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# 6 An Evaluation of Japanese Financial Liberalization: A Case Study of Corporate Bond Markets

Akiyoshi Horiuchi

## 6.1 Introduction

Since the late 1970s, the Japanese financial system has been gradually but steadily liberalized. Japan entered the “era of financial liberalization” in the 1980s. As will be explained to some extent in this paper, foreign exchange transactions were greatly liberalized, thereby spurring the internationalization of Japanese financial markets. Full-scale liberalization of interest rates, which used to be covered by the Temporary Law of Interest Rate Adjustment (1947), was started in 1984 when the Japanese government placed the deregulation of interest rates on the agenda for the U.S.-Japan Yen-Dollar Committee.<sup>1</sup> By 1993 almost all bank deposit rates except for small-denominated and demand deposits had been liberalized. In October 1994 the remaining regulations on deposit interest rates were removed, except for that on “current deposits” (*toza-yokin*).<sup>2</sup> The Japanese financial system is far more market-oriented than it was in the high-growth period from the early 1950s to the beginning of the 1970s, and it seems certain that financial liberalization has improved the efficiency of the Japanese economy.

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1. See Frankel (1984) for a detailed explanation of the agreement of the Yen/Dollar Committee. The primary objective of this committee was to realign the Japanese yen, which was regarded as substantially undervalued. But, as Frankel points out, it was ambiguous whether the liberalization of Japanese financial markets and other “structural policies” included in the agreement were effective in amending the undervaluation of the yen.

2. Regarding the recent process of interest deregulation, see Federation of Bankers Associations of Japan (1994, 86–94).

However, it is noteworthy that Japan's financial liberalization has been characterized by "gradualism." The monetary authorities have been in part skeptical about the efficiency of the market mechanism and in part worried about the anticipated "destructive impact" of free market mechanisms on the status quo in the financial system. Therefore, they have controlled its implementation so as to avoid radical changes in the conventional framework of the financial system, and to preserve the equilibrium attained among various vested interests in the financial sector. For example, despite the apparent process of liberalizing interest rates, most Japanese financial markets, particularly the bank deposit market, seem to be far from "contestable" because the regulatory segregation of various financial businesses from one another effectively prevents full-scale competition. Therefore, the benefits of interest rate liberalization have not yet been fully realized. The remaining regulation via financial segregation symbolizes the gradualism of Japan's financial liberalization.<sup>3</sup>

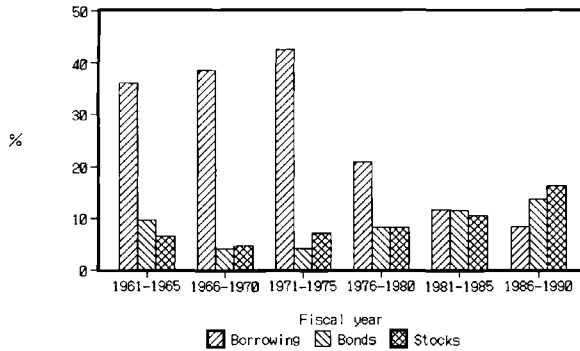
This gradualism may have contributed to superficially stabilizing the Japanese financial system, as the authorities intended. It should be noted, however, that this gradualism gives a distorted nature to the financial liberalization, which can be regarded as the cost of liberalization in Japan. In order to evaluate Japan's financial liberalization since the early 1980s, we should not neglect the cost of gradualism. The purpose of this paper is to investigate the cost by focusing on the process of liberalization in the Japanese corporate bond market.

Japanese corporate finance was dominated by indirect finance centered on bank lending for the nearly 40 years between the early 1940s and the late 1970s. However, figure 6.1 and table 6.1 indicate that its structure has undergone remarkable changes since the late 1970s. The most conspicuous changes were a steady decrease in major firms' reliance on borrowing from banks and a corresponding increase in the amount of bond issues. We might say that Japanese corporate finance has been substantially "securitized" during the last decade. In particular, major Japanese companies issued convertible bonds intensively to raise funds in the latter half of the 1980s. According to figure 6.2, almost half of all corporate bonds were issued in the form of convertible bonds during this period. Thus, the securitization of Japan's corporate finance during the last decade was accompanied by a surge in convertible bond issues.<sup>4</sup>

