activities may be desirable.

Coordinating Banking and Securities Market Regulators

30. As banks increasingly engage in securities and derivatives business, regulators need to coordinate in order to improve their effectiveness. They should examine whether to take an umbrella (functional) approach in which banking and securities regulatory authorities are separately established and coordinated, or a consolidated approach in which all relevant regulators are combined under a uniform authority. It may be desirable for Asian developing countries to select an umbrella approach since they usually do not have prudential regulations of sufficient strength nor banking sector supervision. Given this situation, integrating bank regulators with nonbanking regulators may reduce confidence in the overall financial system, as it could weaken the regulatory capacity of banking regulators if there are limited human and financial resources. Further, many countries have not established independent regulatory regimes that protect central banks from policy intervention. Thus, integrating the various regulators without ensuring independence may weaken the quality of the overall regulatory regime and with it, its credibility. Governments should place priority on prompt strengthening of bank regulation, while improving regulatory capacities for nonbanking business.

Searching for New Regulatory Frameworks for the Intermediate Financial Market Structure in Post-Crisis Asia

Sayuri Shirai¹

1. Introduction

Overreliance on bank loans has been viewed as the cause of the severe double mismatches (currency and maturity mismatches) and the Asian financial crisis of 1997-1999. As a result, it is widely viewed that Asian countries should reduce their dependence on bank loans and expedite the development of securities markets as alternative sources of private investment financing. Indeed, bond markets do matter, since market-determined interest rates are critical for hedging various risks and forming the basis of pricing other financial assets, and achieving a more efficient resource allocation.

However, it will take a long time before domestic securities markets, particularly viable domestic corporate bond markets, are fully developed, for several reasons (Yoshitomi and Shirai, 2001). First, Asian countries have an abundance of small and medium enterprises (SMEs), so the information asymmetry between ultimate investors and ultimate borrowers is generally large. When firms are small and relatively new, their past and expected returns are highly idiosyncratic and firm-specific. In this circumstance, their commitment to payments and thus creditworthiness as well as business prospects are largely uncertain. Since it is not easy to make such information standardized and thus transferable to ultimate creditors (or public investors), an information gap between ultimate borrowers and ultimate creditors remains large and thereby the former find it difficult to attract public investors without paying prohibitively high interest rates.

¹ This paper benefited from many insightful and useful comments received at the Third Brain-Storming Seminar of the Asian Policy Forum on “How to Design a Financial Market Structure in Post-Crisis Asia,” Japan, 26 January 2001; the Fourth Brain-Storming Seminar of the Asian Policy Forum on “How to Design a Financial Market Structure in Post-Crisis Asia,” Japan, 26 March 2001; a seminar of the Asian Development Bank Annual Meeting in Hawaii, 8 May 2000; the Third Asia Development Forum, Thailand, 11-14 June 2001; the Thirteenth Annual PACAP/FMA Finance Conference, the Republic of Korea, 5-7 July 2001; the SEACEN-ADB Institute Seminar on “Development of Capital Markets,” Malaysia, 16-20 July 2001; and the Second Wharton School/ADB Institute Joint Seminar on “Regulatory Differences between Banks and Securities Markets: Implications for Crisis Prevention and Management,” Japan, 26-27 July 2001. I am grateful to Dr. Masaru Yoshitomi, Prof. Hideki Kanda, Prof. Richard Herring, Dr. Philip Turner, and Mr. Lie Ker for their insightful comments. I also acknowledge the help of Mr. Prithipal Rajasekaran for his excellent research assistance.

Second, the pace of financial asset accumulation has been relatively slow in a number of Asian developing countries, suggesting that the investor base in the corporate bond market is narrow and small. When a country's income per capita level is low and economic development is still in the early stage, there are generally few households or individuals that are able to save their income, and thus saving rates are low. In this situation, households are highly risk-averse and prefer holding their assets in the form of safe, liquid assets, such as bank deposits. At the same time, the lack of diversified financial assets leaves them no other choice but to concentrate their financial assets on bank deposits. As their incomes increase, they increasingly diversify their assets to higher-risk and potentially higher-return assets, such as bonds, equity, and derivatives.

Further, there are few institutional investors in Asian developing countries. The development of pension and insurance industries, and collective savings schemes is closely associated with the income level of the country. For example, the Republic of Korea (henceforth, Korea) has more diversified and large financial institutions, including pension and insurance firms, investment trust funds, and mutual funds, compared with Indonesia and Thailand whose income per capita is much lower. These financial institutions are potentially important institutional investors in the corporate bond markets and generally constitute a major driving force in the expansion and diversification of the investor base.

Third, developing viable corporate bond markets requires an informational, legal, and judiciary infrastructure that would ensure that public investors are able to make investment decisions confidently and thus are willing to bear the risks. Such confidence is enhanced if transparency is improved and a legal and judiciary infrastructure is established where public investors who are suspicious of fraud are able to appeal to courts at relatively low cost and cases are promptly processed. The infrastructure includes (i) securities laws that require issuers to use proper accounting and auditing standards, disclose relevant information promptly, and prohibit any fraud by issuers and market intermediaries (such as investment firms) against public investors; (ii) judiciary systems (including courts, lawyers, judges, etc.) that enforce the securities laws; and (iii) the establishment of credit rating agencies, and mobilization of well-trained accountants and auditors. Since such an infrastructure requires a high degree of sophistication and efficiency, it takes a long time to develop.

Thus, in Asian developing countries, development of viable domestic corporate bond markets is likely to take time and so the banking sector will probably remain dominant in the foreseeable future. It is generally viewed that the banking system emerges at the initial stage

of economic development, as discussed extensively in Yoshitomi and Shirai (2001). The following question then arises: what policies should Asian countries adopt in order to minimize double mismatches while at the same time developing corporate bond markets? Yoshitomi and Shirai (2001) have taken the view that Asian countries should strengthen their banking systems as a short- to medium-term solution, while in the meantime developing a domestic corporate bond market.

Further, it should be recognized that banks in a number of Asian countries already play a crucial role in the corporate bond market as underwriters, investors, and issuers, reflecting their dominant position and high reputation achieved through their long-term presence in the financial market. This suggests that the banking industry is complementary to the development of corporate bond markets in Asia. This paper refers to this scenario as the “intermediate financial market structure,” since it lies between a bank-dominated financial structure where banks take liquid savings from the public and finance business investment, and the full-fledged capital market-based financial structure where numerous, diversified nonbank issuers and investors are present. As the intermediate financial market structure is likely to prevail in Asian countries in the medium term, it is important to analyze how to improve the soundness of the banking system within this system by tackling the following five issues.

First, the paper examines the potential disadvantages arising from the intermediate financial market structure when banks engage in securities and related business (i.e., derivatives). Those disadvantages include (i) the higher default ratio faced by banks, (ii) a decline in credit availability for SMEs, (iii) the slower pace of financial innovation compared with independent investment firms or other financial institutions, (iv) high switching costs, (v) conflicts of interest between banks and investors, (vi) any impact that the failure of securities and derivatives business may have on the solvency of the banking sector, and (vii) a concentration of power in the banking sector.

Second, the need to improve banks’ balance sheets becomes an even more important and urgent issue within the intermediate financial market structure. This is because new risks emerge and existing ones are amplified as a result of banks’ involvement with securities and derivatives. For this reason, internal risk management mechanisms based on collecting and processing information about their clients and monitoring them should be strengthened further and prudential regulations need to be improved.

The paper also focuses on a regulatory framework for banks that incorporates factors specific to Asia. Namely, the paper poses the following question: given the predominance of family businesses among banks and borrowing firms, what specific legal, regulatory, and informational infrastructures will have to be established to achieve a sound banking system? In other words, a key question is whether one size fits all, with regards to the infrastructures required to ensure prudential banking behavior and prevent systemic crises. This paper examines measures to cope with these problems.

Third, it is crucial to examine whether disadvantages arising from banks' engagement in securities and derivatives activities—such as the solvency of the banking sector, concentration of power, high switching costs, and conflicts of interest—could be contained by adopting a specific corporate form of banking organization.

Fourth, the banking system has been becoming increasingly market-based in recent years, especially in industrial countries and a few emerging market economies. Banks loans have become more liquid since the increased variety of available securities has enabled banks to diversify their portfolios; a securitization drive has allowed banks to liquidate illiquid mortgage bank loans; the growing credit card industry and the emergence of credit bureaus have enabled consumer loans to be rated and thus to be liquidated; and information technology has made it easier for banks to evaluate credit risk of their borrowers with more objectivity. Consequently, these factors have seen a shift from more relationship-based banks to market-based ones. Although it may take time to develop such a market-based banking system in Asian developing countries, it is likely to gradually change the content and emphasis of bank regulation. It is also likely that differences between banking and securities regulation will shrink, compared to the case in which banks rely heavily on relationship lending.

Fifth, the issue of how to coordinate among regulatory authorities becomes important as banks increasingly work with securities. It is important to discuss whether regulatory authorities should be integrated into one body or coordinated functionally.

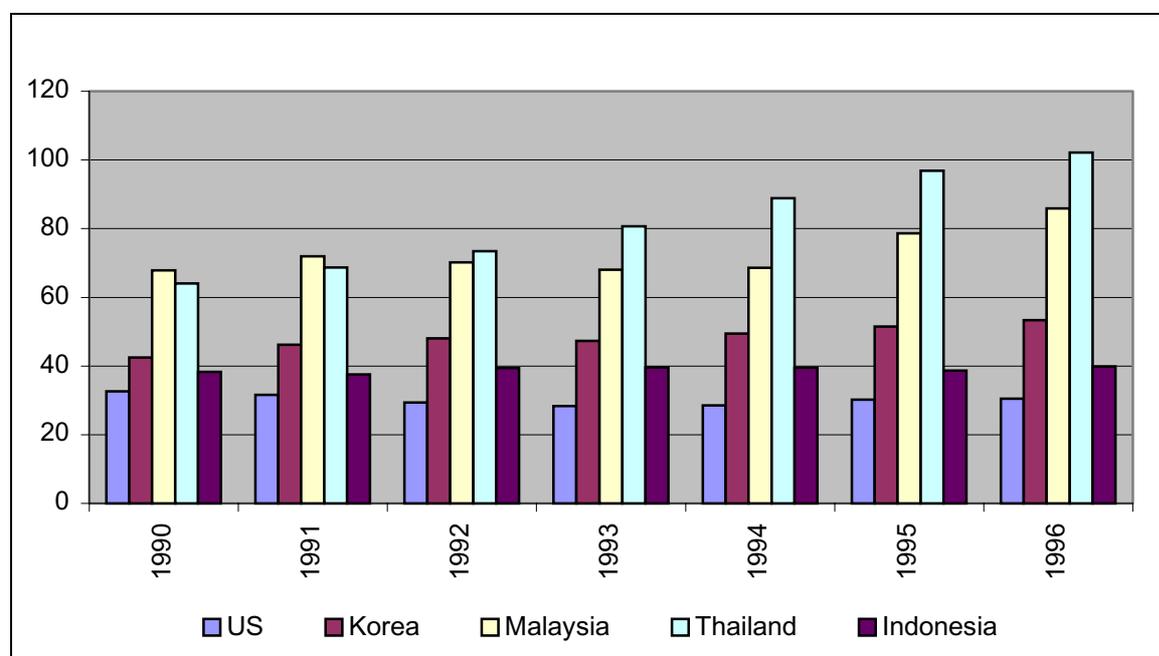
This paper consists of five sections. Based on observations of the financial market structure in four countries—Indonesia, Korea, Malaysia, and Thailand—Section 2 stresses that the banking sector has already played an important part in these countries' corporate bond markets. Section 3 discusses the intermediate financial market structure as well as advantages and disadvantages. The section also restates banks' essential roles and stresses

that banks are likely to survive even in new environments. Section 4 focuses on the regulatory frameworks that are applied to the international financial market structure. Section 5 contains concluding remarks. Finally, this paper focuses on instances where banks are privately owned. While issues associated with state-owned banks and denationalization of nationalized banks are important in Asia, this paper focuses solely on private banks to narrow the scope of study and leaves these issues for future research.

2. Observations—The Cases of Indonesia, Korea, Malaysia, and Thailand

Asian economies are generally characterized as being heavily dependent on the banking sector. Before the crisis, the share of bank loans as a percentage of Gross Domestic Product (GDP) in Indonesia, Korea, Malaysia, and Thailand was consistently above that of the United States, accounting for about 35% of GDP (Chart 1). Bank loans increased rapidly particularly in Thailand and Malaysia during 1990-1996—from about 60% each in 1990 to 100% and 90%, respectively, in 1996. The proportion of bank loans in Korea has remained more or less constant at 40% of GDP during the same period.

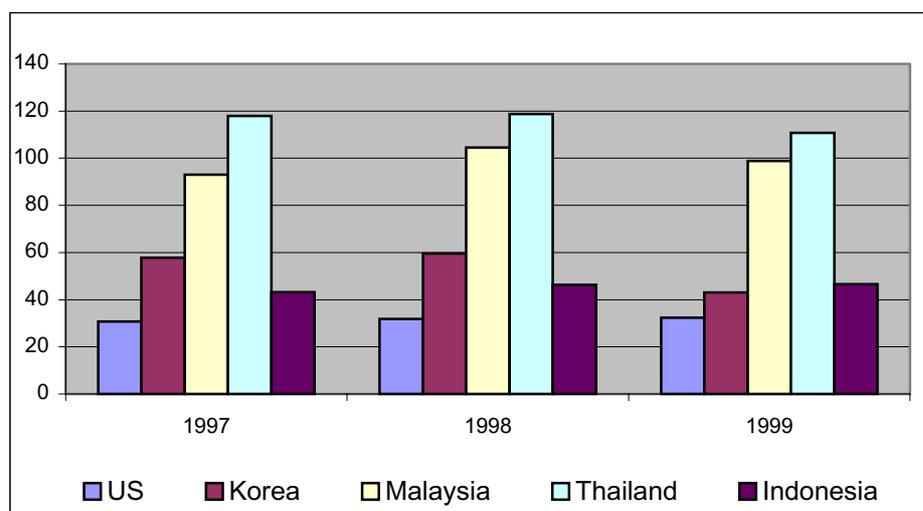
Chart 1: Bank Loans Before the Crisis (Percent of GDP): 1990-1996



Source: DRI Asia Database (DRIASIA), CEIC Data Co. Ltd.; International Financial Statistics (IFS), International Monetary Fund (IMF), April 2001.

After the crisis, the percentage of bank loans declined slightly in Indonesia and Thailand, as the number of loans fell amid the banking sector restructuring process (Chart 2). Nevertheless, the sizes of bank loans in the four countries have still remained large. Given that alternative financing sources have been limited and unstable, this suggests that commercial banks will continue to be the dominant financial institutions in the foreseeable future.

Chart 2: Bank Loans After the Crisis (Percent of GDP): 1997-1999



Source: DRIASIA; IFS, IMF.

Furthermore, the banking sector is already playing a crucial role in the corporate bond market in Asia. Table 1 shows that banks are not only major investors in corporate bonds but also issuers, underwriters, and guarantors. The importance of banks as major investors is observed in both the official and corporate bond markets—particularly in Indonesia, Korea, and Thailand. Malaysia has a unique feature in that a single state-owned saving fund, the Employees Provident Fund (EPF), has dominated both the official and corporate bond markets. The presence of such a single dominant institutional investor suggests that its impact on pricing and maturity structures, as well as liquidity of those bonds, is significant. The banking sector is the second major investor after the EPF in both the Malaysian official and corporate bond markets.

Table 1: Role of the Banking Sector in Asia

Banks as:	Thailand	Indonesia	Korea	Malaysia
Issuers	X	X	X	
Underwriters	X			X
Investors	X	X	X	X
Guarantors		X	X <i>(before the crisis)</i>	X <i>(before the crisis)</i>

Note: The shaded areas refer to cases where the banking sector plays a crucial role.

On the supply side, in Malaysia the issuer base is more diversified than the investor base, ranging into various industries. By contrast, in Korea, issuers are concentrated in the manufacturing sector, reflecting the presence of relatively large and medium manufacturing firms that are able to issue bonds on a sufficiently large scale at relatively low cost. In the cases of Indonesia and Thailand, banks are major issuers of corporate bonds (bank debentures). Last, banks were important guarantors of corporate bonds in Korea and Malaysia before the crisis.

Investors in Official Bonds

In the Korean official bond markets (including Treasury bonds and bills, the foreign exchange stabilization fund, grain securities, and National Housing Bonds), banks—including the bank trust department—held about 50% of total bonds before the crisis and have been maintaining this share since (Table 1a). Most recent data—as of August 2000—indicate that banks held 72% of government bonds, investment trust companies (ITCs) held 19%, and insurance firms and securities firms each held about 3.5% (Park, 2001). The total value of outstanding government bonds issued has risen from an average of W24 trillion in 1995-1996 to W51 trillion in 1998-1999, reflecting a rapid increase in the issuance of government bonds for financing the expansionary fiscal policy, improving social safety nets, and implementing banking sector restructuring projects.

Table 1a: Korea, Investors in Official Bonds (Billions of Won, Percent): 1995-1999^{1,2}

	Before Crisis 1995-1996 Average	1997	After Crisis 1998-1999 Average
Banks	23.4	28.7	38.6
Bank Trusts	31.4	13.6	19.7
Others	45.1	57.8	41.8
Total	100.0	100.0	100.0
Total (100 Billions of Won)	241	285	514

Note 1: Official Bonds include Treasury Bonds, Foreign Exchange Stabilization Fund, Grain Securities, National Housing Bonds, Treasury Bills.

Note 2: Data refer to outstanding official bonds, stock data.

Source: Shin (2001).

The banking sector has boosted its holdings of official bonds in Korea. This reflects increased awareness of the need to improve internal risk management by holding safer assets, the need to improve capital adequacy ratios, and the need to meet liquidity requirements. Since banks already had a low capital level, they invested in government securities and thus did not have to worry about capital requirements. Other major investors—which are categorized under “Others,” including nonbank financial institutions, such as ITCs and securities firms—also purchased more government securities, since they began to recognize the credit risks associated with corporate bonds and thus shifted their investments to higher quality bonds. Overall, the financial sector (together with the banking sector) has played a crucial role in the country’s official bond market as the major investor.

In the Malaysian official bond market (including Malaysian government securities [MGS], government investment issues, Khazanah bonds, Malaysian savings bonds, Danaharta bonds, and Danamodal bonds), the EPF has been the largest and dominant investor for more than 40 years. Table 1b indicates that the EPF has held more than 50% of total MGS issues both before and since the crisis. The EPF was established under the EPF Act 1951 and obtains its resources from mandatory contributions by employers and employees based on a percentage of employees’ wages.

Table 1b: Malaysia, Investors in Official Bonds (Millions of Ringgits, Percent): 1995-2000^{1,2}

	Before Crisis 1995-1996 Average	1997	After Crisis 1997-2000 Average
General Government	0.7	0.6	0.2
EPF	59.2	57.5	64.9
SOCSSO	2.7	2.4	2.2
Insurance Companies	8.0	7.9	7.5
Bank Negara Malaysia	0.2	0.2	0.1
Banking Institutions	15.2	19.1	16.9
National Savings Bank	3.2	2.1	1.3
Foreign Holders	2.9	2.6	0.5
Others	8.0	7.5	6.3
Total	100.0	100.0	100.0
Total (Millions of Ringgits)	65,815	66,262	80,878

Note 1: Malaysian Government Securities.

Note 2: Data refer to outstanding official bonds, stock data.

Source: Hamid and Abidin (2001).

The investment panel comprising members appointed by the Ministry of Finance determines EPF's investment policies and portfolios. The panel comprises the chairperson, representatives from the Ministry of Finance, Bank Negara Malaysia, and three financial and investment experts. Since more than 50% of EPF's investible annual funds (flow resources) and no less than 70% of EPF's total investment funds (stock resources) were required to be invested in MGS in the past, the EPF maintained at least 70% of its investment funds in MGS. In the precrisis years of the 1990s, however, the EPF was allowed to diversify into other safe and relatively high yielding instruments, given that the amount of MGS issues declined in the face of a sound fiscal policy. As of the end of June 2000, the EPF held 32% of investment funds in MGS; 23% in corporate bonds, debentures, guaranteed loans, and promissory loans; 23% in money market instruments; and 21% in equity (Hamid, 2000). After the EPF, the banking sector is the second largest investor in the official bond market, accounting for more than 15% of total MGS issues.

Commercial banks are the major investor in the Thai official bond market (including government bonds, Financial Institutions Development Fund [FIDF] bonds, and bonds issued for financial sector restructuring). Table 1c shows that the banking sector accounted for more than 60% of total official bonds issued in 1995-1996, although the holdings of official bonds dropped in terms of both the relative shares as well as the absolute value after 1997, reflecting a severe deterioration of their balance sheets and shortage of available funds. The Bank of

Thailand (the central bank) and FIDF were the third largest investors after nonbank financial institutions before the crisis, but have become the second largest investors since.

Table 1c: Thailand, Investors in Official Bonds (Billions of Baht, Percent): 1995-2000^{1,2}

	Before Crisis 1995-1996 Average	1997	After Crisis 1997-2000 Average
Bank of Thailand & FIDF	11.3	25.9	20.4
Commercial Banks	64.3	54.9	40.4
Government Savings Bank	0.1	0.0	13.7
Other Financial Institutions	20.5	14.8	9.9
Insurance Companies	0.0	0.4	4.4
Others ³	3.7	4.3	11.2
Total	100.0	100.0	100.0
Total (Billions of Baht)	31	14	11

Note 1: Government bonds, including loans for the FIDF and for financial sector restructuring.

Note 2: Data refer to outstanding official bonds, stock data.

Note 3: Institutional investors, mutual funds, and provident funds.

Source: Jantarapavech (2001).

The banking sector has also been the dominant investor in government bonds in postcrisis Indonesia (Table 1d). As of March 2001, the latest month for which data are available, domestic commercial banks held 62% of total government bonds. Prior to the crisis, the Indonesian government did not issue any bonds given that fiscal surpluses were maintained. After the crisis, the government issued bonds to recapitalize weak banks that were then purchased by Bank Indonesia (the central bank) and then sold to commercial banks in exchange for their stocks—thereby not causing an increase in the money supply. For these reasons, most government bonds have been held by domestic commercial banks, although some of them were later sold in the secondary market.

