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THE ROLE OF A CORPORATE BOND MARKET IN AN ECONOMY—AND IN AVOIDING CRISES

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ABSTRACT

While much attention has been focused on the optimal ratio of a firm's debt to equity, the 'optimal' or best balance between bond financing and (longer-term) bank financing has scarcely been addressed. This article examines the principal differences between an economy with a well-developed corporate bond market free from government interference and an economy in which bank financing plays a central role (as in East Asia). When a full-fledged corporate bond market is present, market forces have a much greater opportunity to assert themselves, thereby reducing systemic risk and the probability of a crisis. This is because such an environment is associated with greater accounting transparency, a large community of financial analysts, respected rating agencies, a wide range of corporate debt securities and derivatives demanding sophisticated credit analysis, and efficient procedures for corporate reorganization and liquidation. In addition, the richness of available securities will tend to enhance economic welfare, and the market forces at work on the wide array of bond prices are likely to have a strong spillover effect on the health of the banking system as well.

Keywords: corporate bond, bond market, financial crisis, bond financing

> Govern a large country as you would
> cook a small fish—lightly.
>
> *Lao Tsu*

I. INTRODUCTION

The three principal means employed in the funding of economic enterprises are equity instruments, bonds, and bank lending. Over the years, much attention has been focused on the optimal ratio of debt to equity, especially since Modigliani and Miller (1958), with no letup in sight and relatively modest progress in reaching the

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answer (Myers, 1998; Leland, 1998). In contrast, the 'optimal' or best balance between bond financing and (longer-term) bank financing has scarcely been addressed. This is somewhat surprising, because heavy average reliance on one or the other can have far-reaching effects, especially on systemic risk, since the banking system is heavily leveraged and subject to regulatory imperfections.

This article will examine the principal differences between an economy with a well-developed corporate bond market and an economy in which bank financing plays a central role. I will show that a significant corporate bond market is in a much stronger position than the banking system to give free reign to the important disciplinary role exercised by market forces. In other words, investors in corporate bonds and related instruments appear to do a better job than bankers in deciding which enterprises to fund and on what terms, and thus in preventing the economy from ending up in a crisis. While factors such as monetary policy, fiscal policy, and policies concerning capital controls clearly have an impact on economic performance, this analysis will focus on the interplay between the banking system and the corporate bond market only.

The only country with a well-functioning corporate bond market at this time is the United States. As a percentage of GDP, bond market financing in other countries is a small fraction of the US number (Rajan and Zingales, 1995; Sapsford, 1997; Pomerleano, 1998). McGee (1998) noted that company financing from bonds for non-financial corporations in Italy, for example, represented only 2% compared to approximately 50% in the US. In contrast, bank lending as a percentage of GDP in 1995 was three times the US number in Japan and twice as large in Malaysia and Thailand (Sapsford, 1997). Incidentally, countries where banks play a large role need higher savings rates to reach the same level of benefits, since returns on bank deposits are typically smaller than on bonds and on equities.

In this paper, the term 'corporate bonds' is interpreted broadly, to include bonds ranging from very safe to the junk variety, as well as mortgage-backed and other asset-backed securities. Thus, a well-developed corporate bond market is associated with a substantial degree of disintermediation, as well as with a well-functioning market in derivatives in which interest rate and currency risks, for example, are readily hedged. To qualify as well-developed, a corporate bond market must also be free from government interference with the lending process, a condition which in recent years has been lacking in many East-Asian nations (Barth et al., 1998). In addition, a smoothly operating market in government securities would typically be present in such an environment.

Section II will summarize the shortcomings associated with a corporate bond market that is underdeveloped, while in Section III the infrastructure required for such a market to operate without impediments will be reviewed. Section IV addresses the (unstoppable) forces currently underway bolstering the market for corporate bonds, particularly in the EMU countries and Japan, and Section V provides a summary.

II. THE PROBLEM WITH AN UNDERDEVELOPED CORPORATE BOND MARKET

The absence of a corporate bond market of sufficient size and independence from government interference has two principal effects. First, the effects of misdirected government credit-allocation preferences will tend to be magnified. Second, the absence of a sizeable corporate bond market will aggravate the imperfections present in any financial regulatory system. In the end, the associated inferior risk assessment by the oversized banking system and that system's other weaknesses will tend to overwhelm, leading to productive over-capacity and non-performing loans and finally economic crisis.

1. Magnified Effects of Misdirected Government Credit-Allocation Policies

Governments wishing to exercise a high degree of influence over the direction of a nation's economic development and growth, sometimes referred to as industrial policy, have discovered that strong control over the banking system is their most effective weapon. Projects viewed as national ambitions can then be readily funded by the implementation of appropriate incentives and coercive measures. The natural evolution of an unconstrained corporate bond market can be hindered either by excessive regulation, taxation policy, or other means. This road, sometimes referred to as the Japanese growth model, is the one chosen by many Asian nations in recent decades. According to a recent report, banks hold over 60% of savings in Japan vs. less than 20% in the US (Sapsford, 1997).