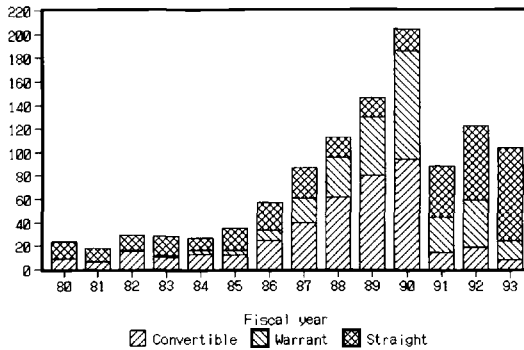
The policy of liberalizing the corporate bond market accounts for this process of securitization. As will be seen in section 6.2, the ability of Japanese firms to issue corporate bonds has been strictly controlled since the 1930s. But the internationalization of financial markets exerted great pressure on domestic bond markets in the early 1980s, thereby promoting their liberalization. The restrictive control of corporate bond issues has since been relaxed, and the

3. The Financial System Reform Law of 1992 enforced in April 1993 allows financial institutions to compete in each other's spheres via subsidiaries. However, the entry of various financial institutions into other spheres has been controlled by the MOF. The MOF determines which financial institutions are allowed entry into other spheres at what time.

4. Hoshi (1993) shows that Japan's major firms tended to decrease borrowing from banks by issuing convertible bonds during the 1980s.



**Fig. 6.1** Composition of fund-raising by major companies, F.Y. 1969-92  
 Source: BOJ (various years).



**Fig. 6.2** Corporate bonds issued by Japanese firms, F.Y. 1979-92  
 Source: *Koshasai Yoran* (Handbook of Japanese Bonds) (Tokyo: Nomura Research Institute, various years).

**Table 6.1** Components of Fund-Raising by Major Companies<sup>a</sup> in Japan (average %)

Period	Stocks	Bonds	Loans	Internal Funds	Other	Total
1961-70	6.1	5.6	37.7	32.4	18.4	100.0
1971-75	4.0	7.0	42.6	33.8	12.6	100.0
1976-80	8.0	8.1	20.9	50.7	12.4	100.0
1981-85	11.4	10.5	11.7	61.2	5.3	100.0
1986-92	11.6	17.6	8.4	51.0	11.4	100.0

Source: BOJ (various issues).

<sup>a</sup>“Major companies” refers to about 600 firms chosen from the group of listed companies whose book value of equity capital is more than ¥1.0 billion. Financial institutions are not included among major companies.

number of big firms allowed to issue bonds in domestic markets has gradually been increased.

Thus, the surge in bond issues in the 1980s may seem to be a natural response by Japanese corporations to liberalization in the bond markets. The standard theory of corporate finance, however, cannot sufficiently account for this phenomenon. In this paper, we propose a hypothesis to explain the surge in convertible bond issues in the late 1980s. The hypothesis relates the active issue of convertible bonds by Japanese firms to the combination of an imperfect mechanism of corporate governance and the distorted or half-finished nature of the corporate bond market liberalization.

First, it can be argued that the possibility of issuing convertible bonds mitigated the constraints of bankruptcy for corporate managers, thus encouraging them to issue convertibles. According to our hypothesis, the rapid increase in convertible and warrant bond issues in the late 1980s was related to imperfect corporate governance in Japan.

Second, the process of liberalizing the domestic corporate bond market was distorted during the 1980s in the sense that only well-established major companies were allowed to issue convertible and other equity-related bonds. In theory, such instruments are most useful for small and relatively newly established enterprises, in order to overcome the agency problem due to asymmetric information. However, such firms were effectively excluded from domestic corporate bond markets during the recent gradual process of liberalization. This paper will argue that the distortion due to the gradualism of liberalization led to the surge in equity-related bond issues by major companies in Japan under conditions of imperfect corporate governance.