**Table 1d: Indonesia, Investors in Official Bonds (Billions of Rupiah, Percent):
March 2001¹**

	Billions of RP	Percent
Private National Banks	28,612	62.2
Foreign Banks	5,723	12.4
Securities Companies	2,519	5.5
Mutual Funds	100	0.2
Insurance	499	1.1
Pension Funds	66	0.1
Private Companies	155	0.3
Others	8,328	18.1
Total	45,993	100.0

Note 1: Data refer to outstanding official bonds, stock data.

Source: Shidiq and Suprodjo (2001).

Investors in Corporate Bonds

In the Korean corporate bond market, the financial sector was the largest investor, accounting for about 90% of total corporate bonds newly issued before the crisis. This figure has remained the same since (Table 2a). While detailed data on the classification of investors are not available for the period prior to the crisis, it is known that the leading investors were ITCs, banks, and investment trust management companies (ITMCs) (Shin, 2001). The government established ITCs to promote capital markets: two in 1970s, one in 1982, and then another five in 1989. The government then introduced 23 ITMCs in 1996-1997. ITCs conduct business through issuing/selling beneficiary certificates directly to customers and forming/investing their trust funds in bonds, stocks, debentures, call loans, futures, etc. ITMCs concentrate also on securities investment but they are not allowed to issue or sell beneficiary certificates. ITCs and ITMCs before the crisis actively purchased corporate bonds, most of which were guaranteed by banks and securities firms, while offering deposit-type fixed payments to their investors. Thus, these financial institutions were de-facto banks owing to their function of transforming fixed liabilities to long-term lending to private nonfinancial firms in the form of corporate bonds or equity.

Table 2a: Korea, Investors in Corporate Bonds (Billions of Won, Percent): 1995-1999¹

	Before Crisis 1995-1996 Average	1997	After Crisis 1998-1999 Average
Financial	91.6	89.7	94.3
Government	2.3	1.6	3.1
Corporate	4.4	5.6	1.6
Private	1.6	2.9	0.9
Foreign	-	0.2	0.1
Total	100.0	100.0	100.0
Total (Billions of Won)	1,001	1,505	2,441

Note 1: Data were obtained from the flow of funds accounts (flow) and include privately placed bonds, asset-backed securities, and certain public bonds such as corporate bonds.

Source: Shin (2001).

From 1998 to the middle of 1999, the Korean corporate bond market experienced a temporary boom. Amid banking sector restructuring and a temporary loss of depositor confidence in the industry, some depositors shifted their financial resources from bank deposits to investments in ITCs and ITMCs. As their funds rapidly increased, ITCs and ITMCs then bought bonds mainly issued by manufacturers, such as Daewoo, which desperately needed funding in the absence of bank loans. The bond market boom also reflected a public perception that ITCs and ITMCs never went bankrupt in the past and, even if they fell into financial distress, these institutions would be rescued by the government. This corporate bond market boom ended when Daewoo went bankrupt in July 1999. This failure prompted investors to withdraw money from their funds. Massive investor demand for their funds caused serious financial problems for some ITCs and ITMCs. The financial sector was restructured, reducing the number of ITCs from eight firms to three and the number of ITMCs from 23 firms to 20.

In Malaysia, the EPF, which is categorized under the category “Others” in Table 2b, has been the dominant investor of corporate bonds. As of November 2000 (the only month in which data are available), commercial banks were the second largest investor, accounting for 17% of total corporate bond issues. Combining commercial banks with financial companies, merchant banks, and discount houses, the overall financial sector accounted for 25% of total corporate bond issues.

Table 2b: Malaysia, Investors in Corporate Bonds (Millions of Ringgits, Percent): November 2000¹

	Millions of RM	Percent
Commercial Banks	16,911	17.2
Financial Companies	2,337	2.4
Merchant Banks	3,389	3.5
Discount Houses	2,016	2.1
All Financial Institutions	24,652	25.1
Foreign Holders	1,426	1.5
Others ²	72,115	73.4
Total	98,192	100.0

Note 1: Data refer to outstanding corporate bonds, excluding short-term and medium-term paper, stock data.

Note 2: Others include major bondholders, i.e., the EPF and insurance companies.

Source: Hamid and Abidin (2001).

In the case of Thailand, detailed data on classifications of investors are not available. Based on available information and some estimates by Jantarapavech (2001), foreign institutional investors—mainly foreign banks—were the major investors in corporate bonds that were newly issued in 1995. Thailand was the only country that issued corporate bonds in international markets on a significant scale, and those bonds issued for foreigners were mostly denominated in US dollars or yen. After the crisis, the share of foreign investors in newly issued bonds dropped sharply from about 65% in 1995 to 9% in 1999, as a result of massive capital outflows driven by a loss of foreign investors' confidence (Table 2c). Instead, the share of domestic investors—largely consisting of domestic commercial banks—rose sharply both in terms of share and value.

Table 2c: Thailand, Investors in Corporate Bonds (Percent): 1995 and 1999^{1,2}

	1995	1999
Institutional Investors and High Net-Worth Investors	96.0	99.6
Domestic Investors	30.0	91.1
Foreign Investors ²	65.0	8.5
Retail Investors	4.0	0.4
Domestic Investors	2.5	0.4
Foreign Investors	1.5	0.0
Total Value of New Issues	100.0	100.0
Total Value of New Issues (Millions of Baht)	66,066	315,858

Note 1: Data refer to new corporate bond offerings, flow data.

Note 2: Estimate by the author.

Source: Jantarapavech (2001).

In the Indonesian corporate bond market, banks were the major investors, accounting for more than 60% of total corporate bond issues (Table 2d). Other major investors were insurance firms, pension funds, and mutual funds.

Table 2d: Indonesia, Investors in Corporate Bonds (Percent): 1995-2000¹

	Before Crisis 1995-1996 Average	1997	After Crisis 1998-2000 Average
Insurance	10.1	7.7	8.4
Pension Funds	12.7	9.2	11.5
Mutual Funds	14.0	16.3	12.6
Banking, etc.	63.2	66.8	67.4
Total	100.0	100.0	100.0
Total (Billions of Rupiah)	4,285	12,540	14,132

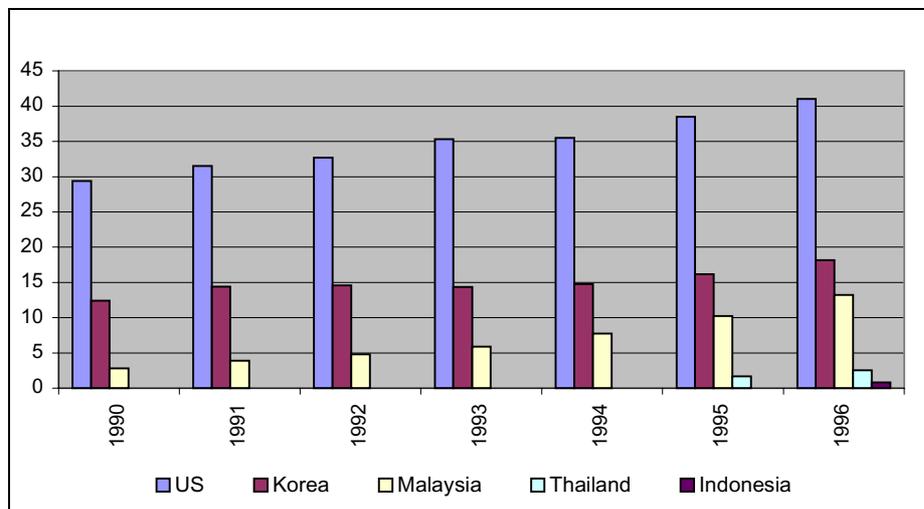
Note 1: Data refer to outstanding corporate bonds listed at the stock exchange, stock data.

Source: Shidiq and Suprodjo (2001).

Issuers of Corporate Bonds

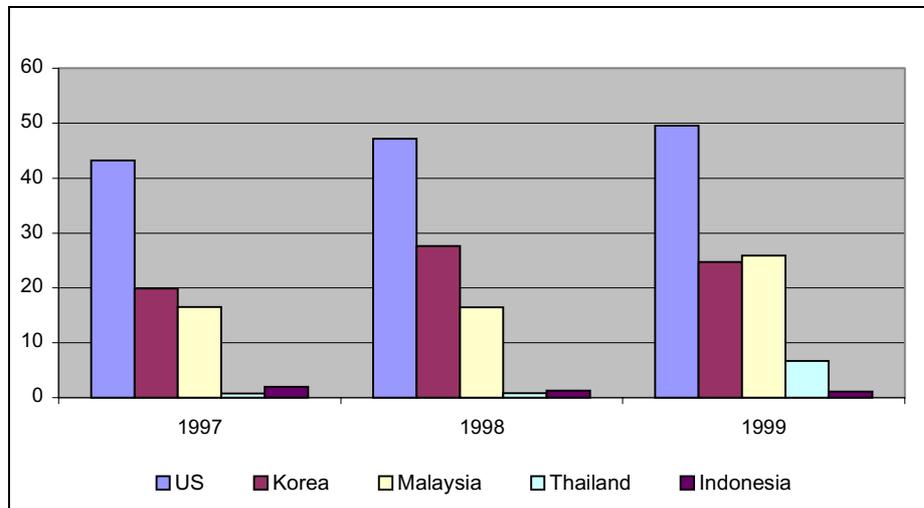
The size of the Korean corporate bond market, measured by outstanding bond issues, was relatively larger than those of Indonesia, Malaysia, and Thailand before the crisis (Chart 3). The corporate bond market expanded rapidly in the 1990s after deregulation induced firms to increase financing from bond markets rather than from stock markets. Dominant issuers were manufacturing firms, accounting for more than 70% of total corporate bonds newly issued in 1995-1997. After the crisis, the size of issuance of corporate bonds as a share of GDP rose (Chart 4). The relative share of corporate bonds newly issued by manufacturing firms declined to 56% on average during 1998-1999, however (Table 3a). During the postcrisis bond market boom, large manufacturers, such as Daewoo, issued substantial numbers of bonds. However, the corporate bond market stagnated after the collapse of Daewoo in July 1999 and the subsequent plunge in investors' confidence in the investment trust industry.

Chart 3: Outstanding Corporate Bonds Before the Crisis (Percent of GDP): 1990-1996



Source: Shin (2001); Hamid and Abidin (2001); Jantaraprapavech (2001); and Shidiq and Suprodjo (2001).

Chart 4: Outstanding Corporate Bonds After the Crisis (Percent of GDP): 1997-1999



Source: Shin (2001); Hamid and Abidin (2001); Jantaraprapavech (2001); and Shidiq and Suprodjo (2001).

Table 3a: Korea, Issuers of Corporate Bonds (Percent): 1995-1999¹

	Before Crisis 1995-1996 Average	1997	After Crisis 1998-1999 Average
Manufacturing	71.5	72.4	56.3
Construction	13.1	10.5	7.5
Wholesale and Retail Trade	6.5	9.9	16.7
Financial Intermediation	5.9	2.1	7.0
Others	3.2	4.9	12.6
Total	100.0	100.0	100.0
Total (Billions of Won)	26,742	34,322	40,529

Note 1: Data refer to newly issued bonds, flow data.

Source: Shin (2001).

Commercial banks in Korea were traditionally prohibited from issuing bank debenture until 1996. Therefore, major bank debentures were issued only by the specialized state-owned banks—such as the Korean Development Bank (KDB), Korea Long Term Investment Bank, Korea Foreign Exchange Bank, and Korea Small and Medium Companies Bank. In the postcrisis period, only the KDB has been actively issuing bank debentures among specialized banks. In 1997, the government allowed commercial banks to issue bonds and since then, the active issuer has been Korea Long Term Credit Bank (currently, Kookmin Bank).

Compared to those in Korea, issuers in Malaysia are highly diversified. About 60% of issuers are publicly listed companies and they are generally large. The remainder are private limited companies, but most of them are affiliated companies or subsidiaries of publicly listed companies. Before the crisis, major issuers were the transport, storage, and communications sector; construction sector; and manufacturing sector, accounting for 25%, 21%, and 18% of newly issued bonds, respectively (Table 3b). After the crisis, both the share and value of bonds issued by the manufacturing sector dropped sharply. Instead, the share and value of bonds issued by the finance, insurance, real estate, and business services sector; and construction sector rose significantly.

Table 3b: Malaysia, Issuers of Corporate Bonds (Percent): 1995-2000¹

Sectors	1995-1996 Average	1997	1998-2000 Average
Agriculture, Forestry, and Fishing	0.9	1.5	0.1
Mining and Quarrying	-	-	-
Manufacturing	17.9	25.0	4.9
Construction	20.7	14.3	30.2
Electricity, Gas, and Water	12.4	15.5	8.6
Transport, Storage, and Communications	24.8	15.7	11.0
Finance, Insurance, Real Estate, and Business Services	8.1	27.2	37.3
Government and Other Services	1.9	-	3.1
Wholesale, Retail Trade, Hotels, and Restaurants	13.3	0.8	4.9
Total	100.0	100.0	100.0
Total (Millions of Ringgits)	10,792	14,428	15,419

Note 1: Data refer to new issues of listed and nonlisted private debt securities, excluding Cagamas Bonds, flow data.

Source: Hamid and Abidin (2001).

In Thailand, before the crisis, the banking sector was the major issuer of corporate bonds, accounting for 31% of total corporate bonds newly issued. The share rose further to about 50% on average in 1998-2000, reflecting a need for an increased capital adequacy requirement and the fact that banks were allowed to issue subordinated bonds (Table 3c). Banks have increasingly issued subordinated bonds, since they are recognized as tier-2 capital.

Table 3c: Thailand, Issuers of Corporate Bonds (Percent): 1995-2000¹

	Before Crisis 1995-1996 Average	1997	After Crisis 1998-2000 Average
Banking	30.7	-	48.8
Building and Furnishing Materials	6.4	-	16.9
Commerce	20.0	11.0	1.3
Communication	15.0	15.9	9.0
Finance and Securities	5.0	-	3.1
Leasing	-	48.8	4.7
Others	22.9	24.3	16.2
Total	100.0	100.0	100.0
Total (Billions of Baht)	93,812	35,710	159,241

Note 1: Data refer to new corporate bond offerings, flow data.

Source: Jantarapavech (2001).

In the case of Indonesia, the banking sector was the major issuer before the crisis although the total issue size was very small (Table 3d). After the crisis, banks' share dropped

to about 20% of total outstanding bond issues although the value of issue size increased. Instead, the issue size of the nonbank financial and infrastructure sectors rose rapidly. To restructure firms, some newly issued bonds were issued and exchanged with mature bonds.

Table 3d: Indonesia, Outstanding Corporate Bonds (Percent): 1996-2000¹

	1996	1997	1998-2000 Average
Property	26.5	28.6	25.0
Wood-Based and Agro Industries	9.3	9.2	13.2
Banking	27.3	19.3	19.5
Consumer Goods	-	2.4	6.3
Infrastructure	-	2.2	10.8
Financial	4.7	12.4	11.1
Others	32.2	26.0	14.1
Total	100.0	100.0	100.0
Total (Billions of Rupiah)	4,285	12,540	14,132

Note 1: Data refer to outstanding corporate bonds listed at the stock exchange, stock data.

Source: Shidiq and Suprodjo (2001).

Guarantors and Underwriters of Bonds

In the Korean corporate bond market, bonds were mostly guaranteed by banks and the Guarantee Fund before the crisis. The government introduced guaranteed corporate bonds in 1972 to ease financial constraints by initially authorizing Korean Investment Corporation to be a sole guarantor. The government later allowed banks also to become guarantors and about 50% of corporate bonds were guaranteed by banks in the 1980s. The relative importance of banks as guarantors declined in the 1990s as nonbank financial institutions became major guarantors. However, most financial institutions ceased to guarantee corporate bonds after the crisis, in part because of the imposition of a new regulation prohibiting securities firms from providing guarantees in 1998 and in part because of the increased awareness of the risk involved in guarantee business (Table 4).

Table 4: Guarantors of Corporate Bonds

	Before Crisis	After Crisis
Indonesia	Banking Institutions, Affiliated Firms, Parent Firms	Banking Institutions, Affiliated Firms, Parent Firms
Korea, Rep. of	Guaranteed Funds, Surety Companies, Banks, Securities Companies, Merchant Banking Corporations	None
Malaysia	Government, Banking Institutions, Top Credit-rated Corporations	None
Thailand	None	Parent Companies, Related Companies

Source: Shin (2001); Hamid and Abidin (2001); Jantaraprapavech (2001); and Shidiq and Suprodjo (2001).

In Malaysia, about 50% of bonds were guaranteed in 1995 and about 10% in 1996. The guarantees were used to enhance credit ratings so that firms were able to issue bonds, given a requirement imposed by Bank Negara Malaysia that all corporate bonds had to be rated at least at a minimum investment grade (BBB or above). Major guarantors were banks while others were government and top-rated firms. After the crisis, most corporate bonds are no longer guaranteed owing to the banking sector restructuring process and a removal of the minimum investment grade requirement from July 2000.

Thai banks did not play a crucial role as guarantors, unlike the case of Korea and Malaysia before the crisis. This is because most bonds were asset-backed or secured, and were sold through private placement. After the crisis, some bonds have continued to be guaranteed, but guarantees are mostly given by parent companies or affiliated firms of the issuers. Instead, banks have become increasingly important underwriters in recent years (Table 5). They have been permitted to underwrite bonds since 1993.

Table 5: Thailand, Underwriters of Corporate Bonds: 1995 and 2000

Year	Lead Underwriter	Value	No. of Issues	Percent
1995	Phatra Thanakit Public Co., Ltd.	3,595	2	30.9
	Thana One Finance & Securities Co., Ltd.	3,595	2	30.9
	First Bangkok City Finance Co., Ltd.	1,750	2	15.0
	Bangkok First Investment & Trust Public Co., Ltd.	500	1	4.3
	Siam Commercial Bank Plc.	500	1	4.3
	Finance and Securities as Lead Underwriters	9,440	7	81.1
	Banks as Lead Underwriters	500	1	4.3
2000	Siam Commercial Bank Plc.	11,955	5	21.1
	Citicorp Securities (Thailand) Ltd.	10,333	4	18.2
	Thai Military Bank Plc.	7,650	4	13.5
	ABN-AMRO Bank N.V.	6,500	3	11.4
	Jardine Fleming Thanakorn Securities, Ltd.	3,650	6	6.4
	Finance and Securities as Lead Underwriters	13,983	10	24.6
	Banks as the Lead Underwriters	26,105	12	46.0

Source: Jantaraprapavech (2001).

Most Indonesian corporate bonds were not guaranteed before the crisis and have remained so after the crisis. In the postcrisis period, fewer than 5% of bonds have been guaranteed by banks or issuers' affiliated firms or parent companies. Since all bonds are rated, guarantees were used to enhance their credit rating, provided that ratings given to the guarantors are higher.

3. The Intermediate Financial Market Structure

The banking system is likely to remain dominant in Asia for the foreseeable future, given its historically important and advantageous position and the lack of well-diversified capital markets, as indicated in Section 2. This suggests that the role of commercial banks cannot be dismissed when considering how to develop the corporate bond market. It is also inevitable that those banks will enter into new businesses since their incomes from traditional banking services are likely to decline, as was seen in the United States and many other countries, in the face of intense competition driven by financial market liberalization and deregulation. This section examines the intermediate financial market structure, in which banks play a crucial role in the development of the corporate bond market in the medium term. Also, advantages and disadvantages arising from the intermediate financial market structure are examined.

3.1. The New Environment Surrounding the Banking Sector

In recent years, fundamental and dynamic forces have been increasingly undercutting the traditional role of banks in financial intermediation.² There are several factors behind the change. While some of these trends are particularly present in industrial countries, such as the United States, Europe, and Japan, they are also likely to become important in the foreseeable future in Asian emerging market economies and developing countries.

Banking Sector Liberalization and Globalization

First, deregulation has diminished banks' advantages in acquiring funds. When deposit rates were set low by regulation in the past, banks could obtain funds cheaply and maintain sufficient interest rate spreads and margins. Under the deposit ceiling regulation, banks were often exempted from paying interest on checkable deposits and from paying high deposit rates. Since a major source of bank funds was checkable deposits, zero interest cost was advantageous for banks. In the presence of a high rate of inflation, real interest rates were even negative.

When governments began to remove deposit rate ceilings and opened up the banking sector, banks found it necessary to raise their deposit rates to compete for funds and at the same time to provide competitive lending rates. This has reduced their interest rate spreads and profit margins. As a result, some banks have had no choice but to increasingly extend credit to risky projects, such as real estate, to gain higher returns.

Competition has intensified not only among commercial banks but also between commercial banks and different financial institutions and markets. This trend has been amplified further since borrowers have gained access to various sources of funding and countries have promoted deregulation in the financial sector. Deregulation has reduced geographic barriers to competition between commercial banks. In addition, the number of finance companies has been increasing and consequently, their share of business lending has

² In the United States, for example, commercial banks' share of total nonfinancial borrowing dropped from 35% in 1975 to 22% in 1994. The size of banks' assets in total financial intermediary assets declined from 38.5% in 1970 to 28.6% in 1994. Of this, the share of commercial banks declined sharply from 19.4% in 1970 to 7% in 1994. In contrast, the share of noninterest income in total income for commercial banks has risen rapidly from 23% in 1975 to 35% in 1994.

been expanding.³ As a result, commercial banks have been forced to increasingly concentrate their business on liquidity provision, shifting away from traditional lending activities. This has contributed to reductions in commercial banks' profitability and to downgrading of their credit ratings.

