

Developing multiple layers of financial intermediation: the complementary roles of corporate bond markets and banks

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“...[R]ecent crises have underscored certain financial structure vulnerabilities that are not readily assuaged in the short-run but, nonetheless, will be increasingly important to address in any endeavour to build formidable buffers against financial distress. Among the most important, in my judgment, *is the development of alternatives* that enable financial systems under stress to maintain an adequate degree of financial intermediation even should their main source of intermediation, whether banks or capital markets, freeze up in a crisis.” [Italics are mine.]

“Before the crisis broke there was little reason to question the three decades of phenomenally solid East Asian economic growth, largely financed through the banking system, so long as rapidly expanding bank credit outpaced lagging losses and hence depressed the ratio of non-performing loans to total bank assets. The failure to have alternative forms of intermediation was of little consequence so long as the primary means worked. That is, the lack of a spare tyre is of no concern if you do not get a flat. East Asia had no spare tyres. The United States did in 1990 and again in 1998.”²

1. Introduction

In Asian economies, banks have traditionally been the main institutions performing the vital role of financial intermediation. Thanks to various government initiatives, banks have established extensive branch networks to tap savings from remote corners of their economies, and extend loans to both the public and private sectors. Indeed, the culture of bank financing is fairly deep-rooted for corporate borrowers in many Asian countries. However, relying almost exclusively on this single source for access to capital and intermediation can be problematic when there is a financial crisis that dries that source up. The East Asian crisis of 1997 was just such an event.

The ability of the corporate bond market to pick up the slack when the banking sector experienced problems in the United States back in 1990 is a constructive and shining example of a situation in which the corporate bond market provided a much needed safety valve, when the banking sector was vulnerable. Likewise, prudent measures on the part of central banks, along with the actions taken by commercial banks, helped to offset the potentially debilitating influence of disrupted corporate bond markets in the 1998 crisis, following the Russian default and Long-Term Capital Management (LTCM) failure. The growth of high-yield bond markets and recent developments in credit derivatives markets in the United States also point to the importance of the multiple layers of access to credit, managing and transferring credit risk.

The positive US experience could serve as a useful baseline model for Asian economies in the process of building their own complements to solely (or largely) bank-based financial intermediation. As the Asian economies expand, and become more open to trade and financial flows, it will be increasingly essential that they have the infrastructure of multiple layers of financial intermediation in which commercial banks and corporate bond markets thrive and provide healthy competition to each

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² See Greenspan (2000).

other in the provision of credit and intermediation. They will also need more market-based management of credit risk. Making all this happen will require careful planning and sustained effort. The rest of this paper is devoted to a discussion of the steps necessary to pave the way for this process.

Section 2 of the paper articulates the areas where developmental efforts have to be concentrated in order to promote a public corporate bond market. While there are many areas that require simultaneous attention from policymakers and regulators, the paper will dwell on two important dimensions: a) legal frameworks, bankruptcy reform and investor protection (Section 3); and b) transparency of secondary markets in corporate debt (Section 4). Section 5 briefly discusses some of the issues identified in Section 2 (but not discussed in Sections 3 or 4) and draws conclusions.

2. Developing corporate bond markets

Development of multiple and complementary institutions for performing financial intermediation takes time and effort and cannot be accomplished in the short run. Significant efforts have already been undertaken in Asian economies in this regard, as the other chapters in this volume have abundantly illustrated.

The supply of and demand for credit and liquidity is at the heart of financial intermediation. In order to develop an alternative to intermediation driven primarily by banks, it is necessary to simultaneously make progress on a number of fronts:

- Free flow of capital and market-based interest rates
- Legal frameworks, bankruptcy reform and investor protection³
- Corporate governance standards to mitigate wasteful agency costs, and control premiums to reduce the cost of corporate borrowing
- Prudent regulatory frameworks that promote self-regulation, but establish enforcement of disclosure-based rules
- Provision of stable and reliable government benchmark yield curves even when governments are running a surplus (the Australian and the US experiences are illustrative of the benefits of this policy).
- Developing transparent and efficient primary and secondary markets (the recent initiative by the Securities and Exchange Commission (SEC) in the United States to create TRACE (Trade Reporting and Compliance Engine) is worth studying in this connection).
- Broadening the investor base through the creation of bond funds⁴
- Open access to currency and credit markets
- Provision of market mechanisms for credit risk transfer, such as credit default swaps, collateralised debt obligations, etc

Various chapters in this volume have focused on each of these topics. I will therefore restrict my attention in this paper to issues of bankruptcy reform and market transparency.