This paper is organized as follows: In section 6.2, we present a rough sketch of the evolution of Japanese corporate bond markets from the early postwar period to the late 1980s. In particular, we explain the process of relaxing eligibility requirements for corporate bond issues and emphasize its distorted nature. In section 6.3, we take up the question of why equity-related bonds, and convertibles in particular, were issued so actively during the second half of the 1980s. We propose a simple hypothesis of imperfect corporate governance. This hypothesis predicts that managers of well-established firms will be eager to issue convertibles with a view to extending their opportunity to enjoy perquisites, and that they will increase the volume of convertible issues when the market holds strong expectations of a rise in their firms' stock prices. In the latter half of section 6.3, we investigate statistically whether these predictions were actually observable during the late 1980s in Japan on the basis of companies' financial data. We summarize our discussion in section 6.4.

## **6.2 Liberalization of Japan's Corporate Bond Markets**

In this section, we discuss the process of liberalization in corporate bond markets in postwar Japan. We emphasize that until the mid-1980s, restrictive

rules regarding eligibility were imposed on firms that wanted to issue bonds in the domestic market. Then, we discuss how the restrictive eligibility requirements have been relaxed in response to a “hollowing” of domestic corporate bond markets.

### 6.2.1 The Process of Controlling Corporate Bond Issues

It is well known that during the post–World War II years, and particularly during the 1950s and 1960s, Japanese corporations depended heavily on borrowing from banks, as table 6.1 suggests. In contrast, bond finance was relatively more important for Japanese corporations in the 1920s and 1930s. According to Net Supply of Industrial Funds data prepared by the Bank of Japan (BOJ), even in 1931 bonds provided 21.7 percent of external corporate funding and bank loans only 15.2 percent.

But in 1933, when Japan’s financial system was suffering from serious turmoil caused by international financial disorder, with the support of the Ministry of Finance (MOF) and the Industrial Bank of Japan (IBJ), around 30 of the largest private bond-underwriting companies and banks established the *Kisai Kondan Kai*, or the Bond Issue Arrangement Committee (BIAC), in order to restore stability and soundness to the securities markets. At the heart of the BIAC were eight private banks, headed by the IBJ. Therefore, the interests of private banks, particularly big banks, were reflected in the workings of the BIAC. For example, the banks succeeded in structuring BIAC regulations so that only “trustee banks” were allowed to manage relevant collateral until the maturity of a bond, in return for a fee. Thus, although securities companies participated as underwriting members of the BIAC, only banks could earn the collateral fee. It should also be noted that the BIAC was a semipublic organization in which the MOF could exert strong influence on specific processes of decision making. We can safely say that the MOF regulated Japanese corporate bond markets through the BIAC in tight collaboration with big private banks.<sup>5</sup>

Precisely, the BIAC was in charge of controlling the straight bond market. The markets of “equity-related bonds,” such as convertible bonds, were controlled, not by the BIAC, but by another organization consisting only of underwriting securities companies. However, this organization, like the BIAC, was closely monitored by the MOF, and therefore, its way of controlling convertible bond issues was quite similar to the BIAC approach to straight bonds. For example, the principle of collateral, which will be explained in the following,

5. The BIAC group met monthly throughout the high-growth period to determine the volume of new private sector debt issues, the firms that would be permitted to issue, and the specific terms of each issue. During the forced “low interest rate” period from about 1955 to 1970, the IBJ was in a most strategic position, given its status as the only permanent, nonrotating private sector member of the BIAC. But, as Calder (1993) describes in great detail, the IBJ’s role was not “top-down” allocation but more mediation. The convention of the BIAC was to react to specific requests to issue rather than to formulate general guidelines; the IBJ organized a case-by-case consensus on these requests by private firms.

was applied not only to straight bond issues but also to convertible issues, and the eligibility requirements for convertibles were determined and adjusted in parallel with those for straight bonds. We will also explain the eligibility requirements for corporate bond issues in detail below.