Further, commercial banks have begun to lose opportunities to collect implicit rents that justify various risks they bear through providing staged financing or offering flexible, discretionary, and repetitive bank loans, since bond markets allow firms to shift from bank loans to bond finance (Yoshitomi and Shirai, 2001). A bank with market power has more incentive to alleviate the problems arising from information asymmetry between banks and their borrowers by investing in monitoring of the projects of borrowers and establishing value-enhancing relationship banking. Since raising interest rates does not solve these problems, banks may find it optimal to ration credit and select borrowers by collecting inside information about borrowers and monitoring them. Indeed, this may increase the availability of credit to firms. If banks expand their market power and achieve high profitability, they may become more conservative, moderating risk taking (Matutes and Vives, 1998). This is because market power enhances the charter value of a bank, which may decline if the bank takes more risks and fails. Therefore, this possibility gives banks an incentive to be careful about their investment behavior.

Thus, competition may destroy banks' incentives to monitor and reduce lending. It has been pointed out that the recent decline in banks' charter values due to deregulation and liberalization has been blamed on an increase in risk-taking behavior and thus failures in the banking sector from the 1980s [Keeley (1990) and Hellmann *et al.* (1997)].⁴

³ Finance companies tend to offer relatively longer-term credit compared to banks and also focus on the sectors or areas of their lending activities (Rajan, 1996). This makes their operational structure more transparent to their own investors than that of banks to depositors. At the same time, finance companies have a better match between interest income they receive on an additional loan and the cost of funding it, although they lose skills of extending credit outside their areas of focus. This partly explains why finance companies do not typically lend to high quality firms or make general-purpose loans, as banks do.

⁴ For example, as margins eroded in the Savings & Loans institutions in the United States in the 1980s, they increased the credit extended to risky activities and this caused bank failures. Since then, regulators have allowed only well-capitalized banks to engage in risky activities by requiring an insolvency level below a certain limit. However, long-term relationships have become increasingly harder to initiate and maintain because banks cannot receive a credible implicit guarantee from their borrowers on the receipt of such rents (Rajan, 1992).

Advances in Information Technology

Second, advances in electronic trading technology have had various impacts on the capital and financial markets. They have lowered the startup costs for new trading systems and operating costs of electronic trading systems. In the past, securities transactions were conducted mostly at organized exchanges, where only members licensed by the exchanges could trade directly and sellers and buyers set prices at auction on trading floors. Members generally comprised large investment firms, brokerage houses, specialist firms, independent brokers, and a few companies, and it was difficult to obtain membership.⁵ On such traditional organized exchanges, the floor members have time and place advantages over those off the floor.

By contrast, with an electronic trading system, everyone is in the same cyberspace and, thus, time and place advantages disappear. While some exchanges have adopted electronic trading and have no floor, electronic trading is frequently used at the over-the counter (OTC) markets. The OTC markets, such as NASDAQ consist of a geographically dispersed and diversified group of traders that are linked to one another by telecommunication systems. On the NASDAQ, for example, dealers put quotations on computer screens and then receive orders from other dealers via computer links or over the telephone. Some broker-dealers are market makers, taking either bids or offers by quoting both prices. Information technology (IT) has also blurred the distinction between broker/dealers and exchangers, because brokers/dealers systems have become increasingly automated and broker-dealers themselves have developed electronic trading systems that function very much like organized exchanges. It brings customers' buy and sell orders together and provides a means for customers to interact with each other's orders. These alternative trading systems have become real competitors of the traditional markets, although they operate largely outside the regulatory framework for exchanges. As a result of advances in IT and resultant communication tools, the need for traders to be membership organizations is greatly reduced.⁶

This suggests that advances in IT may promote the disintermediation of markets, since they provide a means for natural buyers and sellers to meet directly without intermediaries such as market makers or specialists. Public investors now have access to securities through

⁵ In the case of the United States, for example, insurance firms could not become members.

⁶ In the United States, participants in the OTC markets must become members certified by the National Association of Securities Dealers and overseen by the Securities Exchange Committee (SEC). Although entities wishing to become members must have sufficient capital and demonstrate expertise, application is open to anyone.

the Internet, managed by small securities firms that specialize in trading. Information about issuers is also available through the Internet, which helps public investors make their own analysis and decisions about investment. Consequently, this helps the investor base to expand.

Further, IT has enabled small firms to issue securities at relatively low cost. Banks and finance companies have begun to use credit-scoring models, which use widely available information about borrower quality to estimate the likelihood that a particular small business loan will default, in order to underwrite loans to small businesses. While inside information obtained by relationship banks continues to be important, IT helps inside information become more standardized and thus lowers transactions costs of securitizing them (Mishkin and Strahan, 1999). Consequently, banks are likely to become more market-based.⁷

This suggests that while banks will continue to play a crucial role in the intermediate financial market structure in Asia, their relative importance may gradually erode, as the financial market structure gradually shifts to the full-fledged capital market and advances in IT facilitate more public investors to come in and reduce the role of dealing and brokerage activities.

The Emergence of New Markets and New Players

Third, a number of large, profitable, and established firms have begun to issue commercial paper to finance working capital instead of relying on bank loans, because of the cost advantage. Meanwhile, money market mutual funds have emerged and indirectly undercut banks by supporting the expansion of competing finance companies that raise funds by issuing commercial paper. The growth of assets in money market mutual funds has created a ready market for commercial paper, because these funds must hold liquid, high quality, and short-term assets. A rapid expansion of the commercial paper market has enabled finance companies to expand their business and intensified competition with banks.

Junk bond markets also have grown in industrial countries and have taken business away from banks. In the United States, for example, in the past, only Fortune 500 companies could raise funds by selling their bonds directly to the public, by passing banks. Nowadays, even lower quality borrowers can raise funds in the bond market in some industrial countries.

⁷ In the United States, large banks were the first to use credit-scoring models for small business loans. They apply the models only to very small business loans, such as those under \$100,000 (Mester, 1997).

Financial Innovation

Fourth, derivatives transactions have been rapidly increasing in recent years. Derivatives are financial contracts whose values are derived from those of other underlying assets. They incur low transactions costs and are often used for hedging, speculating, arbitraging price differences, and adjusting portfolio exposures. Derivatives markets exist for forwards, futures, options, and hybrid derivatives. The types of assets underlying the contract include foreign exchange, interest rates, commodities, and equities. The volume of derivatives traded at the exchanges and OTC markets has grown rapidly in the world. A rise in derivatives reflects an opportunity to lower funding costs and enhance yields through arbitrage activities (such as swaps). Further, exchange rates and interest rate volatility have increased demand for market-risk management products. This trend was also supported by a continuing reduction in the cost of implementing arbitrage, hedging, and other risk management strategies, due to financial deregulation and advances in communication and information processing technology. The development of valuation models for derivatives has allowed derivatives participants more accurately to measure, price, and manage their risk exposures.

3.2. Changing Roles of the Banking System

The Essential Functions of Banks

One of the essential roles of banks is to provide liquidity to borrowers and depositors. Every time customers or depositors wish to withdraw money from an automated teller machine or write a check, they rely on the bank's liquidity function. From the viewpoint of banks, there is little difference between a demand deposit that an investor holds and a line of credit extended to a firm, since both require banks to pay the client money on demand (Kashyap *et al.*, 1998). In this sense, we can say that banks provide liquidity on both sides of its balance sheet—to depositors and borrowers.

A bank can achieve scale economies by using the same underlying reserve of liquid assets and the same institutional arrangements to meet the unexpected demands of borrowers and depositors. The economies of scale work since the various demands are likely to offset each other, or equivalently, borrowers draw down a line of credit at different times from depositors, thereby economizing on the need to hold low-return reserves. In other words, there are complementarities between demand deposits and lines of credit for banks (Rajan,

1998). The more a bank does of one, the more it does of the other. Synergies between products arise because a bank can economize on holdings of liquid assets when the two products are jointly offered.

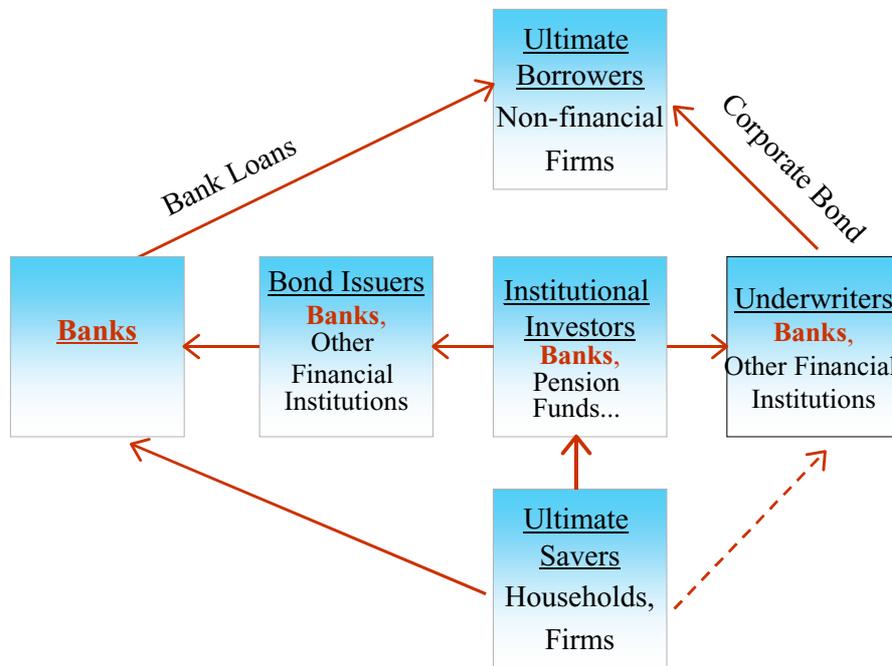
Another essential role of banks is to fund complex, illiquid positions. Banks use short-term deposits to make relatively longer-term loans to borrowers, which are highly illiquid. This maturity transformation is possible, since banks establish long-term relationships with their borrowers and thus obtain inside information about their future prospects and return streams. In this way, they can lend to their borrowers more than other less knowledgeable lenders can. It has been shown that the availability of credit to small firms increases with the length of their banking relationship (Petersen and Rajan, 1994). These kinds of specific lending skills and knowledge become important when banks' credit loans to borrowers are highly illiquid and hard to sell to other potential lenders that do not have similar skills or knowledge. In the long-term relationships, more complicated intertemporal transactions—for example, staged financing, early repayments, and refinancing even when borrowers are in financial distress—are possible than through explicit arms' length contracts.

It appears that these two essential roles of banks are incompatible (Rajan, 1998). This is because to fulfill the first role, banks must come up with money on demand, while to fulfill the second role, they must undertake investments that are hard to liquidate because of their idiosyncrasy or dependence on specific knowledge. Thus, excessive investment in illiquid positions makes illiquid banks susceptible to inefficient runs. However, Diamond and Rajan (1998) have stressed that banks' specialized skills enable them to manage their complicated positions. Since banks have the ability to extract high implicit rents from their depositors and commit lower rents in the future by issuing demand deposits that are a hard claim, and by providing liquidity, they can commit themselves to lower compensation for managing complex positions.

3.3. The Intermediate Financial Market Structure

The observations in Section 2 have suggested that Asian countries are experiencing an intermediate financial market structure, where commercial banks continue to provide traditional banking services while becoming major issuers, investors, underwriters, dealers/brokers, and guarantors in the corporate bond market (Chart 5). Thus, banks actively engage in securities and related business, such as derivatives. The intermediate financial market structure has the following five features.

Chart 5: Intermediate Financial Market Structure in Asia



Continued Presence of Banks

First, banks are likely to continue to provide traditional banking functions, albeit to a lesser extent. For example, even reputable, large firms, while issuing bonds, have an incentive to promote relationships with commercial banks to some extent in order to maintain lines of credit. When firms fall into distress, it is likely that they will face a complete loss of credit from capital markets, while banks that form long-term relationships with these firms continue to refinance them. A credit termination in capital markets may be triggered by even a hint of financial distress.

Moreover, large numbers of small firms are likely to continue to depend heavily on bank loans because the corporate bond market is incomplete and generally unavailable for relatively unknown, small firms, especially in the initial stage of corporate bond market development. In particular, local commercial banks are important for small firms because of more human interactions and an impression of small banks being more trustworthy and less technologically intimidating than advanced and larger foreign banks or other financial institutions.

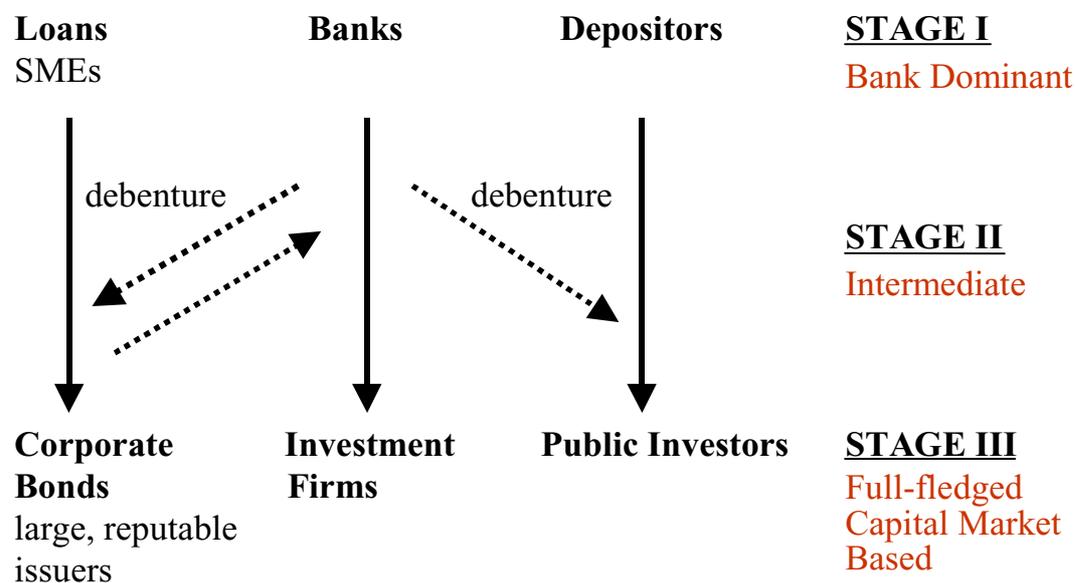
Further, a large number of firms is likely to maintain checking accounts with commercial banks. This is because in addition to the continued high demand for banks' checking and settlement functions, firms tend to deposit checks for fear that they will not have a physical record otherwise (Rajan, 1996). In addition, commercial banks would continue to have comparative advantage in providing checking account services owing to their diversification capacity across liquidity demand.⁸

Transitory Stage of Financial Development

Second, the intermediate financial market structure lies between a bank-dominant financial structure (Stage I), where banks provide largely traditional banking services, and a full-fledged capital market-based financial structure (Stage III), where large numbers of borrowers have direct access to corporate bonds in addition to bank loans and there are numerous, diversified individual and institutional investors (Chart 6). Stage I applies to a number of developing countries, whereas Stage III applies to industrial countries where bank loans are substituted for matured corporate bonds, as exemplified by the United States. The intermediate financial market structure refers to Stage II in Chart 6 where banks complement the narrow investor and issuer base. Complementarities between the banking system and the corporate bond market are present, because there are few and diversified institutional investors that are able to issue bonds at reasonable cost; individual investors have a strong preference for highly liquid assets such as bank deposits; institutional investors such as pension funds and insurance firms are largely underdeveloped; and, information about ultimate creditors are highly idiosyncratic and non-transferable. Therefore, banks tend to dominate the corporate bond market and become large institutional investors. In Stage II, while bank loans are substitutes for fledgling corporate bond markets, this substitution is compatible with the complementary development of the corporate bond market.

⁸ This explains, as Rajan (1996) stresses, why commercial banks still have value, even though money market mutual funds can provide depositors with unlimited liquidity on demand at lower costs since they commit to investing all their cash in extremely safe and liquid securities. While investors in money market mutual funds do not always require liquid cash at the same time, money market mutual funds hold it in liquid assets. This leaves the liquidity of those highly liquid assets largely unused and generates inefficiency. Similarly, commercial banks may maintain value even though finance companies can provide longer-term finance to firms with relatively longer-term liabilities. This is because finance companies provide financing, but do not provide liquidity insurance, which puts commercial banks at an advantage in meeting unexpected needs for finance of their customers.

Chart 6: Development Stages of Financial Market Structure



Informational Advantages

Third, banks can better handle the problems of information asymmetry in the issuing and buying of corporate bonds owing to their good reputation and the informational advantages they enjoy. Thus, it makes sense for banks to play a crucial role in corporate bond market development, especially when institutional, legal, and judiciary infrastructures—as described by Yoshitomi and Shirai (2001)—are underdeveloped. It may be argued that rating agencies have an incentive to provide accurate information and can reduce the severe information asymmetry, while firms are willing to incur the costs of that process because it gives them access to capital markets and so saves them the costs of contracting with a bank. However, even though credit rating agencies exist, some firms may not be able to reduce the information gap, especially when production of information about these firms is too costly. In such a case, banks can save costs by gathering the relevant information about a borrower through long-term relationships. When banks monitor firms, they make sure that the firms observe the conditions of the funding contracts and gather further information about them.

Further, commercial banks increasingly play an important role in providing firms with lines of credit for the issuance of commercial paper based on these informational advantages. Commercial banks may support the commercial paper market by letting firms directly issue corporate bonds and providing backup lines of credit or letters of credit to assure investors in commercial paper that they will get their money back in the event of default (Rajan, 1996). In

this case, commercial banks do not provide traditional lending services to firms, but indirectly support them through promoting securitization based on their informational advantages. To obtain lines of credit, firms might be required to maintain compensating deposit balances at banks up to a certain portion of the total credit or pay fees to banks for lines of credit. Commercial banks would maintain their basic function of arranging short-notice funding but the channel through which this service is offered would have changed considerably. As a result, noninterest income would take on an increasingly large share of commercial banks' total income.

Issuance of Medium-Term Bonds

Fourth, banks tend to hold short-term bonds in an attempt to minimize maturity mismatches as long as their liabilities are mainly in the form of short-term bank deposits. Further, when the extent of information asymmetry is great, bank loans tend to be short term. This is because banks use short-term credit as a way of disciplining borrowers through refinancing. This discipline gives managers and owners of borrowing firms a strong incentive to avoid bad outcomes and also increases efficiency by terminating unprofitable projects. Also, banks provide short-term loans more frequently in cases when the financial infrastructure is underdeveloped; information systems or contract enforcement mechanisms are absent; and, accounting and auditing techniques are not adequate (Diamond, 1991). By being able to reprice bank loans, banks can obtain new information and thereby partially offset an inadequate infrastructure.

One way to lengthen the maturity of bonds, therefore, is to allow banks—especially the “long-term credit banks”—to issue relatively longer-term bank debentures to finance longer-term investment projects.⁹ This role may become important especially when individuals have a high propensity to save so that savings rates are quite high, yet they prefer holding deposits rather than securities. In such a case, commercial banks, credit unions, or wealthy individual investors may purchase medium-term bank debentures (e.g., one to five years) issued by long-term credit banks, which in turn provide medium- to long-term loans to the private sector. Longer-term loans can protect borrowers from liquidation undertaken by

⁹ In Japan, long-term credit banks were established to finance long-term projects, although policy-based financial institutions—such as the Japan Development Bank and former Export-Import Bank of Japan (now Japan Bank for International Cooperation)—were the most important sources of finance to industrial companies. The main sources of funds for the long-term credit banks were the issue of two types of debentures: one-year discount debentures bought mainly by individuals and five-year coupon debentures bought by financial institutions. Long-term credit banks also accepted deposits from financial institutions, but they were not permitted to take deposits from the general public.

imperfectly informed creditors and prevents opportunistic creditors from using the threat of liquidation to expropriate the profits of healthy firms. This transformation of short-term funds to long-term loans through the intermediation of long-term credit banks could contribute to economic growth, as was seen in Japan during its high growth period.¹⁰

Medium-Term Perspective

Fifth, the intermediate financial market structure may work effectively in the medium term, but not in the long term. As income levels rise and assets accumulate, the investor base expands and diversifies, lowering the relative importance of banks as investors. Further, as the nonfinancial firms expand and their profitability increase, they become able to issue bonds at reasonable cost. In this stage, nonfinancial firms are able to have diversified sources of financing and so are in a position to make a choice between bank loans and corporate bonds, which weakens the role of long-term credit banks in transforming short- and medium-term funds into long-term funds. This leads to a situation where bank loans are substituted for matured corporate bond markets (Stage III), turning complementarity to conflicting substitution.

3.4. Advantages of Financial Conglomeration

This section discusses the various advantages from banks being allowed to engage in securities and related business. Some advantages—such as mitigation of maturity mismatches, informational advantages, economies of scope, diversification benefits, operational efficiency, and economies of scale—may be applicable to banks. Others—such as a lengthening of the maturity of debt, mitigation of the conflicts of interest between banks extending loans to firms and shareholders of these firms, and a better input choice—may accrue to borrowing firms and the wider economy.

¹⁰ Whether such long-term credit banks can survive without initial government support and a low interest rate policy, both of which were present in Japan, is an open question. In the case of Japan, the Bank of Japan (BOJ) supported them indirectly by qualifying bank debentures for use as collateral on BOJ loans and by using them in open market operations. BOJ's indirect support not only helped long-term credit banks by increasing the investor base but also enabled them to become specialists in industrial finance, making strategic allocations of long-term funding that contributed substantially to the transformation of Japan's industrial structure (Koyanagi, 2001). Also, the low interest rate policy enabled banks to maintain sufficiently large interest rate margins. Further, by holding five-year bank debentures, commercial banks expected that long-term credit banks would supply the funds to their major client firms. Consequently, commercial banks held about half of the five-year bank debentures during the high growth period, while the rest were held by a broad range of investors, which were willing to purchase those highly liquid, safe assets.

Minimizing Double Mismatches and Promoting Economic Growth

First, banks' engagement in securities business promotes economic growth by making available much needed long-term financing to commerce and industry, while minimizing maturity mismatches and maintaining profitability. For example, if long-term credit banks are able to issue medium-term bank debentures, they may contribute to a transformation of the industrial structure and accelerated economic growth.