An over-reaching banking system suffers from four serious problems. First, credit decisions are in the hands of relatively few decision-makers compared to the case of a well-developed bond market. In Thailand, for example, a large portion of total lending was done by just four banks. Second, bankers are more willing to engage in 'crony capitalism', since bad loans can often be kept from being written down for long periods with the government's tacit or express approval—in contrast to the situation for corporate bond investors, who generally must face the music from the start. Third, bond investors are far better than bankers at assessing risk—witness the savings and loan crisis in the US and the recent generous credit extension to Long Term Capital Management (LTCM) for example (Siconolfi, Raghavan and Pacelle, 1998). The main reason for this is that bond investors have a more direct stake in the outcome and thus a stronger motivation for making the appropriate risk adjustment. Finally, since banks are more highly levered than the typical bond investor, the systemic risk component is far greater than when the relative sizes of the banking system and the corporate bond market are more balanced.[2]

The consequences of an oversized banking system are far-reaching. Banks in possession of bulging deposits need outlets for their funds. When demand is insufficient, the tendency is to 'force' them on perhaps unwilling borrowers by eas-

[2] Although some hedge funds trade in corporate bonds, and some of these funds are highly levered, they represent a relatively small fraction of total corporate bond holdings.

ing the usual terms or by other means. In the *keiretsu* environment, for example, the placement of unneeded loans was readily accomplished. This in turn tends to relax the borrower's investment criteria, resulting in a low return on capital investments and on equity. Thus, excessive borrowing leads to excess capacity, which in turn converts many of the loans to bad ones. This cycle has recently been most visible in East Asia (Pomerleano, 1998).

Misguided government-induced credit allocation preferences and the lack of a developed corporate bond market also causes unfavoured industries and companies in particular, but not exclusively, to borrow abroad, with loans repayable in foreign currencies. When faith in the local currency begins to fade, these debtors' scramble for foreign funds is often the spark that sets off a genuine economic crisis.

Since a well-developed corporate bond market is an important component of the overall domestic capital market needed to finance infrastructure projects, some of a nation's basic investment needs may be delayed or inadequately funded in the absence of a proper balance. Conversely, funds that would otherwise find a natural home in corporate bonds end up as investments in foreign securities such as US Treasuries.

In sum, the irony is that a government credit-allocation preference scheme or industrial policy that relies primarily on the banking system is rather pernicious in its effects; the resulting oversized banking structure too often ends up weak and is a drag on the economy.

2. Aggravation of Regulatory Imperfections

In most countries, banks are subject to more intensive regulation and supervision than other industries. Government guarantees and/or deposit insurance are other means whereby the public's faith in the banking structure is cultivated. But no supervisory or regulatory system functions perfectly. It is therefore no surprise that the larger the relative size of the banking system is, the more devastating the consequences are of the imperfections inherent in any regulatory and supervisory structure.

As an example, in the savings and loan crisis in the US a decade or so ago, much of the blame for reckless lending was laid on the failure of the deposit-insuring agencies to adjust the premia charged for risk. This was no easy task, since each institution would have had to be classified into a risk class, and appropriate premia calculated for each class, tasks not readily performed by a government agency. In addition, when field audits did uncover problems requiring intervention, higher-ups in the agency did not always follow-up, not wishing to 'rock the boat'.

When a given loan or investment should be written down or off is of course partially subject to judgment. The institution itself generally views its incentives as pointing in the direction of reluctance and the supervisory agency never has the manpower to go into sufficient detail—assuming it is in a sufficiently arms-length position in the first place. In recent years, Japan has been the main country in which the banks have been particularly unwilling, and government agencies particularly ineffective, in forcing the write-down and write-off of bad loans. This is another area where crony capitalism exacts a heavy toll, and no country or institution ap-

pears exempt (Mayer, 1998).

While banks and other highly levered enterprises have strong incentives to engage in sound risk management, actual practices are not always up to standard and the underlying methodologies employed are not always the best available. (This is not to say that the prediction of 'rare events' has yet been mastered in our models.) It may be noted that Standard & Poor's recently took the opportunity, following the rescue of Long Term Capital Management, to warn financial institutions to take corrective actions with respect to their risk management practices (Corrigan, 1998).

The LTCM debacle brings two other dimensions into focus. First, the various lenders were apparently unaware of each other's loans, suggesting a lack of transparency across lenders. Second, since many of the officers of the lending institutions had made personal investments in the LTCM fund, the whole LTCM affair has been cited as an example of western crony capitalism (Plender, 1998).