One of the most important roles of the BIAC was to establish the principle of collateral, which prohibited Japanese firms from issuing corporate bonds without sufficient collateral, usually in the form of real estate or specified government bonds. The organization that controlled convertible bond issues followed the BIAC and adopted this principle as well. The principle of collateral persisted until 1979 when Sears Roebuck Tokyo issued uncollateralized bonds. Collateral requirements urged by the powerful private banks after the panic of 1927 thus played a crucial role in destroying the Japanese corporate bond market; by the late 1930s corporations issued virtually no bonds at all. Equity continued, however, to be a major source of corporate finance, constituting over half of corporate funding every year from 1934 through the onset of the Sino-Japanese War in 1937 (table 6.2). It was the sudden expansion of heavy industrial investment demand under the pressure of war with China, and the onset of patriotic savings drives by the banks to provide funds to meet this demand, coupled with the uncertainties a wartime environment created for capital markets, that led to the decline of equity and to heavy corporate reliance on debt.

In spite of radical structural change in the Japanese economy immediately after World War II, the dominant position of the banking sector in corporate finance was kept intact. Article 65 of the Securities Exchange Act, which was instituted in April 1948 following the U.S. Glass-Steagall Act, precluded banks from underwriting bonds for public placement, but it did uphold the principle of collateral for all corporate bond issues. Unlike the U.S. banks, Japanese banks were not prohibited from being shareholders of their client firms, although the Anti-Trust Law specifies the maximum proportion of each firm's shares that banks are allowed to hold.<sup>6</sup> Thus, Article 65 of the Securities Exchange Act did not decrease the dominance of the banking sector in postwar Japan's financial system. The BIAC, the long-term credit banks, and the extensive legal controls introduced in mobilizing the Japanese financial system for World War II also survived, creating a debt-oriented, bank-dominated financial system with a strong bias toward the status quo. Since the banking sector, which had a vested interest in preserving the overwhelming importance of bank loans in the financial system, was so influential in arranging corporate bond issues, it is hardly surprising that corporate bond markets were prevented from fully developing in postwar Japan.<sup>7</sup>

6. At present, this maximum proportion is 5 percent. Banks can be among the largest shareholders of large Japanese companies by holding just a few percent of their shares.

7. During the high-growth period, the underdeveloped nature of corporate bond markets did not seem an obstacle to rapid industrial development. The intimate relationship developed between

**Table 6.2** Composition of Industrial Funds (average %)

Period	Stocks	Bonds	Loans <sup>a</sup>	Total
1931-40	49.1	6.9	44.0 (43.3)	100.0
1941-50	13.3	3.7	83.1 (72.5)	100.0
1951-60	14.2	4.4	81.4 (72.7)	100.0
1961-70	9.4	3.5	87.1 (78.9)	100.0
1971-75	5.7	3.9	90.4 (81.7)	100.0
1976-80	7.1	4.3	88.7 (75.2)	100.0
1981-85	7.7	3.5	88.8 (80.4)	100.0

Source: *Economic Statistics Annual* (Tokyo: BOJ, various years). The BOJ stopped publishing this data in 1986.

Note: This table covers the net supply of external funds to all industrial firms in Japan and, therefore, does not show very clearly the structural changes that have occurred in major company financing since the mid-1970s (cf. table 6.1).

<sup>a</sup>Numbers in parentheses are component ratios of loans from private financial institutions.

### 6.2.2 Eligibility Requirements for Corporate Bond Issues

Credit allocation through domestic corporate bond markets was based on both the principle of collateral and eligibility requirements for bond issues. The eligibility requirements were basically requirements for sufficient net worth (book value), amount of dividend per share, profit rates (both per share and as a ratio to total capital), and equity-capital ratio (ratio of equity to total assets). Unless they were able to satisfy these requirements, firms were not allowed to issue bonds at all. Table 6.3 shows an example of the eligibility requirements for convertible bond issues with collateral as of May 1985. These specific requirements were less severe than those in the 1970s and early 1980s, and as will be explained in the following section, they were substantially relaxed during the second half of the 1980s.

Moreover, the eligibility requirements for bond issuing effectively worked to crowd out small and medium-size firms from corporate bond markets, as such firms did not possess sufficiently large net wealth. This mechanism corresponds to the collateral principle in the sense that the possibility of default was kept to a minimum in the bond markets. Although, this regulation may have been effective in stabilizing Japan's bond market, it hindered the development of a flexible price mechanism in the corporate bond market and, in turn, strengthened the system of indirect finance based on the banking sector. Even

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banks and borrower firms worked sufficiently well to help industrial sectors finance their large investment expenditures. See, e.g., Hoshi, Kashyap, and Scharfstein (1991) and Prowse (1990). But, as this paper insists, the immature corporate bond market has become a weak point in the mechanism of corporate governance since the banking sector has lost its dominance in the financial system.