Gaining from Diversification Benefits

Second, financial conglomeration gives banks an opportunity to gain noninterest income, thereby sustaining profitability. This enables banks to maintain long-term relationships with clients throughout their life cycles and thus gives them an incentive to collect and produce inside information and monitor them. This lowers banks' incentives to take excessive risks. Also, banks can obtain diversification benefits by diversifying their activities with returns that are imperfectly correlated, thereby reducing banks' costs of funds and maintaining profitability. Since incomes from different financial services are not perfectly correlated, diversification can reduce banks' costs of funds, which lowers banks' charges to lending and underwriting customers. Close multidimensional relationships between banks and firms can reduce the costs of obtaining funds for firms, improve their performance, make investment decisions less dependent on retained earnings, and make it easier for firms to resolve financial distress.

DeLong and Ramirez (1995) have shown that the value of banking relationship for the firm was substantially reduced when the relationship narrowed to lending alone. Canal (1993) has found that increased revenue from new business units has contributed to improved bank performance in recent times. In addition, Gallo *et al.* (1996) found that mutual fund activities increased the profitability of banks. Moreover, Benston (1989) has reported that returns for combined commercial and investment banking would be significantly higher, without a compensating increase in overall risk.

Utilizing Information and Reputation Advantages

Third, financial conglomeration promotes efficiency by allowing banks to utilize inside information. Through long-term lending relationships, banks already possess inside information about creditworthiness of borrowers and features of their investment projects that

are not readily available to outsiders. Banks do not need to spend a lot of resources in collecting the information about their clients that is necessary for underwriting securities. Thus, banks are able to underwrite securities at lower costs than nonbank underwriters.¹¹ For example, firms issuing junior and more information-sensitive securities may receive higher prices when banks underwrite them than when independent investment firms do so, because of perceived monitoring advantages of the banks that are a byproduct of their lending activities.

Also, thanks to reputation, investors may be willing to purchase securities underwritten by bank underwriters rather than by independent underwriters. As it is easier to gain reputation in some businesses than in others and there are spillovers in reputation, banks can use the reputation gained in offering one service to recommend their other services (Rajan, 1996).

Exploiting Economies of Scope by Using Existing Capital

Fourth, banks can enjoy economies of scope from the production of financial services. They can spread the fixed costs in terms of physical and human capital needed for managing a client relationship over a wider set of products (Steinherr and Huveneers, 1990). Economies of scope can be exploited by using bank branch networks and all their other existing delivery channels to distribute additional products at low marginal cost (Llewellyn, 1996). Also, banks can better handle the shifts in demand for the products they offer by quickly transferring resources within organizations (Santos, 1998).

Economies of scope can also be realized from the consumption of financial services. Consumers may save on searching and monitoring costs by purchasing a bundle of financial services. This form of saving has been important historically for reducing corporate finance costs.

¹¹ In Japan, banks used to be lead underwriters, whereas securities firms served as subordinate underwriters until 1948. This differential role reflected differences in capital, credit, and expertise. Banks conducted (i) consulting and agencies services at the time of issue, (ii) underwriting, and (iii) bondholder protection. When the Securities and Exchange Law took effect in 1948, the Japanese Government adopted disclosure requirements as investor protection measures. At the same time, it separated the roles and services of banks and securities companies according to the US Glass-Steagall Act with banks taking the first and third roles and securities firms taking the second role. These so-called “commissioned banks” together with underwriting securities firms served as mediators in the bond market by balancing the interests of issuers and investors and managing the market so as to coordinate with the overall financial system and thereby protect bondholders (Koyanagi, 2001). Specifically, the disclosure requirements and the mediation roles played by banks together with securities firms contributed to the development of sound bond markets. This is in contrast with the United States, where repeated litigation is the preferred means to resolve disputes.

Exploiting Economies of Scale

Fifth, financial conglomeration may stimulate the growth of banks and thus realize economies of scale. Economies of scale exist if assuming a constant product mix, a bank faces declining average costs as its size expands. Technological advances may be a catalyst for increased size. In general, studies of US banks cannot provide evidence on the cost characteristics in nonspecialized financial institutions, because regulatory constraints have historically prohibited financial conglomeration and universal banking (UB). Based on non-US data, Saunders and Walter (1994) have found economies of scale amounting to \$25 billion for loans at the world's 200 largest banks. Vennet (1994a) has found similar results for a sample of 1,500 European Union (EU) banks. Lang and Welzel (1996, 1998) have found scale economies among German universal banks (UBs) reaching DEM 5 million and also significant scale economies for a sample of relatively small Bavarian cooperative banks.

Achieving Operational Efficiency

Sixth, it promotes competition by opening up various areas of finance for entry by banks. Financial conglomeration may improve “x-efficiency” or operational efficiency (Vennet, 2000). With regard to cost advantages, Berger and Humphrey (1991) have documented that technical efficiencies and allocative efficiencies may be large and even dominate scale and product mix economies. Increasing competitive pressure and technological advances force banks to shift to an institutional form that allows maximum x-efficiency. If cross-activity mergers are allowed, managers of financial firms are encouraged to implement their stronger monitoring capacity in the presence of the takeover market. Arnould (1985) and Akella and Greenbaum (1988) have stressed that takeovers will reduce expense-preference behavior, which has been found to be present in banking. Saunders (1994) has argued that allowing banks to be acquired by other financial companies or even commercial firms would impose the need for monitoring and create incentives for efficiency and value-maximizing behavior.

Berger, Hancock, and Humphrey (1993) have found that larger banks are more efficient. Allen and Rai (1996) have documented wide variations in country-specific efficiency for 194 banks in 15 countries and have found that large banks in separated banking countries (countries prohibiting the integration of commercial and investment banking) were less efficient than other bank groups during 1988-1992. Benston (1994) has pointed out that data on the presence of x-efficiency indicate some advantage for integrated banks over

specialized banks. Vennet (1996) has also found that in the EU, bank mergers improved rationalization.

Based on a full sample consisting of 2,375 banks from 17 European countries during 1995-1996, Vennet (2000) has found that while specialized banks appear to exhibit no disadvantages relative to financial conglomerates in traditional intermediation activities, the latter are most cost efficient when nonbanking activities are taken into account. Vennet has also found that integrated banks had higher average levels of operational efficiency relative to specialized banks and this finding was most pronounced for non-German banks. The integrated banks also dominate specialized banks in terms of profit efficiency. The continued expansion of financial conglomerates as a response to the introduction of the euro is likely to lead to a more efficient financial system since competition should induce these banks to further strengthen their cost and profit efficiency.

Reducing Conflicts of Interest between Stockholders and Creditors

Seventh, banks may be able to reduce conflicts of interest between creditors to the firms and shareholders of these firms by holding stocks of their clients. The conflicts are likely to arise when the firms are distressed and near bankruptcy. This is because banks tend to be conservative since banks promise a repayment of principal and interest and concentrate risk over the payback period, whereas shareholders may have incentives to increase risk-taking lending activities since they have limited liability and equity claims promise payment of a share of profits. Thus, the fact that banks control their clients' stocks can reduce the potential conflicts of interest between stockholders and creditors in developing a reorganization plan. Also, a bank that owns stocks of a firm can lend to it at lower cost, because its powers of control as a stockholder permit it to protect its interests as a creditor.

Improving the Composition of Input Choices

Eighth, banks' involvement with nonbanking services may lower the adverse effect of high costs of external finance on the composition of input choices. Calomiris (1995) has compared German UBs and banks in the United States that were not integrated due to regulatory limits during the second industrial revolution of 1870-1913. This period involved large-scale production and distribution, which required rapid financing to large industries. Also, it gave rise to many new products and technologies on an unprecedented scale, particularly in the machinery, electricity, and chemical industries. Consequently, novelty of

these production processes posed severe information and control problems for external sources of finance, because of the difficulty of evaluating proposed projects and controlling the use of funds.

In this period, German banks enjoyed lower industrial finance costs than those in the United States because the former could diversify their businesses (Calamoris, 1995). High financing costs retarded industrial growth in the United States relative to its potential and biased the process away from fixed capital-intensive industrialization toward a greater reliance on raw materials and labor. In particular, industrial buildings and equipment are considered less desirable inputs than materials and accounts receivable for a financially constrained firm, because they are less liquid.¹²

3.5. Other Business Potentially Undertaken by Banks

In addition to securities and derivatives businesses, banks may engage in other nonbanking activities. Allen and Gale (2000) have stressed that financial conglomeration in Europe has been more successful than that in the United States. The success of a UB system, Allen and Gale (2000) argue, depends on the presence of a low degree of competition in the provision of financial services. Combined relationships in Europe have been successful to the extent that large future streams of profits are expected. On the other hand, several intermediaries in the United States attempted to establish financial supermarkets where ultimate investors could obtain a whole range of financial services from the same provider. This is exemplified by Sears' purchase of Dean Witter in the 1980s, which gave it the ability to provide deposits, consumer loans, credit cards, mortgage banking, and commercial lending. Financial supermarkets—although offering a wide range of products and convenience through one-stop shopping—did not provide more implicit insurance because each service competed with others and contained unprofitable services as well.

¹² For example, during the pre-World War I period, the composition of tangible capital was consistent with the idea that low costs of industrial finance would be reflected in input choices. Compared with Germany, the United States relied more on labor and materials than on hard-to-finance equipment. During the late 19th century, US nonagricultural producers increased output and labor at the same rate, but in Germany nonagricultural output rose twice as fast as labor input. This indicates that in the United States the inventory to fixed capital ratio was much higher than that of Germany during this period. In addition, Germany enjoyed greater benefits from expanding quickly and reaping economies of scale. In the electrical industry, in particular, Germany expanded rapidly and took advantage of scale and network economies in constructing its electrical utility industry, while US industry developed inefficiently.

Insurance Business

Banks have advantages in insurance underwriting by tapping their existing resources in areas such as administration, investment management, and human resources, and there is no need to add additional employees, systems, or resources to generate and mail out premium notices. Also, sales personnel with fixed salaries are generally less expensive than traditional brokers who receive commissions. Banks can use customer information to tailor their sales approach and target products to individuals. Banks also can automatically debit premium payments from checking or savings accounts of their depositors. They can capitalize on the trust individuals typically have in their banks by extending their customer relations to include insurance (Lown *et al.*, 2000).

Based on US data during the 1970s and 1980s, Boyd *et al.* (1993) have concluded that mergers between bank holding companies (BHCs) and life insurance firms would likely decrease BHCs' bankruptcy risk, while mergers with other types of financial firms would likely increase the risk. Constructing hypothetical, pro-forma mergers between BHCs and firms in each of the other three major financial services industries (life insurance, property/casualty insurance, and securities), mergers between BHCs and life insurance firms will produce firms that are less risky and no less profitable than those in either of the two individual industries. While banking and life insurance yield lower profits than investment advice and securities, their risk level is lower. Because of the highly regulated nature of banking, this industry proves to have the lowest risk among the group. For example, regulators tend to encourage mergers when a bank is weak and, therefore, there is likely less recorded evidence of firms close to failure than would otherwise appear in the data. Insurance and property/casualty insurance are also highly regulated. Thus, the statistics for combined firms show that mergers between BHCs and life insurance are likely to provide firms with less risk than others. This result supports the combining of banks and life insurance firms.

Based on US data of 1984 and 1998, Lown *et al.* (2000) have tested whether a better opportunity to diversify banks' businesses in the post-Gramm-Leach-Bliley Act period would improve risk-return tradeoff faced by financial companies.¹³ They have found that mergers

¹³ Since the middle of 1980s, regulators in the United States have begun to loosen restrictions on bank participation in investment banking and insurance. Before 1986, state insurance regulators imposed limitations on national banks' insurance sales and underwriting. Subsequently, the Office of Currency Comptroller (OCC) argued in 1986 that a previously overlooked section of the 1917 National Bank Act can be used to allow national banks to sell insurance anywhere on condition that one of its branches be located in a town with less than 5,000 people. In 1993, a US Court of Appeals ruling upheld the OCC decision. State regulators continued fighting the

between BHCs and life insurance firms will produce companies that are less risky and no less profitable than those in either of the two individual industries. Moreover, Saunders and Walter (1994) have found that expanding banks' activities reduces risk, especially when insurance services are combined.

In Europe, banks have entered into the life insurance industry during the past few decades, reflecting a drive to utilize the scope of economies, and have been successful so far. Life insurance premiums grew more than 10% per year in eight of 12 EU countries (Lown *et al.*, 2000). This growth seems to have been sustained due to the rising income and wealth in the increasing percentage of older people.

3.6. Disadvantages Arising in the Intermediate Financial Market Structure

When banks enter into securities and derivatives businesses, they may experience various problems including a higher default ratio on their loans to firms, an emergence of new risk, and an aggravation of existing risk. Also, economies may face a slower pace of financial innovation when banks deal in securities as compared to when independent investment houses do so. Further, investors may suffer when conflicts of interest result in low quality of securities services. Issuers may also face higher switching costs, while other small firms may find it difficult to get financing from banks, particularly small ones.

Higher Default Ratios of Bank Loans

First, large, reputable firms increasingly issue securities at low cost in the capital market. Thus, commercial banks are likely to end up providing loans to small, relatively newly established firms that are not able to raise funds directly from markets. Since their income streams and creditworthiness are relatively uncertain, loans to these firms may increase the default probability. Consequently, these banks may face a higher default ratio on their average credit.

court decision until a 1996 Supreme Court ruling upheld it. Since 1996, the ruling has forced state legislatures to level the playing field by passing new laws that allow national and state-chartered banks to sell insurance through subsidiaries or directly through bank branches. As a result, BHCs increased their share of the securities industry's total revenue from 9 to 25%.

Decline in Credit Availability for SMEs

Second, financial conglomeration may make larger banks more profitable and efficient while leaving specialized or small banks competitively disadvantaged. As large banks increase their business with large customers and expand their size through purchasing small, weak banks, the number of small banks declines. The proliferation of new bank product lines has also prompted internal competition for scarce capital and managerial attention in which the small business component of banking has been losing ground. This is because acquiring banks have often imposed their own idiosyncratic policies and procedures on acquired banks, stripping the latter of their autonomy in management. This process may be robbing acquired banks of their community identity and their appetite for providing loans to small local businesses (Berger and Udell, 1995).

These forces may not increase much the downside costs for consumers who demand relatively generic financial services and increasingly wish to obtain financial services in national markets with substantial competition.¹⁴ Equally, these forces may not cause downside costs for large- and middle-sized firms that wish to obtain a wide variety of financial services from large banking organizations.

On the other hand, there is growing concern that small businesses have fallen victim to the increasing size and complexity of banking organizations. SMEs usually find it necessary to have banking relationships with individual banks that understand the local business market and are staffed with local personnel. Trust is a necessary condition for establishing and continuing a long-term relationship between banks and borrowers so that the latter are able to obtain tailor-made services that are necessary to meet idiosyncratic shocks. Petersen and Rajan (1994) and Berger and Udell (1995) have found evidence that at least some types of lending to small businesses tend to be relationship-driven. Berger and Udell (1996) have found that small businesses tend to consolidate their working capital financing with a single bank. Banks collect inside information through repeated transactions and long-term relationships and use this to refine the terms of the lending contract. Also, small business borrowers with long banking relationships tend to pay lower interest rates to the banks and

¹⁴ Calem and Nakamura (1994) have presented evidence that bank branching was even pro-competitive because price differentials across states were reduced. Similarly, Calem (1987) has presented empirical evidence favoring the notion that mergers and branching enhanced competition. Laderman and Pozdena (1991) have examined the response of stock returns of BHCs to changes in interstate banking laws and have concluded that interstate banking increased potential and/or actual competition in the banking industry. Such new trends in the banking industry had positive impacts, especially on large banks, through an improvement of efficiency and also on borrowers and depositors via improved access to bank branches and competitive interest rates.

have fewer collateral requirements. Since the severity of asymmetry in information tends to be greater for SMEs, the nature of the debt contract tends to vary with the size of the firm.

As banks become larger and more complex, they tend to reduce their supply of loans to SMEs.¹⁵ This tendency reflects the fact that the delivery of banking services to SMEs is fundamentally different from that to large firms. Lending to SMEs tends to be more information-intensive and relationship-driven, whereas lending to large firms tends to be more transaction-driven and also often involves the joint provision of more nontraditional banking products, such as derivative contracts and underwriting services (Berger and Udell, 1996). The problem of reduced bank loans to SMEs can be exacerbated by the fact that the pool of independent community banks that could absorb this contraction in supply has been reduced by the acquisition of small banks by large banking organizations (Berger and Udell, 1996).

Williamson (1967) has provided another explanation as to why the trend toward large, complex banking organizations has reduced the supply of credit to SMEs. He emphasized that managerial diseconomies may occur when multiple activities are undertaken by large, complex organizations. As banks become larger and more complex, more dimensions of managerial oversight become necessary. For example, the joint provision of banking services to SMEs with securities services typically demanded by large corporations may complicate the management of the banks (Berger and Udell, 1996). The trend towards larger banking organizations with expanded product lines and increased geographic dispersion has significantly complicated the managerial structure of the banks and resulted in increased layers of management (vertical complexity) and more parallel functions (horizontal complexity). Such organizational diseconomies provide an incentive for larger, more complex banks to abandon their small business clientele in order to focus their efforts more narrowly and avoid these diseconomies.¹⁶

¹⁵ Based on data covering about 900,000 domestic commercial loans issued quarterly by a sample of US banks in 1986-1994, Berger and Udell (1996) have found that larger banks tend to charge lower loan rates and less often require collateral for small business borrowers. Large banks are predicted to charge about 100 basis points less on loans issued to small businesses and require collateral about 25% less of the time than small banks. Further, large banks were found to issue fewer loans to small business borrowers. These results support the view that a reduction in lending to relationship borrowers lowers the average interest rate and collateral requirements offered to those remaining in the small borrower pool (since the pool consists of a higher proportion of ratio borrowers who tend to pay a lower price for credit). Moreover, Berger and Udell have found that banks that are more organizationally complex overall generally provide less credit to small borrowers.

¹⁶ Moore (1995) has stressed that a relaxation of geographic banking restrictions did not cause small banks to lose more market share than would be predicted based on historical patterns. Further, Lawrence and Klugman (1991) also have found no evidence that BHCs competed unfairly against other small banks in rural markets in the case of the United States. Goldberg and Hanweck (1988) have concluded that BHCs did not show any

Concentration of Power

Third, banks' involvement with securities and derivatives may promote a concentration of power in the banking sector as the size of banks expands. This is partly because banks have a natural tendency to promote lending over securities, thereby indirectly deterring capital market development. Further, banks' reputation and their informational advantages leave them on a stronger footing, preventing independent investment firms from competing with banks on a level playing field.

The Slower Pace of Financial Innovation

Fourth, financial conglomeration gives rise to conflicts between the innovative drive present in the securities market and that present in relationship banks. In the securities markets, innovation is fostered by enhancing competition and specialization and by the fact that advances in customer services drive profits. Since small innovations are applicable to widely traded market instruments, innovation can be remunerative (Steinherr, 1996). Market-based innovations in money and capital markets can be substituted for bank deposits and loans, affecting the interest rate margin of banks.

By contrast, innovation in the banking system tends to focus on cost-saving devices rather than on product innovation. From the viewpoint of banks, it is less important to offer the latest innovation. Rather, it is important to build up reputation, reliability, and a long-term commitment to customers on a sustained basis. Therefore, banks put more emphasis on quality control, reliability, and stability, all of which are required for maintaining relationships. Banks potentially lose money in the case of loans extended to a firm that becomes bankrupt; thus, banks have no interest in advising their customers to adopt a high risk/high return strategy. Even if banks' loan portfolios are well diversified, a mere loan loss is a negative signal for the banks. Thus, banks act as risk minimizers and transmit this bias to their customers (Steinherr, 1996). Further, the banking system tends to control competition to provide implicit rents that are necessary for banks to conduct discretionary, flexible, repetitive transactions. Thus, the resultant large banks become too big to fail and implicit protection makes failure less likely. As a result, restricted competition results in less aggressive and innovative behavior, unpenalized by forced exit.

long-run competitive advantages over other types of banks. Rose and Wolken (1990) have found that an affiliation with a geographically-diversified BHC provided no significant long-term comparative advantages for BHC subsidiaries over independent banks.

Independent investment firms determine whether to innovate (invest in innovation) without taking into account the impact of the innovation on the loan demand faced by commercial banks. When commercial banks that also engage in securities business determine whether to innovate, on the other hand, they internalize the depressing effect that the innovation will have on the loan demand faced by commercial bank units. This finding is independent of the organizational details of the banks engaging in securities business—whether investment firms and commercial banks are divisions or subsidiaries. It depends only on the fact that the integrated banks maximize the sum of the expected profits of the investment firms and commercial banks. Consequently, integrated banks need higher expected profits from the innovation than do functionally separated investment firms. Since a positive profit from innovation is available only if the integrated bank in question is the only bank that innovates, the only way to increase the expected profit from innovation is to lower the probability with which each competing bank innovates in a mixed strategy Nash equilibrium.¹⁷

This suggests that while large integrated banks enjoy scope economies and may deal with large, politically viable clients, stand-alone investment firms are able to compete with them. Stand-alone investment firms have an innovation-based advantage in competing with integrated banks. They can wrest some of the market share away from local UBs, particularly when it comes to large corporate borrowers seeking capital market funding. The evolution of a financial system is likely to be path dependent. Well-developed financial systems provide stronger incentives for financial innovation and develop faster.¹⁸

¹⁷ Boot and Thakhor (1997) have shown theoretically that the equilibrium probability of innovation is lower in a financial system with universal banking than a financial system with functionally separated banking. Banks obtain inside information, which is reusable intertemporally and whose cost of acquisition becomes lower over time. Thus, customers of a commercial bank become more profitable to commercial banks over time because informational monopoly for the bank creates ex post rents. Since financial innovation yields only a single-shot gain due to imitation by rivals, banks may not be eager to undertake innovation. This reflects banks' concerns that they can face loss of loan demand as a result of financial innovation so that they cannot recover losses generated at early stages of banking relationships.