³ See La Porta et al (1997, 1998 and 2002)

⁴ See Ma and Remolona (2005) and Reserve Bank of Australia Bulletin (2003).

3. Legal frameworks, bankruptcy reform and investor protection

The respect for law, the nature of the legal code and the ability to enforce contracts determine the willingness of lenders and borrowers to participate in credit markets. In Table 1, which is based on studies by the World Bank and International Finance Corporation, I provide a comparison of some Asian economies with the more mature markets. The legal rights index in the second column measures the degree to which collateral and bankruptcy laws are designed to expand access to credit, as well as access to collateral for secured lenders. Higher scores reflect better access to both credit and collateral.

While Korea has made progress on all dimensions, other Asian countries appear to have some serious structural deficiencies. Contract enforcement delays are rather high in India, Thailand, Malaysia and China. As a percentage of debt, enforcement costs are very high in India, China and Malaysia. When enforcement is a problem, banks may rely on short-term debt (as argued in Diamond (2004)), which may pose significant asset-liability mismatch problems for corporate borrowers in Asian economies. In order to reduce the maturity mismatch problem and improve the debt capacity of the corporate sector, reform in the areas of legal framework, bankruptcy code/judiciary reform and corporate governance must be undertaken.

Table 1

Country	Borrowers' and lenders' legal rights index	Contract enforcement time (days)	Contract enforcement cost (as percentage of debt)	Length of bankruptcy process (years)	Bankruptcy costs (as percentage of estate)
China	2	241	25.5	2.4	18
India	4	425	43.1	10	8
Korea	6	75	5.4	1.5	4
Malaysia	8	300	20.2	2.3	18
Thailand	5	390	13.4	2.6	38
Asia	5	286	22	4	17
Mature markets	7	165	9	2	7

Source: IMF (2005): Chapter IV on "Recent Trends in Corporate Finance", *Global Financial Stability Report*, April.

Likewise, the length of the bankruptcy process is ten years in India, and bankruptcy costs (as a percentage of estate) range from 38% in Thailand to 4% in Korea. On average, the cost of bankruptcy stands at 17% in Asia, which compares with an average of 7% for more mature economies.

The ex ante cost of borrowing will reflect these costs: rational lenders will charge a premium to participate in markets characterised by poor contract enforcement and tardy bankruptcy procedures. At the limit, the debt capacity of the economy will be adversely affected by these deficiencies. Several emerging economies in Asia, including China and India, have undertaken reform of their bankruptcy codes. In discussing what might be important features of a bankruptcy code, Hart (1999) has identified the following aspects. First, the code should punish borrowers for not honouring contractual commitments, which is accomplished through suspension of dividends and enforcement of absolute priority when a firm files for bankruptcy. Second, the code should deliver efficient ex post outcomes, ie the total value of all claims should be maximised. This is difficult in practice as secured creditors may have a liquidation bias, and existing management may have a continuation bias. Third, the code should provide some value to borrowers in the process of financial distress resolution. Specifically, the process should permit illiquid but potentially solvent corporate borrowers to have a reasonable shot at reorganisation rather than being relegated to liquidation. Debt renegotiation, partial forgiveness of prior debt and exchange offers are very much in this spirit. It is also important to encourage the development of mechanisms such as Debtor in Possession (DIP) financing for borrowers already in financial distress. DIP financiers provide liquidity to distressed firms precisely when they are illiquid. In

order to encourage the development of such mechanisms, a bankruptcy code should provide supra-priority rights to such lenders.

In turning to investor protection, we must evaluate how well Asian economies compare to G-3 countries, which themselves are not immune to corporate fraud, as cases such as Worldcom and Enron have demonstrated. I now present some estimates on how well Asian economies have fared on accounting standards, rule of law, judicial efficiency, contract repudiation and expropriation risk. The source for this information (presented in Table 2 below) is the International Institute for Corporate Governance and the IMF. Low scores along each dimension reflect poor standards, and high scores indicate tight standards. Table 2 shows that Asian countries have some way to go in persuading investors that contract repudiation and expropriation risk are not significant. Judicial efficiency is still a major problem, especially in Thailand.

Table 2

Country	Accounting standards	Rule of law	Judicial efficiency	Contract repudiation	Expropriation risk
India	5.7	4.2	8	6.1	7.8
Korea	6.2	5.4	6	8.6	8.3
Malaysia	7.6	6.8	9	7.4	8
Thailand	6.4	6.3	3.3	7.6	7.4
Asia	6.5	5.7	6.6	7.4	7.9
G-3	6.6	9.4	9.7	9.5	9.9

Source: IMF (2005), Chapter IV on "Recent Trends in Corporate Finance", *Global Financial Stability Report*, April.