**Table 6.3** Example of Eligibility Requirements for Issuing Convertible Bonds (as of May 1985)

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- A. The book value of net wealth must be more than ¥10.0 billion.
  - B. The amount of dividend must be no less than ¥5.0 per share.
  - C. The after-tax profit per share must be either no less than ¥7.0 or the current profit must be positive immediately before the year and the after-tax profit per share must be expected to be no less than ¥7.00 in the coming year.
  - D. The value of net wealth must be more than 1.2 times as much as equity capital.
  - E. The equity capital ratio must be more than 15 percent.
  - F. The profit rate per total capital must be more than 4 percent.
- 

*Source:* *Koshasai Yoran* (Handbook of Japanese Bonds) (Tokyo: Nomura Research Institute, 1987), 428–30.

*Note:* A firm had to satisfy A, B, and C and more than one among D, E, and F before being permitted to issue convertible bonds with collateral. The eligibility requirements for issuing convertible bonds without collateral were much stricter. For example, firms with less than ¥33.0 billion net wealth were not permitted to issue convertibles without collateral at all as of 1985.

after 1988, when a rating system was introduced for determining eligibility requirements, the system appears to have been utilized as a means of excluding firms with a low rating from the bond markets.<sup>8</sup>

### 6.2.3 Internationalization and Pressures from Abroad

The Foreign Exchange and Foreign Trade Control Law (FEFTCL) of 1948 and the Foreign Investment Law of 1950 prohibited in principle all foreign exchange transactions unless specifically permitted by the government. These laws conferred on regulatory authorities great discretion in mediating between the domestic financial system and its global environment and provided the basic legislative framework that governed foreign exchange transactions for more than a generation, until December 1980.

The December 1980 revisions of the long-standing FEFTCL did not initiate or result in any categorical relaxation of Japanese foreign exchange controls. Other incremental steps had been taken previously. Furthermore, important provisions for exchange controls to be invoked in times of financial crisis remained even after the revised FEFTCL came into effect (MOF 1993, 139). But the *de facto* removal of controls during normal times helped ratify and accelerate the historical movement of Japanese corporate finance away from the reliance on domestic bank loans that had been the essence of the indirect financing mechanisms of the high-growth period.

Most important, the erosion of exchange controls that began during the 1970s and was accelerated by revision of the FEFTCL let Japanese companies

8. In 1990 the system of eligibility requirements was radically changed in that traditional requirements such as minimum net wealth were all abolished and instead a system of rating was introduced. Specifically, firms with rating BBB can issue straight bonds for public placement. Those with a rating higher than A can issue straight bonds without collateral.

issue straight and convertible bonds overseas, particularly in the Euromarkets. There, the absence of collateral requirements and mandatory prospectus issues, together with the broad range of financial instruments, swaps, and exchange rate hedging mechanisms not available in Japan, made raising funds cheaper and often quicker and more convenient than in Japan itself.

Starting in 1961 with Sumitomo Metals and Kawasaki Steel, Japanese corporations had periodically issued bonds abroad during the high-growth era. But the total amount raised was small: during the early 1970s the Euromarkets accounted for only 1.7 percent of Japanese corporate financing, although the share had risen by the late 1970s to 19.6 percent, mainly to finance offshore operations. In the early 1980s reliance on offshore finance began to rise even more sharply, primarily through large-scale corporate bond issues in the Euromarkets, with the Japanese surge abroad driven by both expectations of a strong yen (in the case of foreign-currency-denominated issues) and the more flexible issuing conditions available outside Japan. In 1979 the value of corporate bonds issued by Japanese corporations in domestic markets totaled over ¥2.4 trillion, more than three times the value of offshore issues; but by 1985 total Japanese corporate bond issues offshore had risen by ¥3.3 trillion, more than 25 percent greater than the total for Japanese corporate issues within Japan (table 6.4). Total Euromarket financial issues, with terms dictated by markets rather than by bureaucratic fiat, supplied over half of all Japanese corporate bond financing and one-third of total corporate finance, despite the low cost of capital to domestic issuers within Japan.