¹⁸ In the meantime, the securities market may discourage firm-specific investment compared with the banking system. In the securities markets, issuing firms invest less in firm-specific capital since it is not transferable. Managers and workers are inclined to invest less in company-specific human capital formation and long-term projects when their tenure is uncertain. The possibility of takeovers may depreciate incumbent managers' investments in the company even further. By contrast, under the banking system, the protection against takeovers provided, for example, by the housebank system or main bank system, reduces this underinvestment bias.

The Emergence of Lemon Problems

Fifth, the pre-emptive behavior that banks can adopt may deter other independent financial institutions from competing for their client's businesses. By having better information about the borrowing firms, banks can anticipate the firms' funding needs and so can prepare some of the necessary work in advance to gain an advantage over potential competitors. This creates a new "lemons" problem when a firm switches to independent underwriters (Santos, 1998). In a specialized banking system, when a firm switches from a commercial bank to an investment firm in order to issue in the market, no special meaning is attached to this move, except that the firm is interested in raising funds through a different channel. Further, the investment firm knows that the bank with which this firm has relationships cannot underwrite its securities. By contrast, when a bank can underwrite securities and the firm switches to an independent investment firm, this independent investment firm may wonder why the firm's bank does not provide the underwriting service and consequently, it may charge higher premiums, thereby raising the firm's switching costs.

Conflicts of Interest between Banks and Investors

Sixth, financial conglomeration of the banking system may lead to various conflicts of interest between banks and investors when the former engage in securities business. Banks may decide to underwrite securities for their troubled borrowers so that the proceeds of the issue of securities can be used to pay off the banks' own loans to the companies. Banks undertaking proprietary trading may not attempt to obtain the best execution for their clients at their advantage. They may dump the unsold part of the securities they underwrite into the trust accounts they manage. The division of banks that is responsible primarily for dealing with initial public offerings (IPOs), seasoned equity offerings, and mergers for new and current clients may face conflicts with the divisions that conduct brokerage operations. This is because the former have the desire to complete for those transactions, while the latter are motivated to maximize commissions and spreads by providing timely, high-quality information for their clients.

When banks conduct securities analysis and their research analysts' compensations are determined by the analysts' helpfulness to corporate finance professionals, the opinions of these analysts may be positively biased. This is true especially when analysts issue opinions and recommendations about firms that have business dealings with their corporate finance divisions. Also, this kind of conflict is likely to become large during an IPO process. This is

partly because underwriter analysts may issue recommendations that are overly optimistic compared to those of their own nonunderwriter competitors, and partly because these analysts may be compelled to issue more positive recommendations on firms that have traded poorly in the IPO aftermarket.

Banks may also impose tie-in deals on customers by using their lending relationships with firms to pressure them to buy their underwriting services, using the threat of increased credit costs or nonrenewal of credit lines. Banks may use the confidential inside information that they possess when they underwrite firms' securities in a way that the firms do not contemplate, such as disclosing the information directly or indirectly to the firms' competitors.

These conflicts of interest are likely to lower the quality of services offered by banks, thus investors need special protection against such malpractices. Conflicts of interest can be exploited especially when (i) there is some monopoly power as with tie-in deals, (ii) there is an asymmetry of information between the contracting parties as in the conflict between the bank's promotional and advisory roles, or (iii) one of the parties involved is naïve, as when securities are issued to transfer bankruptcy risks to outside investors (Santos, 1998).

The Emergence of New Risks

Seventh, investment firms conduct transactions for their own account. They attempt to profit by acquiring securities in the expectation of reselling them at a higher price. This makes the profitability of these activities highly dependent on the bank's assessment of the value of the securities and on that of the market. Risk occurs mainly in the case where firms make commitments to underwriting public issues and these securities firms cannot resell the securities they underwrote at a price high enough to cover the costs of the operation and the price guaranteed to the issuers. Underwriting requires that commercial banks bid as primary dealers in bonds, hold unsold bonds, and support prices after initial distribution. Commercial banks may allocate unused funds to pay for the costs of providing these services. This means that they are now entering a new economic environment and thus face new types of risks. Regulators need to ensure that commercial banks do not overoptimistically analyze the performance of firms with whom they have long-term relationships when they underwrite bonds.¹⁹

¹⁹ Meanwhile, the presence of this risk gives incentives to investment firms to underprice the securities they underwrite. Various research studies have found that IPOs of common stock are usually underpriced. Smith (1986) has reviewed the existing literature and concluded that on average underpricing exceeds 15%. Meanwhile, Loderer, Sheehan, and Kadlec (1991) have found little evidence that underwriters systematically set

In addition, banks may face market risks as they increase the share of securities holdings and lower the share of illiquid bank loans. Equity and other types of assets are relatively risky in themselves. Kroszner (1999) has pointed out that there is historical evidence that permitting banks to expand their portfolios to include equity reduces income stability.²⁰

Amplified Risk with Derivatives

Eighth, various risks associated with derivatives should be considered. The risks surrounding derivative transactions include market risk, credit risk, operations risk, and legal risk, all of which are the same type that banks face in their traditional operations. Some argue that net exposures of derivatives dealers can be quite small for various reasons (Edwards and Mishkin, 1995). First, derivatives contracts require period payments based on notional amounts but not payments of the notional amounts themselves. Thus, a party's exposure is not the notional value of the contract, but the replacement cost of the contract. This suggests that the typical derivatives transaction involves a credit exposure that is only a fraction of its notional principal, thus gross credit exposure is much less. Second, bilateral contractual netting provisions allow banks to offset losses with gains from other contracts outstanding with a defaulting party and its corporate affiliates. Third, when swaps are undertaken with lower quality parties, such counterparties are usually required to post collateral on a marked-to-market basis. A US General Accounting Office (GAO) report has examined 14 major OTC derivatives dealers in the United States and found that their net credit exposure was only \$68 billion, or 1% of the notional value of their outstanding derivatives contracts. In fact, actual losses incurred by derivatives dealers as a result of counterparty defaults have been quite small, accounting for only 0.2% of their combined gross credit exposures in the United States.

Nevertheless, derivatives are different from other securities because of the special attributes of derivatives: complexity and rapid risk transformation. The higher speed and enhanced complexity reduce the transparency surrounding these transactions, which makes risk assessment a much more difficult task for internal management, external counterparties,

offer prices below the market price on the major exchanges, but found evidence of underpricing for NASDAQ issues.

²⁰ However, it is increasingly understood that the risk arising from holdings of stocks can be reduced by diversifying the holding.

and regulators. Lack of transparency associated with derivatives vis-à-vis management, regulators, and financial markets weakens market discipline and regulatory oversight.²¹

Moreover, the increased participation of banks in derivatives markets has generated concern among regulators in industrial countries, reflecting fears that derivatives may enable banks to take more risk. In 1994, many banks faced a substantial loss on interest rate derivatives instruments when interest rates continued to rise in the United States. By exercising leverage, banks generally use derivatives to place sizable bets on interest rate and currency movements. Since banks often behave as dealers in OTC derivatives markets, they may be exposed to substantial counterparty credit risk.²² Compared with organized futures exchanges, the OTC markets offer no clearinghouse guarantee and set no margin requirements to mitigate the credit and counterparty risks involved in derivatives trading.

Further, bank dealers are generally concentrated.²³ This concentration can be attributed in part to (i) the complex information and risk management systems needed to conduct derivatives activity, and (ii) the high credit standing demanded of counterparties in OTC derivatives dealing where credit risk is a paramount concern. The concentration of

²¹ For example, in September 1994, Gibson Greetings, a Cincinnati-based company, filed a suit alleging that Bankers Trust had misled it about the risks of interest rate swaps that it had bought from 1992 onwards, leading to losses of \$20 million. The dispute was settled out of court on the following terms: Bankers Trust released Gibson Greetings from \$14 million it owed under two swap arrangements. This episode indicates how reputational damage can be inflicted on institutions that sell complex derivative products to end users who may or may not be fully informed about the risks involved. Also, in October 1994, Proctor and Gamble, the US consumer products giant, filed a \$130 million plus lawsuit against Bankers Trust alleging that the bank had not accurately and fully disclosed information about a single interest rate swap that it was encouraged to enter into and which resulted in heavy losses.

Following the two legal cases, the Federal Reserve Bank of New York announced in December 1994 that Bankers Trust had entered into an accord with the bank regulator. This accord reflected the regulator's view that all banks engaged in derivatives business should maintain effective policies and procedures relating to client selection, marketing and sales practices, and pricing and valuation. Nevertheless, these obligations fall short of imposing on banks a fiduciary duty to determine whether a transaction is suitable for its counterparty (Dale, 1996). If courts were to set aside such contracts, derivatives dealers would be exposed to losses arising from nonenforceability—similar to the case of 1980s in the United Kingdom, which involved the massive losses caused by the nonenforceability of swap contracts entered into by local authorities.

²² Derivatives can be transacted at either stock exchanges or OTC markets. The stock exchange deals with standardized contracts, sets margin requirements, and acts as a clearinghouse—thereby eliminating bilateral counterparty risk. In general, exchange-traded derivatives are characterized by a high degree of liquidity and low transaction costs, reflecting the standardized contract terms, low credit risk, and broad interest in the underlying assets. The OTC markets deal with tailor-made contracts to meet the specific needs of counterparties (e.g., swaps). In this market, traders and investors are exposed to the counterparty risk. The absence of a clearinghouse and customized contract terms makes OTC derivatives relatively illiquid, and for this reason, OTC derivatives are usually less liquid than the underlying cash markets. The OTC markets are designed primarily to reconfigure market risk rather than to provide liquidity.

²³ In the United States, for example, the seven top domestic bank derivatives dealers accounted for more than 90% of all US bank derivatives activity, while the top five securities derivatives dealers accounted for 82% of all US securities firms' derivative activities.

large-scale derivatives trading in a few major financial institutions may undermine financial stability.²⁴ The failure of one large derivatives dealer may inflict large losses on counterparties, while also damaging the liquidity of the derivatives market.²⁵ The too-big-to-fail doctrine has not only been reinforced but may have to be extended to nonbank derivatives dealers. Moreover, a 1994 US GAO report has stressed that a default by a major OTC derivatives dealer (particularly a major bank) could spill over and close down the OTC markets (Edwards and Mishkin, 1995). The growing size of banks' OTC derivatives activities suggests that they may be exposed to market and credit risks to a significant degree in the future, because of their derivatives positions, such as counterparty credit risk.

Moreover, derivatives may increase the volatility of financial asset prices.²⁶ Also, OTC derivatives trading can exacerbate disturbances in underlying assets.²⁷ Derivatives also increase the potential for cross-border and cross-market contagion, while end users do not understand how these instruments work.

4. Regulatory Frameworks for the Intermediate Financial Market Structure

This section focuses on the regulatory frameworks that apply to the intermediate financial market structure. Given that the intermediate financial market structure generates

²⁴ For example, Barings failed in February 1995, partly because it was involved in large-scale derivatives business, though its senior management did not fully understand the risks involved in such transactions. The failure is also attributed to the fact that Barings was active in the Singapore, Tokyo, and Osaka derivatives markets, yet local regulators communicated neither with each other nor with the UK regulatory authorities. Also, there was regulatory confusion over the appropriate scope of consolidated supervision of Barings' mixed banking-securities business; in particular the way in which Barings' banking arm was able to fund its risky securities operations in Singapore (Dale, 1996).

²⁵ However, Dale (1996) has pointed out that official intervention to prevent end-user derivatives losses is neither necessary nor desirable, since end-user losses are unlikely to pose a systemic threat and it is not good to protect buyers of derivative products from their own folly. When large-scale derivatives activities take place, however, the volatility of underlying assets may expand and transmission mechanisms of shocks become compounded across borders and markets.

²⁶ With respect to the volatility of asset prices, academic studies do not find strong evidence that derivatives trading results in increased market volatility. This suggests that derivatives are better viewed as a response to than a cause of volatility in ordinary market conditions (Dale, 1996).

²⁷ For example, the sharp appreciation of the yen vis-à-vis the US dollar from ¥101 per US dollar in January 1995 to ¥80 in April has been widely recognized as having been reinforced by the cancellation of knockout options and the unwinding of yen-carry trades. Knockout options are cancelled if the exchange rate reaches certain knockout levels and thus leave investors unhedged against exchange rate movements. In early 1995, Japanese exporters purchased knockout options to partially hedge the yen value of US dollar receivables against a moderate appreciation. When the knockout options were cancelled, Japanese exporters with those options sold dollars into an already declining market to prevent further losses on their dollar receivables, thus further appreciating the yen. Also, the dynamic hedging strategies employed by sellers of knockout options required the sudden sale of US dollars after the knockout levels had been reached, thereby exacerbating a further appreciation of the yen (Schinasi *et al.*, 2000).

various disadvantages, as discussed in Section 3, Section 4 discusses measures to mitigate them. These include (i) a further strengthening of the banking sector, (ii) an application of capital requirements, (iii) the corporate forms of banking organization, (iv) managing derivatives activities, (v) improving internal risk management systems, (vi) shifting toward more risk-based bank supervision, and (vii) coordination among relevant regulators.

4.1. Strengthening the Banking Sector

The higher default ratios on average bank loans require banks to improve their internal risk management skills even more intensively when working within the intermediate financial market structure. Banks' involvement in various activities generates new risk as well as amplifies existing ones, increasing the need to improve their balance sheets further. Moreover, intensified competition and a growing tendency toward the removal of government guarantees and excessive protection for commercial banks as the economy moves toward being more market-based are likely to contribute to a further rise in the credit risk borne by commercial banks unless their internal risk management systems are drastically improved. For these reasons, regulators should improve banks' soundness—particularly by taking the following three steps: (i) improving banks' incentives to generate and process information about their clients and monitor their performance, through removing government intervention, (ii) limiting connected lending, and (iii) adopting prudential regulations practiced in industrial countries, with careful consideration to the problems unique to Asia. In considering policies, it is important to take into account specific issues applicable to Asian countries.

Reducing Government Interventions

There are two main types of government intervention that have reduced banks' incentives to monitor borrowing firms by paying agency costs of collecting, analyzing, and processing information about them (Yoshitomi and Shirai, 2001). First, strong government intervention in directing and guaranteeing bank credit adversely affected the incentives. In order to encourage the expansion of particular industries or firms, for example, some Asian governments became heavily involved in directed financing of projects in industries that they selected for promotion. When the extension of external markets is limited and the capital markets are at a nascent stage, these governments may be able to coordinate private investment well enough to induce their economies to take off. As the external markets

expand and the industrial input-output nexus becomes more complex, however, such government interventions are likely to fail.

Second, in order to achieve financial stability and minimize risks borne by banks in the face of such failure, these governments provided implicit guarantees to bank loans and bailed out borrowing firms regardless of their viability when they fell into financial distress. As a result, banks' incentives to collect information and properly monitor their borrowers were considerably reduced, undermining the development of their internal risk management skills.

Therefore, the first step to improve banks' incentives to process inside information about their clients and monitor their performance is to reduce such government intervention.

Limiting Connected Lending

As a second step, it is important to limit connected lending. In Asia, banks are often owned by family businesses or are family-controlled conglomerates. The ownership of East Asian firms is highly concentrated through family controls and group affiliations, generating a divergence between cash-flow rights and control rights. Even if cash-flow rights of each firm based on the share of stock holding is small, ownership of control rights based on voting rights can be concentrated through several mechanisms, such as multiple classes of voting rights, pyramid structures, and cross holdings (Claessens, Djankov, and Lang, 1999). Multiple classes of voting rights reflect a deviation from the one-share-one vote rule and are moderately utilized in many East Asian countries. Pyramid structures—most pervasive in East Asia—occur when one holds a majority of the stock of one firm that holds a majority of the stock of another and this process can be repeated several times. Cross-holdings—although less pervasive than pyramid structures—refer when a company holds shares in another company in its chain of control.

Banks are generally incorporated into family business conglomerates. Thus, banks often provide loans on favorable terms to their affiliated firms without taking into account risks involved. Poor lending decisions and undue concentration of lending in certain sectors or projects often reflect self-lending or lending to entities associated with commercial banks' shareholders or managers. Exploitation is more likely when control rights are high and cash-flow rights are low because the controlling owners gain private benefits but suffer few of the consequences of the reduction in the firms' value. Further, since banks are protected

under the deposit insurance system and lender of last resort facility, they may enjoy advantages that without legal constraints might be shared with their affiliates or otherwise favored borrowers.

Thus, special attention should be given to the quality of bank' own equity since shareholders are not only often concentrated, but also they are banks' customers. Further, bank shareholders may raise funds for purchasing bank equity from unregulated nonbank financial firms. In such cases, the poor quality of bank loans reflects the poor quality of bank equity. Without limiting connected lending, for example, by requiring that lending activities should be made under the proper risk management system, it is difficult to improve the soundness of the banking sector even if the first step described above is taken. Moreover, it may be necessary to limit mutual ownerships of equity between banks and nonbank firms until banks improve their internal risk management systems.²⁸

Adopting Prudential Regulations

While the problems associated with government intervention and connected lending are being dealt with, prudential regulations and supervision similar to those adopted in industrial countries should be introduced. Those include disclosure requirements, capital requirements, portfolio restrictions and diversification requirements, general standards of conduct on firms and their employees (prohibiting unsafe and unsound practices), and periodic reporting requirements with onsite examinations. These prudential regulations are supplemented with a regulatory review of applications to establish new banks and competitive conditions in the markets they propose to enter.

²⁸ One may argue that banks can increase their presence on boards of directors by becoming shareholders and improve firms' performance. The full insider status might improve information flows even further. On the other hand, banks generally prefer equity claims when (i) the return to misallocating funds is relatively high and hence moral hazard is severe, (ii) the probability of failure as a commercial bank is relatively high, and (iii) ex post state verification costs are relatively low. When banks are allowed to take equity positions and assume some control rights in these situations, their incentives to control moral hazard problems could be substantially attenuated (Boyd, Chang, and Smith, 1998). This is because banks can share more easily in the benefits of misallocating funds and they can more easily pass losses onto the deposit insurance system, if it exists. By exercising their control rights, banks can force firms to misallocate funds to projects that are not beneficial to the firm, affecting the performance of the latter and increasing the burden on the deposit insurance system. When stock prices are volatile, moreover, the risk of returns on common stock may exceed that of debt. In addition, by virtue of their dual role as lenders and equity holders and given that capital markets are not a very competitive financing option, banks can behave as monopolists, using their power to extract profits from the firm at the expense of the firm's performance. Also, monopoly profits can be extracted by forcing increased borrowing from the bank at monopoly interest rates.

Indicators of bank strength that are adopted by bank regulators in industrial countries can be summarized in five key variables—capital adequacy, asset quality, management, earnings, and liquidity (the “CAMEL” system). These indicators are useful to assess bank soundness as long as best accounting standards and reporting requirements are practiced. Otherwise, misclassification of nonperforming loans can occur and reserves against credit losses can be underprovisioned. Further, an adequate legal and judicial infrastructure is necessary for regulators to take supervisory action.

Many Asian countries, however, suffer from a lack of adequate accounting, auditing, and reporting requirements. This, therefore, partly explains why there was a lack of awareness among market participants and regulators that the growing concentration of foreign bank loans to unhedged borrowers would cause serious banking crises once the exchange rate depreciated sharply. For example, Rojas-Suarez (2001) has reported that the mean ratio of risk-weighted capital to assets amounted to as much as 8.1% in 1995-1997 for Thai banks that experienced a crisis later on (crisis banks) and this ratio was higher than for those Thai banks that did not experience a crisis (noncrisis banks). In Korea, those ratios reached 7.9% for crisis banks and 8.3% for noncrisis banks. Similarly, liquidity ratios were about 9.5% for both types of Thai banks. While noncrisis banks had higher liquidity ratios than crisis banks in Korea, these ratios were quite high for both types of banks (21.4% and 18.4% each). Moreover, operating costs to assets were about 4.5% for both kinds of Thai banks, while the ratios were lower for Korean crisis banks (3%) compared to Korean noncrisis banks (6.1%).

The capital adequacy ratio—one of the most frequently used indicators in industrial countries—is not necessarily an effective indicator of bank soundness in Asia, even if adequate accounting, reporting, and legal frameworks are adopted. This is particularly so when the stock market for bank capital is small and the ownership is highly concentrated, as indicated above (Rojas-Suarez, 2001).²⁹ If banks owned by family business conglomerates lend to these conglomerates, the poor asset quality of banks as a result of excessive risk-taking lending leads to a poor quality of the banks’ own equity. In this case, own equity value or market capitalization value of bank stocks become meaningless indicators of bank soundness. When wealth is highly concentrated and only limited numbers of investors become bank shareholders, therefore, it is not clear whether these shareholders’ wealth is at

²⁹ In general, changes in the market value of bank capital can provide information to regulators with respect to the quality of reported capital. However, this is true as long as bank equity markets are liquid and deeply developed.

risk when they supply equity capital to banks. Therefore, capital requirements, if implemented, should be more stringent than those adopted in industrial countries.

In addition, the underpricing of government-sponsored deposit insurance reduces the usefulness of markets in pricing equity, because the government becomes a de-facto contributor of capital to problematic banks, thereby increasing their risk-taking behavior.³⁰ When such situations are seen in Asian developing countries, the quality of bank capital will often be low, severely underpricing the public safety net and creating incentives for banks to increase risk taking (Rojas-Suarez and Wiesbrod, 1996b).³¹

Moreover, an accurate estimate of equity is difficult to achieve when markets for subordinated debt are illiquid and deep.³² The soundness of the banking system can be evaluated based on the price of subordinated debt or other bank debenture if markets are liquid, so that the slightest hint of deterioration in the capacity to service debt can be reflected in their prices. Even though the secondary markets are liquid, on the other hand, some argue that those prices not only reflect the banks' default risk, but also prevailing rates for debt with similar maturity and the timings of potential cash flows to bond investors (e.g., call options and frequency of coupon payments). Further, the prices of bonds are affected by liquidity and changes in premium (Hancock and Kwast, 2001).