Note that the G-3 countries have a score of 9.5 or better on all dimensions with the exception of accounting standards. In the area of rule of law, Asian countries fare poorly in comparison to G-3 countries.

Large infrastructure investments, such as the building of highways, ports, power plants, etc, provide an ideal environment for the development of bond markets. This has been especially true in China, and there is great potential in India. However, in order to ensure that investors view corporate and public sector bonds as a core part of their savings portfolios, it is imperative that sweeping legal and judicial reforms are introduced to ensure swift and fair enforcement of contracts, adherence to the rule of law, and efficient financial distress resolution. As seen in the table above, contract repudiation and threat of expropriation are particular areas that require improvement.

4. Developing efficient primary and secondary markets

Corporate debt obligations vary along a dizzying array of dimensions: credit quality (as reflected in agency ratings); market capitalisation (with issue sizes varying from a few million dollars to more than \$1-2 billion); contractual provisions (callability, puttability, convertibility and the like); seniority (senior or subordinated); security (secured or unsecured), etc. All this means that corporate bonds (unlike government debt in many economies) are not commodities that lend themselves to trading arrangements that work well for standardised contracts such as futures.

The presence of significant informational asymmetry between corporate borrowers and lenders also means that the primary market where corporate borrowers raise capital must reflect the diversity of corporate borrowers. For highly rated corporate borrowers who over a period of time have established their credentials through repeated borrowings and a track record of timely repayments, corporate bond borrowing may actually offer an opportunity to disintermediate. Specifically, borrowers can bypass the banking sector and tap directly into savings, thereby reducing the cost of bank intermediation. For established big corporate borrowers, public bond markets with registered bond issues may be a very desirable alternative. For other corporate borrowers, bank credit may continue to be the dominant

alternative: even for non-investment grade borrowers, the continued resilience of the high-yield bond market in the United States over the last three decades is a reminder that public bond markets may prove to be a valuable alternative at lower ends of the credit spectrum. Indeed, bank credit often requires collateral, seniority and onerous covenants. At times when demand from investors is strong, corporate borrowers are able to replace bank debt with public bond issues, which often have less onerous covenants, and may be junior and unsecured. There are other times when access to high-yield markets can be costly (due to reduced demand from investors and an increased need for monitoring of the borrowers by lenders), and corporate borrowers prefer to take bank loans. These substitution possibilities require the development of a transparent, liquid and, eventually, an efficient bond market.

In order to ensure broad participation by both retail and institutional investors, it is essential to develop a transparent corporate bond market. Transparency of a market can be defined as “the widespread availability of information relative to current opportunities to trade and recently completed trades.”⁵ There are two concepts of transparency: pre-trade and post-trade transparency. Pre-trade transparency relates to information about price and volume opportunities in the markets. It includes: a) firm (if not live) bid and offer prices and the quantities market-makers are willing to transact at those prices ; b) in multiple dealer markets (as in corporate bonds), the consolidation or aggregation of bid and offer prices as well as the quantities associated with those prices across all market-makers (or as many market-makers as possible); and c) the existence of effective consolidation mechanisms that serve to reduce the search costs to potential investors by providing them with a complete picture of trading opportunities with various dealers. GOVPX⁶ and other consolidation mechanisms provide this kind of transparency in the US fixed income markets.

Post-trade information includes the prices and volume of all individual transactions that have actually taken place in the market at the time a potential investor is contemplating a trade. Post-trade transparency of a market determines the information that investors will have about most recent trades, helping them to evaluate the quality of execution of trades relative to recently concluded trades. Once again, the existence of effective consolidation mechanisms serves to reduce the search costs to potential investors by providing them with a complete picture of recently completed buy and sell orders with various dealers, as well as the quality of execution.

In a market where the pre- and post-trade transparency is poor, acquiring information about the prevailing buying or selling interest or quality of recently completed executions is costly and time-consuming. As a result, prices will not efficiently reflect all the buying and selling interests present in the market, which, in turn, can lead to poor trade execution: investors may receive or pay prices that are not necessarily the best available in the market. Extensive trading activity in the secondary markets (expressed in numbers of trades and notional amounts), narrow bid-offer spreads and willingness to trade greater quantities (at given bids or offers) provide valuable signals about the true value of the security in question and make the market more efficient. A market that has a) poor transparency, b) poor trading activity and c) wide bid-offer spreads is one in which relevant pricing information is not readily available, and price formation in such a market is likely to be inefficient.