Perhaps the most serious issue facing investors and bank examiners is a lack of transparency. Mark-to-market accounting has been fiercely resisted, not only by the financial industry but by many regulators, including the chairman of the Federal Reserve (Mayer, 1998). Three notable exceptions are the Financial Accounting Standards Board, the US Securities and Exchange Commission, and the International Accounting Standards Committee, which have been in the forefront in pushing fair-value to replace historical cost as a basis for valuing both financial assets and liabilities. Even though most business loans do not have an obvious market value, many modern techniques, such as arbitrage analysis applied to similar instruments, and credit analysis are now available to dispel the current fog surrounding the financial statements of financial institutions.

Finally, governments and their agencies and quasi-agents have a record of bailing out institutions that appear on the brink of failure. As Milton Friedman and others have pointed out, this creates a serious moral hazard problem: if I'm virtually certain to be bailed out, why should I (the banker) not take on greater risks than I otherwise would in pursuit of higher returns? Regulatory bodies seem to catch on to impending trouble only after sophisticated depositors have begun what Kane (1998) calls a 'silent run' on the system.

In sum, when a sizeable corporate bond market is present, a greater portion of total lending is subject to market forces than when the bond market is under-developed and most of the lending is done by the banking system. Regulators, in fact, are among those who make use of information from the corporate bond market. The result, as experience has shown, is that a well-developed bond market offers better protection against economic crises than the decisions of bank managers and the imperfections of bank regulatory systems when the bond market is under-sized and/or captive.

III. THE INFRASTRUCTURE OF A CORPORATE BOND MARKET

Having elaborated on the shortcomings of an over-bearing banking system, it is reasonable to ask just what it is that a well-developed corporate bond market

contributes. As already noted, the short answer is: market discipline. The discipline of market forces as it relates to bonds, however, has many dimensions, the most important of which I will now address.

A pre-condition of a genuine corporate bond market is that it must be free from government interference. Investors must feel free to base their decisions on economic criteria alone, such as risk and expected return. Pressure on bond investors or prices based on industrial policy, either direct or indirect, must be absent.

Probably the single most important element of a well-functioning bond market is a financial reporting system for companies which is relevant, reliable, and timely. At the present time, the Australian, British, and American accounting procedures come closest to this ideal. The work of the International Accounting Standards Committee (IASC), after a slow start, is moving rapidly in the right direction. The higher the quality of the borrower's financial statements, the sounder will be the basis on which the potential investor can make decisions. There is some evidence that the higher the quality of a firm's disclosure practices, the lower the effective interest cost at which its debt can be issued (Sengupta, 1998).

A second key ingredient of a healthy corporate bond market is a strong community of financial analysts. The role of (buy-side) financial analysts is to provide investors with independent and informed advice. In effect, the value of a sound financial reporting system is magnified by the presence of professional financial analysts, since the evaluation of the companies will be easier, resulting in a better product. Thus, an informative accounting system also tends to raise the quality of analysts' recommendations.

Groups of analysts long ago began forming rating agencies, of which the best known are Moody's, Standard & Poor's, and Fitch Investors. Their particular specialty is to assist bond investors by assigning companies and new issues a grade from a pre-determined and well-known scale. Their reports provide a clear, objective basis for determining the 'fair' interest rate for a given bond issue. Respected rating agencies are thus a key ingredient of a mature bond market; their influence on market participants has been documented by for example Hite and Warga (1997) and Ederington and Goh (1998).

Recent years have seen the emergence of new types of corporate debt instruments, in particular high-risk (junk) bonds and mortgage- and other asset-backed securities. This in turn has led to a sharp increase in demand for credit analysis, since sizing up the risks of default now becomes central in assessing the proper yields to make these instruments attractive to investors. As a consequence, a strong corps of credit analysts has become a central element of a well-developed corporate bond market.

While a public market, by offering liquidity, is a key feature of any corporate bond market, some bond investors intend to hold their bonds to maturity. In addition, certain smaller or specialized companies are unlikely to attain sufficient liquidity for a public bond issue. A mature bond market will therefore also include the opportunity for what is known as private placements. Investors in such instruments are usually referred to as relationship investors, because they must monitor the company's

performance themselves and are therefore typically provided with special access to the company and its activities (Emerick and White, 1992).