Consequently, it may be desirable to use more market-based indicators along with traditional indicators such as the capital adequacy ratio, liquidity ratio, and the ratio of operating costs to assets.³³ Market-based indicators include interest rate spreads of banks, deposit rates, interbank rates, and rate of growth of loans. Low interest rate spreads and high deposit rates indicate that a bank's performance is weakening, since poorly-managed banks

³⁰ Therefore, some argue that the true value of a bank's equity should be assessed by subtracting an estimate of the capitalized value of any government guarantees from the market value of equity.

³¹ If capital requirements had been effective, moreover, they would have constrained the expansion of risky assets. The fact that a rapid growth of real value of bank equity (more than 10%) took place prior to the crisis suggests that capital requirements were ineffective (Rojas-Suarez, 2001). This is in sharp contrast with industrial countries, where growth rates of capital in real terms have remained less than 10%. Some may argue that the high growth rates of real capital in emerging market economies can be explained by the view that bank capital in these countries started from a very low base compared with industrial countries. This view suggests a stock adjustment problem rather than the low quality of the market for bank stock. However, in small industrialized countries, such as Norway and Sweden, the rate of growth of real equity became negative at the beginning of their banking crisis. Thus, the high growth of bank stock is likely to reflect the low quality of the market for bank stock.

³² Subordinated debt holders may have incentives to monitor banks and pull out their funds by refusing rollover if they believe that the bank is taking on too much risk.

³³ These traditional indicators are effective if they are based on good accounting principles, which may not necessarily be practiced in Asian developing countries. Other traditional indicators include the net profits to income ratio, nonperforming loan ratios, and the earnings ratio.

attempt to increase their market share by rapidly expanding their loan portfolio through loans to risky borrowers and to gain funding by raising deposit rates. Since these banks do not increase lending rates because they know that this could cause their risky borrowers to default, their spreads decline.

In general, market-based indicators perform better than traditional indicators in developing countries. For example, Rojas-Suarez (2001) has reported that the deposit rate for Thai crisis banks (8.95%) was higher than for Thai noncrisis banks (7.6%) in 1995-1997. Similarly, the deposit rate for Korean crisis banks (8.1%) was higher than for noncrisis banks (6.3%). In addition, the bank spread was lower for crisis banks than for noncrisis banks in both countries. Although the rate of growth of loans did not show differences between crisis banks and noncrisis banks in the two countries, two other market-based indicators appear to predict banking problems and thus constitute good leading indicators.

Moreover, the selection of appropriate indicators in the context of emerging market economies can be undertaken by stress tests, which are useful when historical experience has been limited by successful government efforts to fix asset prices through setting exchange rates or raising interest rates (Frankel, 1998).³⁴ The tests can be used to support alternate projections of cash flows, so bank managements can take various contingencies into account in capital planning.

4.2. Regulating Securities Business by Capital Requirements

Capital requirements can be imposed on securities businesses in order to maintain solvency of securities businesses, protect investors, deal with counterparty risk, and maintain liquidity. Some argue, however, that capital requirements on securities businesses should be lower than those on banking businesses. There are at least four reasons for this view. First, securities businesses generally experience rapid asset turnovers as a result of market making, underwriting, and trading. Securities businesses are also evaluated on a liquidation basis and their accounting is marked-to-market, while banking services are evaluated as going concerns

³⁴ Stress testing is used to identify and measure exposure to market risk in those economic environments where a crisis can be characterized as unlikely, but plausible. It provides actionable information on exposures that may be reduced through a tactical use of hedging transactions that do not alter the basic normal market risk-return profile of the business. Such stress testing is meant to complement the internal models approach to meeting market risk capital requirements. The value-at-risk (VAR) model is meant to provide a statistical measure of the loss of a portfolio in normal periods, which will not be exceeded with a probability of p% given the portfolio remains constant throughout the holding period. Since the VAR model does not provide the dimension of heavy losses, stress testing is used to estimate potential extreme losses (Schachter, 1998).

and their account is often based on original cost. While banking services rely largely on potentially volatile unsecured short-term deposits for their noncapital funding, securities activities have a much higher proportion of secured financing. Thus, securities businesses short of capital can be expected to shrink their balance sheets immediately by selling marketable assets, and may even be required to close down completely through contraction. It may also be said that ultimate closure is a legitimate objective for a securities regulator faced with a troubled entity engaging in securities businesses (Dale, 1996).

Second, investors' assets can be protected from the claims of general creditors when securities businesses become insolvent, as long as an investment firm is required to segregate investors' cash and securities in special accounts. On the other hand, banking businesses face systemic risk, which requires depositor protection.

Third, the delivery-versus-payment approach can be used to limit counterparty risk arising in the settlement procedures of securities businesses. This approach aims to reassure counterparties, including banks and other creditors, who might otherwise be reluctant to deal with firms with high counterparty risk. Moreover, securities activities are largely based on liquid assets compared with banking services. And since most financing related to securities businesses is secured, securities businesses do not give rise to full counterparty risk exposure.

Fourth, securities businesses are based largely on marketable securities and, therefore, there are few differences between the value of these assets on a going concern basis and in liquidation, in marked contrast to the value of traditional banking assets. This suggests that troubled securities businesses can wind down in an orderly manner, meeting their obligations through prompt asset disposal at close to book value. Thus, securities businesses are generally less vulnerable than banking businesses because much of their funding is secured and cannot be immediately withdrawn as can bank deposits. Therefore, their businesses are much less vulnerable to contagious liquidity and solvency crises than are banking businesses.

Given these reasons, it may be viewed that the case for regulating banking businesses is stronger than the case for regulating securities businesses. Thus, capital requirements imposed on the former can be higher than those imposed on the latter. Nevertheless, capital requirements on securities businesses are still necessary primarily for ensuring liquidity. Securities and derivatives activities are subject to volatile market risk, and are marked-to-market daily. The resultant highly volatile profit-and-loss performance makes it

necessary for the parties involved to maintain reserves. Further, investment firms are subject to large fluctuations in their balance sheets and funding needs.

At the same time, permanent capital in the form of equity may be costly for securities businesses because it lacks the elasticity of short-term debt finance. This is one of the reasons why investment firms are generally concerned with ensuring that the capital requirements to which they are subject are no more restrictive than those applied to bank competitors. While the emphasis for banking services is placed on maintaining solvency, that for securities services is placed on maintaining liquidity or liquid capital. For banking services, capital is expected to be permanent by nature in order to support the banking institution as a going concern, whereas capital for securities businesses may be temporary, reflecting the latter's ability to scale down activities as well as the fluctuating need for capital resources (Dale, 1996).

Meanwhile, when banks engage in securities businesses, the solvency issues of banks become important.³⁵ The related affiliate could default, for example, damaging the credit standing of the bank. Moreover, as the size of banks expands and only limited numbers of large banks are involved with derivatives, a rise in capital requirements on their securities and derivatives activities should be considered.

4.3. Containing Disadvantages by Operational or Legal Separateness

One way to deal with the disadvantages discussed in Section 3—such as conflicts of interest between banks and investors, concentration of power in the banking sector, spillover effects of the failure of securities and derivatives activities to the banking sector, switching costs, etc.—is to rely on market discipline and codes of conduct governing practices or conditions for doing business. Also, the disclosure requirement imposed on issuers and bank-owned investment firms is important to ensure that clients are fully informed about all aspects of business they are doing with the banks, and such information should be readily available in an understandable form. Also, competition gives customers choices of various financial institutions, thus minimizing conflicts of interest.

³⁵ However, in the period prior to the Glass-Steagall Act, banks' involvement with securities did not increase the risk of affiliated banks. White (1986) has reported that the failure rate of national banks with securities operations was only 7.6% in 1930-1933—lower than the rate of 26.3% for all national banks. He has found that banks with securities affiliates had a lower probability of failure and there was little correlation between the earnings of banks and their securities affiliates. Calomiris (1993) attributed bank failures during the depression era to insufficient bank diversification stemming from restrictions on geographic expansion.

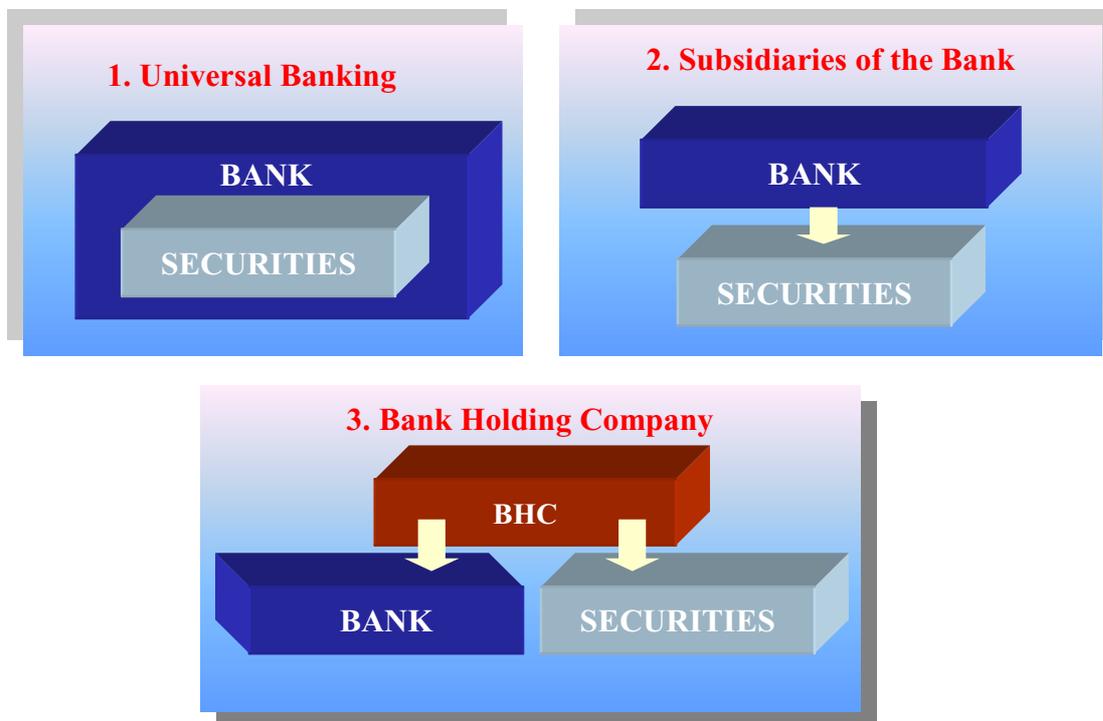
Santos (1998) has stated that it is not clear whether banks have a strong enough incentive to exploit the conflicts of interest because a bad reputation would damage their certification role. Monitoring by bond rating agencies and supervision exercised by regulatory authorities can help mitigate conflicts of interest. Moreover, it is not clear whether banks have opportunities to turn these conflicts to their own advantage. Also, if firms perceive that they may be forced into future tie-in deals, they can protect themselves in advance by maintaining relationships with more than one bank and applying a lemon's discount to the bank's products affected by such conflicts.

Nevertheless, these disadvantages could be present, especially when disclosure requirements and codes of conduct are inadequately implemented and enforced. One way to contain disadvantages, therefore, is to examine whether they should be dealt with by distinguishing banking and securities operations based on trading books and applying differential capital requirements (operational separateness), or by separating those operations through the development of separately capitalized units in the conglomerates (legal separateness). Both measures attempt to insulate banks from risks arising from involvement with securities and derivatives.

Corporate Form of Banking Organization

The choice of operational separateness or legal separateness is closely related to the organizational form of banking organizations. A UB form is commonly observed in traditional banking regimes in Europe. Since securities and banking activities are freely combined within the banking entity, the risks involved in both are pooled. In this model, a common capital adequacy regime is applied to the combined business. This is called "institutional regulation (integrated regulation)." The trading book approach can be viewed as a variant of the UB form and has been adopted in the EU Capital Adequacy Directive. Under this approach, banks are permitted to engage freely in securities activities directly as defined by the trading book and are subject to a capital adequacy regime separate from that for banking (Chart 7).

Chart 7: Corporate Forms of Banking Organization



On the other hand, there are two forms of banking organization that separate banking services and securities services with firewall provisions: (i) the banks with their own subsidiaries form (“bank subsidiary form”), and (ii) the bank holding companies with their own subsidiaries form (“BHC form”). In the bank subsidiary and BHC forms, banks are not allowed to directly engage in securities business. Both forms are designed to protect insured depositors from bearing risks associated with securities and derivatives in conjunction with firewalls. Legal separateness requires that banking organizations take a series of actions to demonstrate that the bank and securities affiliates are truly distinct companies. This means that relevant firms are required to prepare separate accounting records; hold separate board meetings; maintain some separateness of employees, officers, and directors; and maintain separate facilities.³⁶ Legal separateness attempts to avoid actions that convey the impression that the bank is liable for the debts of the securities affiliate or that the liabilities of the securities entity are insured obligations. By ensuring that securities affiliates are adequately

³⁶ Firewalls constrain the ability of banking organizations to transfer risks from nonbanks to banks. For example, banks could be prohibited from lending more than 10% of their capital and surplus to a single affiliate and no more than 20% to all affiliates combined. A regulator could also require banks to make those loans collateralized and prohibit them from purchasing low quality assets. Moreover, interaffiliate transactions must be conducted at terms consistent with arm’s-length dealings. In this way, firewalls would limit funds flows between banks and nonbank affiliates. They are not meant to prevent all risk shifting; rather, they are meant to prevent only a shifting of undue risk from nonbanks to insured banking affiliates. Tighter firewalls could reduce such a risk shifting, but a regulator should be careful not to impose too stringent firewalls so that securities activities become costly and less attractive to banks.

capitalized, risks to the parent and bank affiliates of any securities affiliates are legally limited to any equity investment in it, or to losses on outstanding loans to it.

Under the bank subsidiary form, a bank regulator supervises banks and their securities subsidiaries. By contrast, with the BHC form, banks and securities firms are both subsidiaries of the holding company; the former are supervised and regulated by the bank regulator while the latter are supervised and regulated by the securities regulator. In bank subsidiary and BHC forms, the parent company directly benefits from profits earned at both subsidiaries. The difference between these forms is that with the bank subsidiary form, a bank reaps profits and bears losses associated with securities, whereas with the BHC form, a bank is not exposed to securities losses and profits earned.

The bank subsidiary and BHC forms are to ensure that the safety net coverage for traditional banking activities is maintained and that potential conflicts of interest that are claimed to arise within single units are eliminated. Further, these models insulate the banking unit from the risks associated with securities and eliminate competitive advantage that UBs can have in offering securities services because of their access to the safety net. Legal separateness allows for “functional regulations,” which, it is claimed, are easier and less expensive to implement than institutional regulations.

With respect to banks’ ability to transfer subsidies to their affiliates, under the bank subsidiary form, they can transfer subsidies through capital infusions into the securities units on terms that favor the latter. However, the ability to use this channel can be blocked by requirements that a bank’s investment in its securities subsidiary be subtracted from the bank’s capital for meeting prudential capital requirements. In the BHC form, it is difficult for banks to use this channel since the capital of the securities unit is an investment of the BHC and there are restrictions on the dividends that a bank can pay to the BHC.

The UB form and the BHC form, described below, constitute two extreme forms of banking organizations. By contrast, the bank subsidiary form lies between these two extremes.

(1) The Universal Banking Form

There are several advantages with respect to UB form. The first advantage is that a bank can maintain long-term relationships with borrowers and thus recover losses incurred at

an early stage of the relationship by gains incurred at a later stage. A bank that offers both lending and securities services can satisfy the firm's funding needs throughout a financial lifecycle. A firm begins banking relationships by taking very short-term loans from banks. As its prospects become sufficiently clear to the bank, the latter begins to underwrite securities for the firm and places those issues within the bank's network of trust customers. The UB form allows for a smoother extraction of the "quasi-rents," which enable the bank to maintain a long-term bank-firm relationship. Also, this form enables banks to extract rents over a longer time horizon, thus lowering financial costs of borrowers in the early stages of the relationship, than in a specialized banking system. Berger and Udell (1996) have found that borrowers with longer banking relationships obtain better financing conditions in terms of both collateral and interest rates. Petersen and Rajan (1994) fail to find a positive association between the duration of the relationship and the interest rate charged, but do find a positive impact on credit availability.³⁷

The second advantage is that UBs are able to fully exploit informational advantages by allowing banks to learn more about their clients through the observation of their behavior with respect to a greater number of financial instruments. Petersen and Rajan (1994) have found that the larger the number of services a bank provides to a firm, the greater the availability of funding the bank obtains. If a bank and a firm expect to do business for a long time, the bank is willing to invest in gathering and processing information about the firm and to spread the cost of the investment over a longer time horizon, thereby reducing the upfront cost of capital to the firm. As information available about a firm, its financial needs, and its reputation change over its life cycle, a firm's ability to raise funds through various financial instruments and its ability to access the different instruments also change over its life cycle.

Third, the UB form may help lower underwriting costs. In a world with perfect information and no physical transaction costs, underwriting cost differences between UBs and independent investment firms would be zero. However, in a world where information and transaction costs are large, these costs may be high because firms may find it difficult to

³⁷ By contrast, in the United States, this degree of continuity is lacking in firms' financial relationships since commercial bank lending and investment bank underwriting has been hampered by the fragmentation of the financial system. As a result, industrial lending and securities underwriting became unnecessarily expensive and commercial banks became less involved in industrial lending in the United States than in Germany (Calomiris, 1995). This lack of involvement of banks was a new development, since before the second industrial revolution, US banks had allocated most of their funds to industrial firms owned and operated by bank insiders. By the end of the 19th century, they had switched to financing commercial needs of outsiders and developed commercial lending departments and financial ratio analysis for evaluating these arm's-length loans.

sell their claims to buyers, giving rise to a wedge in the Euler equation, which equates the marginal cost and marginal product of firms' investment projects.

Empirical Evidence

In the United States, banks operating abroad have been permitted to engage in securities underwriting and other domestically prohibited activities through overseas affiliates. These activities do not appear to have substantially increased the riskiness of these institutions. Whalen (1997) has stressed that no strong evidence was found that the combination of commercial banking, investment banking, and insurance in UBs and financial companies operating in Europe has increased the likelihood that such institutions would fail in the absence of firewalls. In these regions, bank failures appear to have stemmed largely from involvement in traditional banking activities. Moreover, private market financial ratings of UBs have generally been above those of less diversified US commercial banking organizations.

With respect to underwriting costs, Calomiris (1995) compared the cost of financing industrialization in Germany and the United States during the second industrial revolution. Based on the spread (commission) earned by the investment bank (the main component of underwriting costs), German equity underwriting costs were lower than those of the United States.³⁸ Based on the evidence of the 1920s, on the other hand, Rajan (1996) has pointed out that commercial banks that tightly integrated their lending and underwriting operations did not get as good a price for the securities they underwrote as did those that voluntarily set up firewalls between the two operations and had separate boards for operation. This is because the former had a tendency to be overoptimistic when they reported the performance of firms to whom they extended credit, which induced investors to suspect the analysis and advice

³⁸ In addition, there are two types of empirical studies for the period prior to the Glass-Steagall Act. The first examines the long-run performance of issues underwritten by banks compared to those underwritten by investment firms (Ang and Richardson [1994], Kroszner and Rajan [1994], and Puri [1994]). Kroszner and Rajan (1994) have compared the ex-post default performance of ex-ante similar securities underwritten by commercial banks with those by investment firms during the period prior to the Glass-Steagall Act. They have found no evidence supporting the presence of conflicts of interest. Instead, commercial banks were found to have underwritten higher-quality securities, which performed better than comparable securities. These observations indicate that some conflicts of interest may develop, but that incentives are constrained and opportunities are limited. Other studies have also found that securities underwritten by commercial banks had a better default record in the long term than those underwritten by investment firms, despite the potential conflicts of interest.

The second type of studies examines ex-ante pricing of corporate debt for the period prior to the Glass-Steagall period. These studies have found that issuers of securities underwritten by commercial banks obtained higher prices ex-ante than those of securities underwritten by investment houses (Puri, 1996). The results support the view that investors anticipated correctly the higher quality of bank underwritten issues.

they received from these commercial banks. This suggests that banks that wish to engage in securities business should be aware that organizational, compensation, and control structures must be adjusted accordingly.

Regarding profitability, Vennet (2000) has shown that financial conglomerates are more revenue efficient than more specialized competitors and that the degree of both cost and profit efficiency is higher in UBs than in non-UBs. Analysis of stock market data leads to the conclusion that the higher observed revenue efficiency of UBs may be linked to their superior ability to deal with moral hazard through monitoring. Profit regressions show that operational efficiency has become the major determinant of bank profitability and that oligopolistic rents have become less prevalent in European banking. Thus, Vennet has concluded that the current trend toward further despecialization may lead to a more efficient banking system. Moreover, research studies on Israel and European countries have found strong evidence of economies of scope in the joint production of these services (Clark [1988], Mudur [1991], and Forestieri [1993]).

By contrast, Lang and Welzel (1998) have shown that cost scope efficiency of German UBs was absent. When loans and investment-oriented services are provided within the same institutions, they claim, these financial services give rise mostly to diseconomies. Kwast (1989) analyzed the correlation between banks' eligible trading and nontrading assets and found that banks' involvement with eligible securities offers limited potential for diversification gains. Saunders and Walter (1994) have found diseconomies of scope between loans and fee-earning businesses for the world's largest banks, many of which are UBs. Further, Drake (1992) has reported that building societies in the United Kingdom had diseconomies of scope.

Regulations for the UB Form

Theoretically, bank regulators are able to regulate and monitor banks' involvement in securities activities by applying differential capital requirements or adopting the trading book approach. However, in practice, there are a few problems. In the UB form, for example, securities activities may render banks riskier. This is not because the securities business per se is riskier, but because it involves greater reliance on subordinated debt as capital. Also, if the trading book approach is adopted and thus different capital adequacy requirements are applied depending on the definition of the types of businesses, banks may expand securities

activities relative to conventional banking businesses, because of the preferential capital requirements.

Further, UBs may displace independent investment firms by expanding their in-house securities businesses, reflecting their funding advantages. This is because as UBs increase the scale of their securities activities, the lender of last resort function and other bank safety net arrangements are likely to be extended to securities markets. Moreover, they may be prone to regulatory arbitrage between banking and trading books since there may be large incentives generated by differential capital rules. For example, banks may be inclined to present long-term investments as trading assets. They also may classify any financial instruments that are held with the intention of ultimate resale or for short-term gains as trading book assets.