For corporate bonds, relevant information about pricing includes the following variables: a) the likelihood that the issuer might default; b) the amount that the bond investor might lose in the event of default (loss given default); c) the market value of and accessibility to any pool of assets that serve as collateral backing the bond issue; and d) macroeconomic circumstances (levels of interest rates, inflationary expectations, expansion or recession, etc). The last factor may have implications for future earnings and the liquidation value of assets in the event of default. The presence of credit default swap markets and the ability to calculate expected default frequencies using equity prices have helped to improve the informational efficiency of some sectors of corporate bond markets where such contracts are actively traded.

⁵ International Organization of Securities Commissions: IOSCO Objectives and Principles of Securities Regulation. See <http://www.iosco.org/pubdocs/pdf/IOSCOPD82-English.pdf>.

⁶ GOVPX is the leading source of 24-hour, worldwide distribution of real-time treasury market prices and data based on the global trading activity of the primary dealers through the inter-dealer brokers for all U.S. treasury securities, repurchase agreements and swaps.

5. Conclusion

This paper's focus has been on the need to make structural reforms in the areas of bankruptcy codes, legal contract enforcement, corporate governance and investor protection. It has also examined issues relating to improving the development of corporate bond markets, with particular emphasis on the importance of transparency and efficient price discovery. In conclusion, I want to draw attention to another issue that must be addressed: the existence of a reliable and liquid government benchmark yield curve. The government curve signals to the corporate borrower the cost of risk-free borrowing at different maturities. This benchmark risk-free rate of borrowing at each maturity reduces the problem of figuring out the cost of corporate borrowing to the task of determining the spread over the risk-free borrowing rate. This spread is the compensation that potential lenders demand for bearing a) increased credit risk; b) increased liquidity risk; c) more complex contractual risks (callability, for example); and d) any tax differences that may exist.

In periods of deficits, most governments borrow, so the availability of an active government benchmark is not usually a big issue. However, when a government faces an economy that produces surpluses year after year, it is more difficult to justify borrowing. The recent decision by the Australian government and the Reserve Bank of Australia to consolidate the benchmarks and continue to borrow despite the surplus generated by the Australian economy is a case in point.

Is it welfare-improving for a government to provide the benchmark for the rest of the credit markets? Government bonds play a special role in the provision of liquidity to the private sector that cannot be easily replicated by other private sector instruments.⁷ They provide the role of "safe havens" in periods of crisis, and as such command an ex ante premium, as investors are willing to pay a higher price to insure themselves against future liquidity crises. In addition, the incremental information value of government bonds is greater as the term of the bonds increases. All this implies that government bonds may have a special value to investors in an economy and may command a premium as a consequence. Thus, by offering such bonds, governments may be able to borrow more cheaply, and, at the same time, provide an important "price discovery" mechanism for corporate borrowers.

⁷ See Diamond (1965) and Woodford (1990), for example.

References

Diamond, D W (2004): "Committing to commit: short-term debt when enforcement is costly", *Journal of Finance*, vol 59, no 4, August.

Diamond, P (1965): "National debt and neo-classical economic growth", *American Economic Review*, vol 55, pp 1125–60.

Emerging Markets Committee of the International Organisation of Securities Commissions (2002 and 2004): "The development of corporate bond markets in emerging market countries".

Greenspan, A (2000): "Global challenges", remark at the Financial Crisis Conference, Council on Foreign Relations, New York, 12 July.

Hart, O (1999): "Different approaches to bankruptcy", working paper, Harvard University.

International Monetary Fund (2005): *Global Financial Stability Report*, April.

La Porta, R, F Lopez de Silanes and A Shleifer (1997): "Legal determinants of external finance", *Journal of Finance*, vol 52, no 3, pp 1131–50.

——— (1998): "Law and finance", *The Journal of Political Economy*, vol 106, no 6, pp 1113–55.

——— (2002): "Investor protection and corporate valuation", *Journal of Finance*, vol 57, no 3, pp 1147–70.

Ma, G and E M Remolona (2005): "Opening markets through a regional bond fund: lessons from ABF2", *BIS Quarterly Review*, June.

Reserve Bank of Australia Bulletin (2003): "Bond market development in East Asia", December.

Woodford, M (1990): "Public debt and private liquidity", *American Economic Review*, vol 80, pp 382–88.