The higher bond issuance fees compelled Japanese firms to issue bonds abroad in the 1980s, and the de facto buyers of the bonds were mostly Japanese investors, thereby giving rise to a "hollowing" of domestic corporate bond markets. The MOF has tried to prevent this hollowing by regulating Japanese investors' purchase of Eurobonds issued by Japanese firms. Specifically, Japanese investors are forbidden to buy such corporate bonds within three months of the bonds' issuance. But this regulation seems to have been ineffective because underwriting securities companies in London could circumvent it by selling the Eurobonds issued by Japanese firms to Japanese investors by subscription. This subscription system has helped the underwriters to minimize the cost of mediation between Japanese firms and Japanese investors in the Eurobond markets.

Offshore financing by Japanese corporations exerted pressure to relax issuing restrictions, especially collateral requirements (which incidentally did not exist in many of the Euromarkets where Japanese firms were active in raising funds). Banks had long opposed any relaxation of collateral requirements within the domestic bond market because the stringent rules had allowed them to reap considerable fee income and, more important, had prevented the full-scale development of financing methods substitutable for bank loans. The existence of these fees caused the total bond-issuing cost in the domestic market

**Table 6.4** "Hollowing" of the Domestic Corporate Bond Market (billion yen)

Fiscal Year	Amount of Corporate Bonds Issued by Japanese Firms		B/A (%)
	(A) Total	(B) Issued Abroad	
1977	1.781	378	21.2
1978	2.253	563	26.1
1979	2.403	751	31.3
1980	1.791	701	39.1
1981	2.945	1,130	38.4
1982	2.887	1,375	47.6
1983	3.479	1,918	55.1
1984	5.130	2,795	54.5
1985	5.838	3,254	55.7
1986	8.670	4,118	47.5
1987	11.310	5,340	47.2
1988	14.635	6,891	47.1
1989	20.412	11,129	54.5
1990	8.809	5,437	61.7
1991	12.280	8,193	66.7
1992	10.396	6,001	57.7

Source: *Monthly Report of Japanese Bonds* (Tokyo: Association of Securities Underwriters, various issues).

Note: Corporate bonds include straight, convertible, and warrant bonds.

to be significantly higher than in Euromarkets.<sup>9</sup> Japanese banks began to reassess this situation during the mid-1980s, as the rush offshore cut back their share of corporate financial business.<sup>10</sup>

The MOF took important steps toward market orientation in the regulation of corporate bond issues, which made the control-minded policies of the BIAC more difficult. As we saw earlier, collateral had in principle been required for all Japanese corporate bond issues between 1933 and the early 1970s. In December 1972, under the MOF's guidance, underwriting securities companies and trustee banks determined the rules for "noncollateralized convertibles," and according to this new rule Mitsubishi Trading Company issued noncollateralized convertibles in 1973 for the first time in Japan. In reality, this 1972 rule did not imply an introduction of full-scale "noncollateralization" into con-

9. As Takeda and Turner (1992, 77-78) point out, bond issuance fees were significantly higher in the Japanese domestic market than in Euromarkets mainly because banks intervene intensively in bond issues in the domestic market.

10. The hollowing of domestic corporate bond markets does not seem to have been mitigated in spite of the liberalization of domestic markets. According to table 6.4, the relative importance of corporate bonds issued by Japanese firms abroad has increased since 1990. The MOF reportedly introduced the March 1993 regulation forbidding securities companies to sell by subscription Eurobonds issued by Japanese firms to domestic investors in order to stop the hollowing phenomenon.

**Table 6.5** Process of Liberalizing Noncollateralized Convertibles: Changes in the Eligibility Requirement of Minimum Value of Net Wealth and Number of Eligible Firms

Date	Minimum Value of Net Wealth (billion ¥)	Changes in Number of Eligible Firms
March 1979 <sup>a</sup>	150	2
January 1983	110	11 → 25
April 1984	55	26 → 97
July 1985	33	111 → 175
February 1987	20 <sup>b</sup>	180 → 330 <sup>c</sup>
November 1988	20 <sup>d</sup>	130 → 500 <sup>c</sup>

Source: *Annual Report of Securities Bureau* (Tokyo: MOF, various issues).