Moreover, monitoring the boundaries between them is costly and difficult to achieve. This is particularly true when the distinction between the banking and trading books comes from the distinction between those securities that are to be held for short-term and longer-term holdings, disregarding the fact that securities themselves have long- or short-term maturities. Some may say that banks' loan portfolios should be treated no differently for capital adequacy purposes than securities holdings. For these reasons, it is difficult to distinguish banking and securities activities and to attempt to contain various disadvantages based on the trade book approach. Rather than using it for solvency purposes, therefore, it may be argued that the trading book concept should be used to achieve competitive equality between banks and investment firms.

(2) The Bank Holding Companies Form

Advantages of the BHC form over the UB form and the bank subsidiary form can be summarized into four factors. First, the BHC form is able to shield banks against the risks that securities activities may entail. It is able to derive the benefits of engaging in securities business without placing the stability of the banking system in jeopardy.

Second, it promotes a level playing field between banking and nonbanking competitors. By allowing holding companies' affiliates to engage in risky securities business, these affiliated securities firms would be placed outside bank regulation because bank affiliates are protected by firewall provisions. Since securities subsidiaries of BHCs and independent

securities firms are regulated under the same securities market regulations, they stand on a level playing field, promoting competitive equality in the funding of securities.

By contrast, in the case of the UB and bank subsidiary forms, securities activities engaged by UBs are mainly subject to bank regulations, whereas independent securities firms are subject to securities regulations. This may generate a regulatory duplication in those securities that are already subject to securities regulation. In addition, UBs or banks' own subsidiaries would tend to have a lower cost of funds, because they are protected by government through such devices as deposit insurance and access to a lender of last resort under the bank system regulation.

Third, firewall provisions would require securities activities to be conducted in holding company affiliates and would force those securities firms to find their own funding in the marketplace, or alternatively, if funded by bank affiliates, to pay market interest rates. In this way, firewall provisions also ensure a level playing field between affiliated securities firms and independent securities firms.

Fourth, the BHC form makes it easier to limit the safety net coverage to traditional banking activities, provides better insulation to the bank from problems from other units, and gives the bank less incentive to bail out a securities unit because this is a sister affiliate rather than a directly owned subsidiary.

The Validity of Firewall Provisions

Few countries outside of the United States have adopted the BHC form. Thus, empirical tests on the validity of firewall provisions are difficult not only because country data are limited, but also because even in the United States, securities activities under the BHC form have been limited so that few cases have caused serious problems for a consolidated organization.

In the United States, two episodes illustrate the validity of firewall provisions (Talley, 1991). The first case is that of Beverly Hills National Bank in 1973. Prior to 1973, a small bank holding company in California, Beverly Hills Nancorp, which owned Beverly Hills National Bank, issued commercial paper to extend loans to borrowers involved in commercial real estate projects. Much of the commercial paper was sold to customers of the bank subsidiary, Beverly Hills National Bank. When one of the large borrowers defaulted,

the holding company was unable to pay off its maturing commercial paper and fell into bankruptcy.

Owing to the adverse publicity that accompanied the bankruptcy and the close public identification of the bank with the holding company, Beverly Hills National Bank experienced large-scale bank runs. This happened in spite of the separateness assured by firewall provisions and the bank's own exposure to the real estate development company was modest and secured, and it was solvent. Since this bank became temporarily illiquid, although solvency was maintained, the regulator ordered a merger with another bank, which took place in January 1974. This episode suggests that firewalls cracked, since the spillover effect took the form of a loss of market confidence in the bank.

The second case is that of Hamilton National Bank, which in 1975 was one of the largest banks in Tennessee. This bank was owned by its holding company, Hamilton Bankshares. In the early 1970s, this holding company set up a mortgage banking company and rapidly expanded operations. The mortgage company was funded by parent company commercial paper. Within a short period, however, the mortgage company accumulated a large amount of nonperforming loans. Consequently, the market became concerned about the firm's real estate exposure and, thus, the parent company faced difficulty in rolling over its paper and encountered funding problems.

In order to save the company, the management of Hamilton Bankshares arranged for Hamilton National Bank to buy a large amount of the company's troubled mortgages. The mortgage company increased its loan sales to Hamilton National Bank and bank regulators in September 1974 found on the books of Hamilton National Bank \$100 million of real estate loans from the mortgage company, plus an additional \$30 million in loans from other affiliates. This exposure represented a violation of Section 23A of the Federal Reserve Act and regulators ordered the bank to correct the problem. Ultimately, the bank failed in February 1976 due to its real estate exposure. At the time of the failure, 87% of the bank's problem loans had been acquired from the mortgage banking subsidiary. This is an incident in which firewalls cracked because the spillover effect involved massive adverse transactions. Firewalls, thus, can break down in extreme situations. The effectiveness of separateness and firewalls depends on the strength of incentives to penetrate them and, thus, supervisory burden will be lightened if incentives are diminished.

The case of “piercing the corporate veil,” occurs when creditors of the affiliate successfully sue the bank to honor the debts of its affiliates in the event of the failure of a BHC affiliate. A court ruling, if that happens, would effectively nullify the technical legal separation of affiliated corporations. Courts might permit piercing in cases where the business affairs of affiliates have been extremely commingled, the affiliates have operated or held themselves out to the public as a single entity, or the policies of the failed affiliate were directed to the interest of surviving affiliates, rather than to its own interests.³⁹ But there have been no such cases in the United States so far.

After the two incidents described above, the Federal Reserve Board shifted its policy from relying on the market to discipline the financial affairs of BHCs and nonbank affiliates. It decided to subject them to a bank system regulation with onsite examinations, offsite surveillance, and extensive financial reporting requirements. The fact that the Federal Reserve Board continued to subject BHCs to a bank system regulation even though no known spillover problems have appeared since the middle of 1970s suggests that it did not have great faith in the firewall concept.

These observations suggest that it may be difficult to insulate banks from BHC problems. If the firewalls develop cracks, as evidenced by the two aforementioned episodes, most of the alleged advantages of the BHC form would disappear. If insulation is not possible, governments may subject BHCs to bank-type regulation, as was the case in the United States, thereby spreading this type of regulation to other areas of finance. Consequently, the advantages of a level playing field and regulatory equality would be eliminated.

To prevent the spillover effect to banks of BHC problems that force them to conduct adverse transactions (and thus to avoid instances like the second episode), regulators should be able to monitor these transactions and distinguish those that are conducted on terms that are entirely fair to banks from those that are not. However, this may not be possible since it is difficult, for example, for a regulator to determine whether the management fees that banks pay their holding companies is appropriate for the services rendered to the banks (Talley, 1991). Further, it is difficult for a regulator to judge whether the tax payment that banks make to their holding companies to cover their shares of the consolidated organizations’ tax

³⁹ Talley (1991) has pointed out that there is almost universal agreement among lawyers, bank regulators, and academics that courts in the United States are unlikely to pierce the corporate veil, except in extraordinary cases that involve a gross commingling of the business affairs of separately incorporated entities.

liabilities is appropriate, or whether the banks' operations have been manipulated in various ways to maximize these tax payments (intercompany transactions). Moreover, BHC managements will knowingly violate banking laws by forcing their banks to bail out failing BHC affiliates.

Preventing the spillover effect of BHC problems to banks caused by a loss of market confidence (thus to prevent instances like the first episode) is a difficult task. This is because depositors often closely identify their banks with the holding companies and see the entire BHC organization as a single entity, ignoring the fact that the organization actually is composed of a number of legally separate corporate entities. This identification emerges because BHCs often attempt to project a single entity image through giving similar names to their various units, and projecting an image of a single entity through name recognition and reputation. Further, BHCs often operate their organizations as a single entity, encouraging market participants to see them as such. Moreover, BHCs undertake most or all of their financial reporting on a consolidated basis, contributing to the single entity perception in the marketplace.

Even if the market does not perceive BHCs and their banks as single entities, the failure of BHCs may incur a large-scale bank run since depositors may view other affiliates in the same organization as being in trouble. Such a perception is generated when major units of BHCs are managed by essentially the same group of staff and the market fears that the banks may be abused in a desperate attempt by the BHC management to bail out the troubled affiliates.

Empirical Evidence on US Subsection 20 Subsidiaries⁴⁰

Gande *et al.* (1997) have empirically analyzed the impact of conflicts of interest and certification effects. They examined the pricing of issues underwritten by Section 20

⁴⁰ In 1970, an Amendment to the BHC Act allowed BHCs to engage in nonbanking activities other than those explicitly permitted (those closely related to banking). Specifically, it enabled BHCs to conduct through Section 20 subsidiaries some previously ineligible activities, such as those prohibited by Section 16 (including the underwriting of commercial paper, municipal revenue bonds, securities backed by mortgages, and consumer receivables). However, such business was possible provided that these subsidiaries were not principally engaged in securities business. Further, those subsidiaries had to meet the requirements of the Glass-Steagall Act by limiting revenue generated by ineligible activities to 5% of the subsidiaries' total revenue and imposing firewalls between them and banks that were part of the same BHC. Later, this revenue limit was increased from 5% to 25%. Over time, therefore, the activities prohibited by the Glass-Steagall Act were reduced on condition that they are housed in a subsidiary of the BHC. This is why the holding company model became so important for US banks.

subsidiaries and also distinguished the purposes of issue into (i) refinancing existing bank debt, and (ii) others. Section 20 subsidiaries are similar to subsidiaries of BHCs, with the exception that more restrictions are imposed on the sharing of informational, financial, and real resources among Section 20 subsidiaries than BHCs by firewall provisions. This kind of analysis is difficult to conduct for the period prior to the Glass-Steagall Act, since there is little information on the purpose of the issue.

In the post-Section 20 period beginning in 1989, Gande *et al.* (1997) have analyzed features of the securities underwritten by banks as compared with those underwritten by independent investment firms. Based on the dollar value of underwriting of fixed-rate nonconvertible debt, they selected the top 20 underwriters; of which, four were Section 20 subsidiaries of money center banks (J. P. Morgan, Bankers Trust, Citibank, and Chase Manhattan Bank). Out of 670 fixed-rate US nonconvertible debt issues, only 80 issues (accounting for 12% of total issues) were underwritten by Section 20 subsidiaries.

Their findings were that 31% (25 out of 80 cases) of bank underwritten issues were of small size (less than \$75 million), whereas only 8% (47 out of 590 cases) of investment bank underwritten issues were of smaller size. The average issue size of bank underwritten issues was \$107 million, whereas that of investment bank underwritten issues was \$189 million. This difference was supported by the univariate t test at a significance of 1%. This is consistent with the view that established investment houses have neglected smaller issuers. It may be argued that such results are explainable by the fact that Section 20 subsidiaries of commercial banks were new to the underwriting businesses and may have been forced initially to focus on smaller issues to gain expertise.⁴¹

Contrary to this argument, however, the average issue size that banks have underwritten has declined over time in absolute terms as well as relative to the average size of issues underwritten by investment houses. The average issue size dropped from \$137.5 million in the first quarter of 1993 to \$54.6 million in the first quarter of 1995. The average issue size underwritten by banks was 64% of the average issue size underwritten by investment houses in the first quarter of 1993, but had declined to 23% by the first quarter of 1995. Since small size issues are usually associated with smaller companies, this result is consistent with the view that banks bring debt issues of smaller companies to the capital market—contrary to the

⁴¹ However, the sample period begins from 1993—four years after the granting of debt underwriting powers—which presumably would have allowed them sufficient time to establish distributional channels for underwriting all sizes of issues and to gain the necessary expertise to compete with investment firms for larger issues if they so chose.

perception that greater banking powers as a result of banks entering into securities businesses would hurt smaller firms' access to the capital market.

Moreover, Gande *et al.* (1997) have shown that banks have brought a larger proportion of lower credit rated (Caa-Ba3) issues to the market than investment firms, both in terms of number of issues (43% as compared to 38%) and the dollar volume of such issues (52% as compared to 36%). These results are consistent with the view that bank underwriting provides a net beneficial impact to such firms. Probit analysis also suggests that whether a bank underwrites a debt issue depends largely on the smallness of issue size. This implies that banks do not have a higher probability of underwriting debt issues since their primary purpose to do so is to refinance existing bank debt.

Regarding yield differences on debt issues, Gande *et al.* (1997) have found no statistically significant difference between the yield spreads on similar debt issues underwritten by banks and investment firms. Higher credit-rated issues lead to lower yield spreads. However, it was found that bank underwritten issues, where banks hold a significant lending stake through their commercial banking affiliates, reduce yield spreads by 27 basis points for lower-credit rated issues (Caa-Ba3) for a one-unit increase in outstanding lending exposure to the issuer. Since one unit of outstanding lending exposure amounts to \$1.7 million of lending exposure, bank underwriting would reduce yield spreads by 16 basis points per \$1 million of lending exposure to the issuer. These results are consistent with the view that association with banks is valuable for such issuers due to banks' dominant certification effect.

In addition, when debt securities were issued for purposes other than repaying existing bank debt, and the bank retains a significant lending stake through its commercial banking affiliate, yield spreads were reduced by 42 basis points for lower-credit (Caa-Ba3) rated issues. Where the stated purpose of an issue is to refinance existing bank debt, there is no statistically significant difference between yield spreads on similar debt issues underwritten by banks and investment houses. These results are consistent with a dominant net-certification effect of bank underwriting. They also suggest that there was an implicit breach of firewalls in which bank underwriting had a net certification effect for investors.

Alternatively, it could be argued that this result comes from investment bank underwriters serving different markets than commercial bank underwriters, with prices reflecting different degrees of market power. If this view is correct, then a reduction in yield spreads for all bank underwriting would have taken place, rather than the source of the

reduction being the bank's lending relationship with the issuer. Thus, it is the extent of the bank's lending relationship with the borrower that matters rather than the underwriter type. Since higher credit-rated borrowers, such as those rated AAA, have more choices than lower credit rated borrowers, banks should be able to extract more rents from the latter group. If banks have monopolistic power, bias would be expected to be against finding a net certification effect for low quality issuers.

Research on US banks has found little support for economies of scope in the joint production of commercial and investment banking services. This is attributed to the fact that commercial banking organizations were allowed to offer only limited investment banking services and had to be housed in subsidiaries of BHCs separated by an extensive set of firewalls from banks in the holding company.

Rationales for Regulating BHCs

There are unsettled issues as to whether BHCs should be regulated and, if so, how. In the United States, the Banking Holding Company Act of 1956 and related statutes imposed substantial restraints on BHCs with controlling interests in banks, while other kinds of financial holding companies, such as firms with controlling interests solely in insurance companies and securities firms, are governed by analogous restraints though less intrusive legal regimes (Jackson, 1997). Before taking into account the issue of whether different degree of regulations should be imposed between BHCs and other financial holding companies, it is important to understand why these financial holding companies should be subject to special supplemental regulations while holding companies of other business enterprises, such as large manufacturing firms or major defense contractors, are not.

Some may argue that if the purpose of imposing a capital requirement on BHCs is to backstop solvency regulation (capital regulation) on regulated subsidiaries, one needs to answer why such a BHC regulation is effective in achieving this purpose if direct capital regulation of their subsidiaries can be undertaken (Jackson, 1997). If the justification for BHC capital regulation is placed on the perceived weakness of solvency regulation at the subsidiary level, one might reasonably think that a more appropriate regulatory response would be to deal more directly with the problem by enhancing the capital regulation of regulated subsidiaries.

Jackson (1997) has emphasized that the answer to this question hinges on the special nature of the regulated subsidiaries that BHCs control and that the justifications for regulating financial holding companies are derivative of the justifications for regulating financial firms directly. The rationale for regulating BHCs per se is implicitly based on the proposition that the regulation of their subsidiaries—whether they are banks, insurance companies, or securities firms—is incomplete or inadequate.

BHC capital regulation could be employed to supplement the solvency regulation imposed on their subsidiaries or alternative supplementary regimes for firms operating outside of the BHC structure. If resources of subsidiary institutions were used to finance BHC activities through loans or other forms of investment, then the regulated subsidiaries would to some degree assume the risks associated with expanded BHC activities and the risk characteristics of those activities would be transmitted to them. Further, regulated financial intermediaries might manipulate the allocation of credit to favor affiliated firms in a manner that could cause competitive harm through providing below-market financing to affiliated entities or withholding credit from competitors of affiliate firms. A related competitive harm attributed to BHCs would involve tying arrangements, whereby regulated financial firms require their customers to purchase goods or services from affiliated entities as a condition to receiving credit from the intermediary.

Basic Holding Company Proposal

Talley (1991) has put forward a BHC Proposal. According to this, any bank that wants to operate in securities should be required to form a holding company and then conduct all riskier activities in the holding company subsidiaries, rather than directly within the bank. These securities activities should be carried out either in the holding company itself or in securities subsidiaries of the holding company, while the bank continues to engage in traditional banking activities that involve bankable risks.

Further, each country should develop laws and regulations with firewall provisions that are designed to insulate the bank from financial problems that might occur in the holding company or its affiliates. The firewall provisions would include (i) strict quantitative limitations on bank loans or other extensions of credit to holding companies or their subsidiaries, as well as tight limits on bank purchases of securities or other assets from these affiliates; (ii) requirements that all bank transactions with affiliates be on market terms—on terms and conditions that are substantially the same as those on bank transactions with

nonaffiliated parties; and (iii) provisions that would prevent holding companies from extracting excessive dividends from their bank subsidiaries that would unduly deplete those banks' capital.

Talley has stressed that holding companies should be subject to little or no supervision by bank regulatory authorities. This is because the financial affairs of these holding companies could be disciplined largely or entirely by the marketplace, through interbank markets and/or capital markets. Thus, prudential regulations on holding companies are not needed if their bank subsidiaries can be effectively insulated from holding companies' financial problems.

The Fail-Proof Bank (Narrow Bank) Proposal

Talley (1991) has introduced another proposal on the BHC model. According to this, banks' traditional deposit issuing and lending functions should be separated. Banks would be confined to issuing deposits and investing in virtually risk-free assets, such as short-term government securities or perhaps high quality commercial paper. All previous bank activities that involve risk would be transferred to BHC affiliates. Moreover, banks would be required to closely match their asset and liability maturities to eliminate interest rate risk. Further, they would be prohibited from engaging in bond or foreign exchange trading, or conducting various off-balance sheet activities.

In this way, banks would be required to obtain a small amount of capital that would be sufficient to absorb any remaining unavoidable risks. Any transactions between banks and their BHC affiliates would have to be on market terms and a regulator would closely monitor all intercompany transactions to make sure that the banks were not being abused. These banks would be virtually risk-free since the government would fully insure all bank deposits without exposing them to any significant losses. From the view of depositors, this insurance would constitute a strong second line of defense behind a virtually risk-free bank.

Under this proposal, BHC affiliates would not be subject to bank-type regulation and, instead, would be disciplined by the market. This is possible since banks can be almost perfectly insulated from BHC financial problems. This proposal would also eliminate any possibility that the banks would be pierced, because the severe fail-proof restrictions would make it impossible for them to commingle their business affairs with other affiliates. Banks would be exposed to only minimal risks of adverse transactions because they could not lend

to affiliates and could purchase risk-free assets only from affiliates. Also, banks would not be threatened by a loss of market confidence when BHC affiliates failed. This is because depositors would know that the banks are risk free and their deposits are fully insured; banks could withstand a bank run due to short maturity of their assets; banks have access to the lender of last resort facility; and they have a large portfolio of acceptable collateral. Such a proposal would minimize the amount of banking system regulation and at the same time promote competitive equality.

On the other hand, there are disadvantages surrounding this proposal. First, banks would be required to hold only a small portion of existing assets and thus would have to sell most in open markets or to BHC affiliates. Such practices may affect prices of assets adversely, giving rise to capital losses on banks. Second, it may be necessary to relax the requirement that banks should hold virtually risk-free assets in order to maintain their advantage.

The Fail-Proof Parent Proposal

Talley (1991) has presented a third proposal on the BHC model. This would require banks to transfer relatively risky activities, but not all activities involving risk, from banks to BHCs. The transferred activities would be carried out only by nonbank affiliates, and not by BHCs, in order to ensure that the latter would not fail as a result of large operating losses. BHCs would be prohibited from issuing debt. Therefore, not being able to service debt obligations would not cause BHCs to fail. Banks would be prohibited from conducting most types of transactions with BHC affiliates, such as lending or the purchase of assets. Only transactions that are essential, such as paying dividends and making tax payments to the parent, would be permitted. BHCs would be subject to oversight by bank supervisors to prevent any abuse of the banks.

Nonbank affiliates would have to find their own sources of funding. However, BHCs would be able to issue stocks and use dividend incomes to fund these affiliates. Also, BHCs could set up a financing subsidiary that could raise funds for the nonbank affiliates. This proposal would allow the centralization of funding for the entire nonbank part of the BHC organizations, thereby exploiting any economies of scale that might be involved. Nonbanks would not be regulated and supervised by a bank regulator, but should be subject to market discipline.

Provided that it makes a difference where risky activities are conducted in the BHC structure and that it is better for these activities to be conducted in nonbank subsidiaries of the parent than in the parent company itself, this proposal would generate less adverse effect on market psychology and is less likely to cause a loss of confidence.

4.4. The Growing Importance of Internal Credit Rating Systems

Internal credit rating systems have become increasingly important, especially for large banks in the United States and other industrial countries. Their approach is similar to that of risk rating agencies in that they summarize the risk of loss due to failure of a given borrower to pay as promised. Risk ratings are the primary summary indicator of risk for banks' individual credit exposures. However, the difference between internal risk rating systems and those of risk rating agencies is related to architecture and operating design, as well as to the uses to which ratings are put. For example, banks assign ratings on the basis of the borrowers' current condition and mostly likely outlook, while rating agencies assign grades on the basis of a downside scenario. Also, most banks consider both firm size and the book or market dollar value of a firm's equity in assigning ratings and, thus small firms with limited access to external finance and few assets are assigned relatively risky grades. This happens even if their financial characteristics suggest a more favorable rating.