Another crucial feature of a smoothly functioning bond market is the presence of a mechanism for efficient reorganization in the case of default or bankruptcy. Such a mechanism, similar to Chapter XI of the Bankruptcy Code in the US, gives a distressed company protection from its creditors while it works out a plan for rehabilitation or liquidation, either under court supervision or through voluntary reorganization. Either way the creditors can expect partial restoration, in cash or securities, with little delay. The lack of an efficient and fair reorganization mechanism appears partially responsible for the slowness of Japan's progress in dealing with non-performing loans (Whitman, 1998).[3]

A developed corporate bond market is virtually certain to enhance economic welfare, since it will encompass a wide range of relatively liquid financial debt instruments of different maturities and with default risks ranging from very low to high. Thus we can expect that a large number of these securities will be such that we will be unable to find any portfolio of other securities in the market which can replicate their pay-off patterns across contingencies or states. This implies under fairly general conditions that, comparing equilibria with and without a well-developed bond market, a financial market richer in bonds will constitute a Pareto-improvement over the financial market in which banks do most of the lending (Hakansson, 1982, 1992).

Finally, the market forces asserting themselves in a mature bond market are likely to have some spillover effects on the banking system, since both are holding corporate debt and are thus subject to similar influences. The banking system can then ill afford to engage in non-competitive credit analysis practices.

While it is natural for banks to play the central role in the early stages of a country's development, the evolution of a corporate bond market ideally coincides with or only slightly lags the evolvement of the stock market. By this measure, the corporate bond markets in continental Europe, Japan, and the Four Tigers, for example, should by now be much further along than they are.

IV. THE FORCES OF CHANGE

Corporate bond markets around the world are currently undergoing rapid change, a phenomenon that is most visible in Europe (Iskandar and Luce, 1998) and to some extent in Japan (Merchant, 1998). This leads us to ask what the main forces behind this evolution are.

The principal force behind the increasing relative size of the corporate bond market is the process known as 'disintermediation'. Disintermediation simply means that corporations needing (borrowed) funds bypass banks and go directly to the capital market. The main consequence of this, of course, is that the requisite credit

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[3] Altman and Kishore (1996) found that the average recovery rate on a sample of more than 700 defaulting bond issues in the US between 1978 and 1995 was 42%.

evaluation previously performed by banks must now be done by the investors themselves.

Besides individuals, mutual funds, foundations, and other tax-exempt organizations, the primary entities responsible for the increased demand for bonds are pension funds and insurance companies, which tend to have a longer-term focus. This form of market participation is currently undergoing rapid growth, especially in Europe, in part due to the processes of economic integration and the privatization of state enterprises. Since these institutional investors also employ little or no leverage, while banks are highly levered, this development should have a beneficial effect on systemic risk, despite the fact that many of the new bonds are of the 'junk' variety.

The relative shift from bank to bond financing is also receiving impetus from the current wave of corporate restructuring and mergers and acquisitions that has recently invaded Europe in particular. The growth in 'securitization' there, via mortgage-backed and other asset-backed securities such as bonds based on auto-loans and credit-card receivables, is also moving the financial market in this direction.

In Japan, two factors are primarily responsible for the shift currently underway from bank to corporate bond financing. The first is the low returns retail investors are receiving on bank deposits. The second factor is the unwillingness of the banking system to lend money, due to its huge bad-loan portfolio and its poor capital adequacy ratios.

The growth in the relative size of the corporate bond market vs. the banking sector, and the introduction of a wide range of new debt instruments along the riskiness dimension, have of course generated a sharp increase in the demand for credit analysis. In Europe the new demand is such that according to one report (McGee, 1998), 'experienced credit analysts can almost write their own ticket'. Credit rating agencies are also benefiting significantly.

V. SUMMARY

This paper has argued that the presence of a well-developed corporate bond market has a strong positive effect on an economy. In the absence of a sufficiently large corporate bond market free from excessive regulation, an overly large burden of corporate lending is taken on by the banking system, typically with the blessing of a government in pursuit of credit-allocation preferences. In such an environment the oversized banking system becomes fertile ground for crony capitalism, resulting in lax lending criteria and relaxed investment standards by companies. Eventually the resulting excessive borrowing leads to excess productive capacity, which in turn lowers the return on invested capital, causing many of the loans to go bad. Poor accounting transparency, regulatory imperfections, moral hazard problems, and, in too many cases, government complicity and/or inaction tends to delay the necessary corrective measures until a genuine crisis has fully developed.

In contrast, when the relative sizes of the banking system and the corporate bond market are more balanced, as would be the case when a well-developed corporate

bond market is present, market forces have a much greater opportunity to assert themselves, thereby reducing systemic risk and the probability of a crisis. This is because such an environment is associated with greater accounting transparency, a large community of professional financial analysts, respected rating agencies, a wide range of corporate debt securities and derivatives demanding sophisticated credit analysis, an opportunity to make private placements, and efficient procedures for corporate reorganization and liquidation. In addition, the richness of available securities will tend to enhance economic welfare, and the market forces at work on the wide array of bond prices are likely to have a strong spillover effect on the banking system.

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