<sup>a</sup>The eligibility requirements for noncollateralized convertible bonds were first determined in March 1979.

<sup>b</sup>The rating criterion was introduced. A firm rated A or higher became eligible irrespective of minimum net wealth and other requirements. A firm rated BBB or higher was eligible if its net wealth was no less than ¥55.0 billion.

<sup>c</sup>Presented in round numbers.

<sup>d</sup>A firm rated BBB became eligible if its net wealth was no less than ¥33.0 billion.

vertible bond issues because issuing firms were still required to hold specific assets as a sort of security.

In March 1979 Sears Roebuck became Japan's first noncollateralized convertible bond issuer, followed the next month by Matsushita Corporation and by 21 other firms during 1979–84. This time, the bonds were truly noncollateralized. Although in the early 1980s the eligibility requirements for noncollateralized convertible issues were so strict as to permit only a few firms of recognized credibility to issue them, the requirements were steadily relaxed during the latter half of the 1980s. As a result, the number of the firms eligible to issue noncollateralized convertibles greatly increased (table 6.5). This liberalization surely contributed to the remarkable increase in the volume of convertibles issued in the domestic market during the latter half of the 1980s. As table 6.6 indicates, the rapid increase in convertible bond issues in the domestic market during this period was primarily due to the surge in noncollateralized convertibles.<sup>11</sup>

It is noteworthy, however, that small-scale enterprises were in effect excluded from the convertible bond market even in the late 1980s. The amount of convertibles issued by firms listed on the over-the-counter market, which are typical of small-scale businesses, was ¥84.5 billion from 1977 to 1989, just less than 0.3 percent of the total amount of convertibles issued in the domestic market during the same period.

11. In January 1985 TDK undertook the first unsecured straight bond issue in the domestic market since 1932; by February 1987 more than 350 other firms had also been authorized to do so. In 1985 the MOF's Securities Exchange Council proposed the eventual abolition of the collateral rule, a change facilitating the flow of capital toward consumer- and service-oriented firms at the expense of by-now capital-rich heavy industry.

**Table 6.6** Convertible Bonds Issued by Japanese Firms in the Domestic Market (billion yen)

Fiscal Year	With Reservation			Total
	Noncollateralized	of Assets	With Collateral	
1970	–	–	108(19)	108(19)
1971	–	–	62(10)	62(10)
1972	–	85(6)	169(43)	254(49)
1973	–	185(18)	210(63)	395(81)
1974	–	117(13)	163(41)	279(54)
1975	–	171(12)	160(29)	330(41)
1976	–	0(0)	56(14)	56(14)
1977	–	35(3)	128(23)	163(26)
1978	–	145(5)	232(22)	377(27)
1979	50(1)	150(7)	154(23)	354(31)
1980	0(0)	40(1)	57(11)	97(12)
1981	60(1)	208(15)	258(36)	526(52)
1982	45(1)	182(12)	191(33)	418(46)
1983	50(2)	604(29)	208(36)	861(67)
1984	856(34)	364(31)	382(60)	1,611(125)
1985	665(29)	376(29)	545(84)	1,586(142)
1986	2,342(95)	291(18)	836(91)	3,468(204)
1987	4,322(204)	228(21)	505(77)	5,055(302)
1988	6,335(252)	136(17)	524(64)	6,995(333)
1989	7,022(245)	128(13)	490(37)	7,640(295)
1990	853(40)	20(3)	39(4)	911(47)
1991	1,151(69)	71(13)	57(4)	1,279(86)
1992	534(30)	27(7)	14(2)	575(39)

Source: *Koshasai Yoran* (Handbook of Japanese Bonds) (Tokyo: Nomura Research Institute, various issues).

Note: Numbers in parentheses are number of convertible bond issues.