For large banks, whose commercial borrowers can be numerous, internal ratings are an essential ingredient in internal credit risk management. Any comparison of the risk posed by many borrowers is difficult owing to the need to simultaneously consider many risk factors for each of the borrowers. Thus, many large banks use ratings in one or more key areas of risk management that involve credit, such as guiding the loan origination process, portfolio monitoring and management reporting, analysis of the adequacy of loan loss reserves or capital, etc. They usually produce ratings only for business and institutional loans and counterparties, not for consumer loans. Rated assets thus include commercial and industrial loans and other facilities, commercial lease financings, commercial real estate loans, loans to foreign commercial and sovereign entities, and loans and other facilities to financial institutions. Ratings are applied generally to those types of loans for which underwriting requires large elements of subjective analysis. Ratings are typically assigned at the time of each underwriting or credit approval action.

The borrower is rated by gathering quantitative and qualitative information, comparing this information with the standards for each grade, and then weighting them in choosing a

borrower grade. The bank may also look for already-rated loans with characteristics close to those of the loan being rated. While in principle the analysis of risk factors can be carried out by a mechanical model, in practice banks rely heavily on judgment. This reflects concerns that (i) different models would be required for each asset class and different geographic regions; and (ii) data are rarely available, thus the reliability of the model becomes apparent only over time, exposing the bank to substantial risks in the interim. Only those banks that feel confident increase their dependence on models.

Further, both the Basle Committee and the EU have accepted now that banks are able to use their own internal risk control models (VAR) and methods to evaluate market risk in relation to capital under restricted parameters, following the December 1996 Amendment to the Basle Capital Accord. If sound credit risk models can be developed, they can bring forward more precise estimates of credit risk. Capital requirement is set now equal to three times the maximum possible loss in the portfolio position of the bank during a certain time period and with a certain statistical degree of confidence. If statistical models are used for regulatory capital purposes, however, competitive equality within the banking industry could be compromised (Swaan, 1998). Since the statistical assumptions and techniques used differ, credit risk models may not be comparable across banks. This issue is complicated further by the potential differences in required capital between banks using models and banks using the current approach. As banks begin to engage in various nonbanking activities, regulators need to put more emphasis on strengthening internal credit rating systems of banks.

4.5. Managing Derivatives

Derivatives can benefit from self-regulatory safeguards maintained by exchanges, such as multilateral netting associated with central clearing, and initial and variation margin requirements imposed on clearing members. The margin requirements provide a buffer against default. Also, exchanges utilize a reserve fund that the clearinghouse can draw on if a need arises and at the same time, adopt prudential rules (minimum capital requirements) applied to member firms. In contrast, OTC markets are self-regulated in a looser sense, relying on bilateral netting and/or collateral arrangements to reduce counterparty risk.

With regard to instruments used for prudential regulations, capital requirements are effective tools to reduce risks associated with banks' dealings with derivatives. Both US and Basle Accord requirements have already been applied to US banks' derivatives activities. Banks are required to comply with two types of capital requirement. One is a risk-based

requirement, which applies to the credit risk associated with derivatives contracts or activities. The other is a leverage ratio requirement, which requires banks to hold capital as a cushion against losses arising from other risks associated with derivatives positions, such as operations risk.

Capital requirements promote financial stability by creating a greater cushion and reduce banks' incentives to take excessive risk by putting more capital at risk. To ensure banks possess sufficient capital, supervision and field examinations are needed. Bank risk exposures need to be measured accurately and capital requirements should be set high enough to deter excessive risk taking. Also, market value accounting principles for valuing bank assets and liabilities are a prerequisite to enhancing the effectiveness of capital requirements.⁴² Capital requirements may mitigate the moral hazard problems induced by deposit insurance and the discount window whose backing banks and their customers rely upon inappropriately, and thus give rise to greater risk in their trading activities in relation to their capital. Market participants may prefer using banks for derivatives because they are perceived to be safer counterparties. While capital requirements can be effective tools, regulators in Asian countries should recognize that good accounting, auditing, and disclosure standards must be implemented. Further, the quality of own equity should be evaluated appropriately, for example through developing liquid secondary equity markets.

Other important tools for prudential regulations are the use of collateral, bilateral netting agreements, and external assessment. It is becoming increasingly important that OTC markets require collateral in some derivatives contracts, enter into netting agreements, and rely on credit ratings to assess risk. Market participants have begun to rely on the assessments of credit rating agencies when dealing with counterparty risk. Information problems associated with reduced transparency have encouraged a greater collective reliance

⁴² The 1988 Basle Accord incorporates capital requirements for OTC derivatives positions. The current replacement cost is calculated using marked-to-market valuations and then another factor is added to reflect the potential future credit exposure over the remaining life of the contract. Counterparty risk weights are then applied to current plus potential credit exposure to determine capital requirements. However, this accord did not seek to address the issue of market risk.

Subsequently, the Basle Committee in April 1993 published proposals for minimum capital requirements to cover banks' exposures to market fluctuations. Derivatives should be converted into positions in the relevant underlying market and become subject to capital requirements designed to capture specific and general market risk under the building block methodology. Further, the Basle Committee introduced an amendment to the 1988 Capital Accord, which reduced the capital that must be held against derivatives credit exposures, which are subject to bilateral netting and subject to banks being able to demonstrate to their supervisors the legal enforceability of netting arrangements in all relevant jurisdictions. However, it is not clear whether these new capital rules will help reduce overall derivatives credit exposures, since bank derivatives dealers are able to support a large volume of gross counterparty positions.

on external credit judgments rather than on internal assessments and have tended to reinforce the shift of borrowers to a few highly rated institutions. Thus, it is becoming important that institutions involved disclose quantitative information on market risks, in addition to performance in managing those risks and counterparty credit risk plus performance in managing credit risk.

At the same time, however, the heavy reliance on external assessment has given rise to regulatory concern that a firm whose rating is downgraded by a rating agency could face a widespread and fairly homogeneous response in the market. This homogeneous response would generate an effect on its overall access to funding sources that is potentially not commensurate with the underlying deterioration in its circumstances.

To deal with counterparty risk, the regulator should set large exposure limits on derivatives transactions. Moreover, counterparty risk can be largely eliminated if business is conducted within an exchange or clearinghouse structure. Since a large part of OTC contracts are of plain vanilla type, accounting for 75% of total OTC contracts, it would be possible to route much of this activity through a clearinghouse (Dale, 1996). However, this proposal may not be desirable if the entire burden of monitoring and controlling risk is merely shifted to the clearinghouse. At present, a regulatory bias in favor of OTC contracts is present, since capital requirements on OTC positions are less than the cost of having to finance the margin payments needed over the life of an equivalent exchange-traded contract in the United States.

The regulator should impose the marked-to-market valuation principle of derivatives positions, require the quantification of market risk and credit risk, and promote the use of multi-product master agreements with close-out netting provisions. The regulator should also ensure a separation between the risk management and dealing functions, and impose accounting and disclosure practices. International Organization of Securities Commission (IOSCO) and the Basle Committee have issued detailed guidelines on risk management aimed at regulatory authorities and market intermediaries. The Basle Committee proposes that any institution active in derivatives dealing should be able to monitor its credit and market exposures using marked-to-market valuations at least daily.

4.6. Shifting from Asset-Focused to Risk-Focused Bank Supervision

Changes in the environment surrounding the banking sector have gradually altered the way banks are supervised.⁴³ Traditional bank supervision has four features. First, the bank regulator examines banks at a fixed point—generally once a year unless there is a crisis. Second, examinations are generally staffed locally. Third, significant emphasis is placed on the valuation of assets. Fourth, dialogues with management are mostly related to examination findings unless there is a crisis.

In the new environment, however, this approach is no longer an effective way to evaluate the condition of many banks. For this reason, the Federal Reserve responded in the 1990s by developing a program of risk-focused supervision (DeFerrari and Palmer, 2001). To apply such supervision, the Federal Reserve established formally the large complex banking organizations (LCBO) supervision program in 1999 to focus on banks in which changes are most dramatic with respect both to the impact of change and the speed with which changes in the banks' risk profiles can occur. The fundamental goals of this program are to maintain an accurate and current assessment of each banking organization's financial and managerial strength and to respond in a timely manner to emerging problems. Thus, the program focuses on understanding and evaluating each institution's internal risk-management processes and control infrastructures. So the supervisory process is continuous and more tuned to market developments.

Each LCBO is assigned a team of Federal Reserve supervisors who conduct a supervisory program, based on the risks that have been identified in the organization's operations. In addition, small teams with technical expertise on such issues as credit-risk modeling, payment systems, and information technology are available to supplement individual LCBO teams. The Federal Reserve's assessment of the banking organization's risk profile is updated quarterly. The program also assesses the development of relationships with the management of the banking organization at various levels through regular and

⁴³ In recent years, bank regulators have been experimenting with an entirely new approach to capital adequacy assessment based on internal risk (VAR) models. This is because it has become clear that reliance on periodic bank examinations and reporting requirements becomes futile when a bank can transform its proprietary trading position and overall risk profile instantaneously through the use of derivatives. Sophisticated risk-control systems are needed to measure and track a bank's potential exposure. The supervisor could require banks to report their overall positions daily. However, this would place an impossible burden on all concerned. Thus, an alternative approach is for supervisors to focus on the process by which portfolios are selected. The regulator should set overall capital standards by instructing banks to allocate enough capital to cover, say, 99% of the loss probability distribution and then evaluate how accurately banks estimate this portfolio loss probability. This is the Basle Committee approach to setting capital standards for market risk.

frequent communications. LCBO are reviewed not only individually but also as a group to identify common or emerging weaknesses that have the potential to become more serious or to become systemic problems.

Since the Gramm-Leach-Bliley Act authorized BHCs to operate as financial holding companies (FHCs) and to engage in a diverse range of financial activities in 1999, the Federal Reserve now acts as an “umbrella” (functional) supervisor for FHCs. Risks associated with financial activities generally cut across legal entities and business lines, and most large and sophisticated financial services companies take a consolidated, or organization-wide, approach to managing their risks. Thus, the umbrella role requires the Federal Reserve to understand FHCs’ corporate-wide systems and controls for managing risk and to keep primary bank supervisors and other relevant supervisors advised of any evolving problems in these areas.⁴⁴

The change in the financial environment has shifted the emphasis from “regulatory” approach to “supervisory” approach (Mishkin, 2000). Traditionally, prudential supervision has stressed assessment of the quality of banks’ balance sheets and loans at a point in time and has examined whether banks comply with capital requirements and other restrictions. While this regulatory approach helps mitigate banks’ excessive risk-taking behavior, regulators have recognized that it is more important to ensure the soundness of banks’ management practices with regard to controlling risk and thus to evaluate banks’ risk management systems.

4.7. Integrated versus Umbrella Approach to Supervision

The choice of corporate form of banking organization depends on whether supervision should be institutional or functional (Dale, 1996). If supervision is organized along functional lines (e.g., with separate agencies undertaking the supervision of banks and securities firms), the problem of cross-functional regulatory coordination has to be addressed.

⁴⁴ Since many LCBOs have become FHCs, they have entered into a large range of activities through nonbank subsidiaries. Thus, functional regulations are added to the mix of regulatory counterparts with which effective communication and cooperation need to take place. Functional regulators include the SEC, the Commodities Futures Trading Commission, National Association of Securities Dealers, and the National Association of Insurance Commissioners. The Federal Reserve must coordinate with these regulators, as well as foreign supervisors. Further, increased public disclosure and issuance of subordinated debt by the companies may improve market discipline, which works through changes in access to funds and changes in risk premiums as banks take on or shed risk or engage in certain types of transactions. While this issue is not a serious concern yet in Asian countries, regulators should strengthen their regulatory capacity and adopt a forward-looking approach by taking into account issues that are likely to emerge in the near future.

Thus, “consolidated (institutional) supervision,” as experimented with in the United Kingdom, may be desirable to improve the effectiveness of regulation over various relevant financial institutions. When a bank has securities subsidiaries or affiliates, the bank regulator should consider various questions: should it take account of the risk incurred by the securities operations and if so how? Should the two parts of the business be fully consolidated in an accounting sense for the purpose of calculating capital adequacy and other prudential ratios? Should a bank be consolidated with its related securities entity so as to eliminate transactions between the two and thereby remove large exposure restrictions that might otherwise apply to the bank’s funding of its securities unit?

There is growing international interest in the structure of financial supervision. In the past, financial supervision tended to be organized around specialist agencies for the banking, securities, and insurance sectors. This type of supervision is called functional regulation. In recent years, some industrialized countries have shifted toward integrating these different supervisory functions into a single agency. Denmark, Norway, and Sweden have adopted variants of the consolidated supervisor model since the middle of the 1980s. Some transition economies such as Estonia and Latvia have examined a consolidated approach. The rationales for the approach are that consolidated supervision would permit more effective supervision of financial conglomerates and that mergers would also permit economies of scale and scope to be obtained in regulation, especially better leverage of resources in administration and infrastructure support (Taylor and Fleming, 1999).

Economies of scale can be realized through the development of joint administrative, information technology, and other support functions. Further, consolidated supervision can assist in the recruitment and retention of suitably qualified regulatory personnel, who might perceive that the career opportunities available to them will be greater than in a series of specialist agencies. Moreover, it permits the regulator to achieve efficiencies in the deployment of staff with rare intellectual capital. Economies can be also realized by gathering and using know-how in specialist areas and for the development and improvement of supervisory methods. The case of the United Kingdom reflects the emergence of financial conglomerate groups.

Goodhart *et al.* (1998) have identified six reasons for the recent move. First, the rapid structural change in financial markets driven by financial innovation has challenged assumptions behind the original structuring of regulatory organizations. Consequently, regulators have to respond to the issue of whether it is necessary to adjust their institutional

structures accordingly. Second, the realization that financial structure in the past has been the result of a series of ad hoc and pragmatic policy initiatives has raised the question of whether a more coherent structure should be put in place. Third, the increasing complexity of financial businesses, as evidenced by conglomeration, has given rise to the question of whether a series of agencies supervising parts of an institution can have a grasp of developments in the institution as a whole. Fourth, increasing demands have been placed on regulation and its complexity—particularly the development of enhanced regulation of conduct of business covering pension schemes, as well as insurance. Fifth, regulators find it necessary to take into account the changing risk characteristics of financial firms occasioned by financial innovation. Last, the increasing internationalization of banking has implications for the institutional structure of agencies at both the national and international level.

Consolidated regulations in the Scandinavian countries focus primarily on prudential regulation rather than conduct of business regulation. Regulators have a role in supervising business conduct on the stock exchange and detecting insider trading. However, responsibility for dealing with customer complaints and the transaction-by-transaction dealings of firms with their customers tends to be left to various industry ombudsman schemes. Regulators' focus is placed on ensuring the solvency of the firms for which they are responsible, especially banks and insurance companies. The regulatory authorities have been established as independent agencies under the general supervision of a relevant government ministry. Their independence is bolstered to differing degrees by the existence of supervisory boards that act as an independent check on the relationship between the ministry and the supervisory authority. These countries, however, have not removed the banking supervision function from the central bank.

Counter-arguments to consolidated regulation—or, arguments supporting an umbrella approach based on functional supervision—have been put forward for developing countries. First, there is a fear that if banking supervision is removed from the central bank, and combined with weaker supervisory bodies for other elements in the financial system, this may give rise to some adverse effects. In many countries, banking supervision has been made a priority and thus they are perceived to be the strongest of the financial supervisory agencies. It is feared that the weaker elements in the consolidated agency will dilute the strength of the stronger banking element; significant numbers of banking supervisory staff may leave the consolidated agency rather than accepting a lowering of status. These problems may emerge until the new regulator gains credibility. Second, there is no point in consolidating supervision if credit, securities, and insurance markets remain largely distinct.

Third, financial conglomerates are not prevalent in developing countries since their economies are largely bank-dominated. However, if banks begin to enter into nonbanking business and play a dominant role in securities and insurance, the case for consolidated supervision is stronger. Fourth, an consolidated approach requires the central bank to have strong guarantees of independence. Otherwise, removing bank supervision from the central bank may have a detrimental effect on the independence and quality of the banking supervisory function. This problem may be relevant in developing countries where guarantees of independence from political interference can be difficult to establish. Fifth, even though the cost of the umbrella approach may be higher than that of consolidated supervision—since the latter is able to exploit the economies of scale and scope and at the same time, information exchanges and policy coordination may be more smoothly done by the latter—it may be politically difficult to integrate all existing relevant regulators. Further, the perception of creating an even bigger regulator may give the public a reason to oppose to it.

In Asian developing countries, an umbrella approach may be desirable since prudential supervision and regulations in the banking sector have not been strengthened to a satisfactory level. The premature integration of various regulators may weaken confidence in the overall regulatory regime and the capacity of bank regulators.

5. Conclusions

This paper has indicated that banks can play a crucial role in fostering corporate bond markets, given their already dominant position in Asian financial markets and thanks to the information and reputation advantages they enjoy. Banks can utilize inside information about their borrowers that they have gained through relationship lending. This role of banks is important, particularly when information about issuers is highly idiosyncratic and the informational, legal, and judiciary infrastructures necessary for developing sound capital markets, as discussed in Yoshitomi and Shirai (2001), are largely underdeveloped. Moreover, banks can exploit economies of scope by using their branch networks and staff. Further, the role of banks in providing liquidity can complement the development of corporate bond markets since it facilitates securities transactions. Owing to these comparative advantages, banks may be able to underwrite securities at lower cost than independent investment firms, thereby promoting companies' investment and economic growth. At the same time, banks that engage in securities and related businesses are able to

maintain profitability by increasing income from securities. This not only helps limit excessive risk-taking by banks, but also enables them to obtain implicit rents, which are necessary for them to continue to provide discretionary, flexible, and repetitive transactions to customers.

This scenario can be termed an “intermediate financial market structure,” since it lies between a bank-dominated financial structure, where banks are dominant financial institutions and provide mainly traditional banking services, and a full-fledged capital market-based financial structure, where numerous firms have direct access to capital markets in addition to bank loans. In this intermediate financial market structure, bank loans are a substitute for fledgling corporate bonds and yet banks play a crucial role in the corporate bond market as investors, issuers, underwriters, and guarantors. Banks complement the investor base, since individual investors have a strong preference for liquid, safe assets (e.g., bank deposits) and the insurance and pension industries—potential institutional investors—are underdeveloped, reflecting low levels of income per capita and asset accumulation. Further, banks complement the issuer base, given that there are few large, reputable firms that are able to issue bonds at reasonable costs. Moreover, establishing “long-term credit banks” that issue medium-term bank debentures can be considered as a way of transforming short- and medium-term funds into the long-term funds that are needed by the private sector.

While the banking sector may promote the development of corporate bond markets in the intermediate financial market structure, a few problems may arise when banks are involved with securities. For example, banks may gradually change into megabanks through mergers and acquisitions in order to take advantage of economies of scope and information. This may increase the concentration of power in the banking sector. This may in turn eventually deter the development of full-fledged capital markets, since banks tend to place priority on banking functions over securities business and it may discourage financial innovation. Moreover, small firms may find it more difficult to raise funds from banks as financial conglomeration emerges.

In addition, the solvency of banks may deteriorate as they increasingly take part in large-scale derivatives transactions, generating new risks and amplifying existing ones. Such activities are increasingly undertaken by a limited number of large banks. Solvency may deteriorate further as large, reputable firms issue securities rather than depending on banks loans and therefore the default ratio of average loans faced by banks increases. In the intermediate financial market structure, therefore, tremendous efforts should be made to

improve banking sector soundness. In order to promote banks' incentives to collect and process information, and monitor their clients, governments should not intervene in banks' decisions over lending. Regulators should also cease to apply a "too-big-to-fail" policy that bails out banks regardless of their solvency. Moreover, it is important to limit connected lending by requiring lending activities to be made under the proper risk management system and imposing limits on banks' holdings of nonbank firms until banks improve their risk management systems. And the quality of banks' own equity should be carefully examined.

While government interventions are reduced and connected lending practices are mitigated, prudential regulations and supervision similar to those seen in industrial countries should be introduced. However, such prudential regulations may not be effective when informational, legal, and judiciary infrastructures are inadequately implemented and enforced. In such cases, additional instruments are necessary to deal with issues specific to Asian countries. In the meantime, prudential regulations and supervision should be improved substantially by boosting skills and knowledge of staff, and making the regulatory regime flexible and responsive to changes in the financial environment.

It may also be desirable for Asian countries to cope with disadvantages in the intermediate financial market structure—such as conflicts of interest between banks and investors, solvency problems, concentration of power in the banking sector, and high switching costs—by introducing firewall provisions. In other words, it may be desirable to introduce the bank subsidiary form or the BHC form rather than allowing the UB form in the intermediate financial market structure, until the informational, regulatory, and judiciary infrastructures are sufficiently developed.

Prudential regulations and banking sector supervision need to be improved substantially, with independence of bank regulatory authorities from government intervention attained to a satisfactory level, so that there is enough confidence in the existing banking regulatory regime. Until then, an umbrella (functional) approach based on close coordination among relevant regulators could be a desirable approach for Asian developing countries, as compared with a consolidated approach in which all relevant regulators are combined under a uniform authority.

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
BHC	bank holding company
EPF	Employees Provident Fund
EU	European Union
FHC	financial holding company
FIDF	Financial Institutions Development Fund
GAO	General Accounting Office
GDP	gross domestic product
IOSCO	International Organization of Securities Commission
IPO	initial public offering
IT	information technology
ITC	investment trust company
ITMC	investment trust management company
KDB	Korean Development Bank
LCBO	large complex banking organization
MGS	Malaysian government securities
OTC	over-the-counter
SEC	Securities and Exchange Commission
SME	small and medium enterprise
SPV	special purpose vehicle
UB	universal bank, universal banking
US	United States
VAR	value at risk

Note: In this report “\$” denotes US dollars, unless otherwise specified.

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HOW TO CONTACT US?

Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5 Kasumigaseki, Chiyoda-ku,
Tokyo 100-6008 Japan

Tel: +81 (03) 3593-5500
Fax: +81 (03) 3593-5571
E-mail: info@adbi.org
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