### 6.3 Convertible Bond Issues and the Structure of Corporate Governance

As has been explained, the most conspicuous structural change in Japan's corporate finance during the 1980s was the surge in equity-related bond issues and decline in the relative importance of bank borrowing. In particular, Japanese firms actively issued convertible bonds in the late 1980s. The restrictive rules on bond issues managed by the BIAC and other organizations were gradually relaxed during this period, so that well-established firms gained easier access to the convertible bond market. Therefore, it may seem natural for such firms to have increased the amount of convertibles issued during the late 1980s. For them the convertible bond is a close substitute for bank credit as a means of fund-raising. From the viewpoint of standard corporate finance theory, however, it is difficult to explain why they preferred issuing convertibles to bank loans, as will be discussed later.

In this section we will propose a hypothesis to explain the surge in convert-

ible bonds in the late 1980s. This hypothesis is related both to a particular characteristic of liberalization in the corporate bond market and to the mechanism of corporate governance in Japan. As was explained in section 6.2, an important characteristic of the liberalization of Japanese bond markets was the favorable treatment of major well-established companies. For those firms' managers, convertible bond issues were not a means of overcoming the agency problem due to asymmetric information, but a means of increasing their perquisite expenditure. This is in essence the hypothesis advocated in this paper.

### 6.3.1 Standard Theory of Convertible Bond Issues

The standard theory of corporate finance provides two reasons to issue convertible bonds. In either case imperfect information plays an essential role. First, firms' managers or shareholders would issue convertible bonds to signal their incentive to avoid risky projects that may entail large losses for their creditors under the rule of limited liability. Issuing convertible bonds implies that, even if a risky project goes well and realizes extraordinary returns, current shareholders must yield most of the returns to investors who hold convertibles. Thus, convertible bonds are thought to be effective in mitigating the agency problem existing between shareholders and creditors (debtholders) emphasized by Jensen and Meckling (1976).

Second, according to Stein (1992), some firms, particularly medium-quality ones, have incentives to issue convertible bonds in order to obtain funding conditions different from those available to low-quality firms. High-quality firms with good prospects of returns are able to issue straight bonds or to borrow from banks without endangering default risk. On the other hand, low-quality firms with poor prospects of returns are forced to issue stock instead of straight bonds because the latter incurs serious default risk. As Stein (1992) shows, medium-quality firms with adequately good prospects may be able to differentiate themselves from low-quality firms by issuing convertible bonds in the capital market.

In either of these cases, convertible bonds are instrumental for firms who suffer from the agency problem caused by asymmetric information. Therefore, these theories predict that firms that are newly established or have not yet achieved excellent performance should be more active in issuing convertible bonds than well-established firms.<sup>12</sup> According to Brealey and Myers, "convertibles tend to be issued by the smaller and more speculative firms" (1991, 549).

### 6.3.2 Another Hypothesis

It is doubtful whether the standard theories about convertible bonds are applicable to the situation in Japan during the latter half of the 1980s. Although the eligibility requirements for convertible bonds became less and less restric-

12. Hitachi issued U.S. dollar-denominated convertible bonds in September 1962. At that time Hitachi could not choose a straight bond issue because the company was not well known among U.S. investors. This case can be clearly understood from the viewpoint of the standard theory.

tive during the 1980s, only relatively large scale firms were allowed to issue convertibles. Overwhelmingly important issuers of convertibles were major companies that were previously established in the Japanese economy. For them, the agency problem due to asymmetric information emphasized by the standard theories seems to be irrelevant.

It may be said that outside investors overrated stock prices of industrial firms during the late 1980s. If managers and current shareholders understood the overvaluation of their stock prices in the capital market, they would have been induced to issue shares and convertible bonds to outsiders in order to exploit the excess profits due to asymmetric information. Can this hypothesis of outsider overvaluation be relevant to Japan's capital markets in the latter half of the 1980s? If this hypothesis were true, current shareholders (insiders) would reduce their equity positions as much as possible in order to press stocks overrated from their viewpoint on outside investors. In reality, however, current shareholders did not seem to reduce their equity positions. In particular, in the late 1980s, Japanese firms did not reduce the share of internal funds in the total amount of fund-raising.<sup>13</sup> It would be irrational for current shareholders to increase the amount of retained profits when outsiders overrate their firms' stock value because it means missing a chance to take excess profits by issuing convertibles and stocks to ignorant outside investors. Thus, the relatively high importance of internal funds in Japanese corporate finance in the late 1980s weakens the hypothesis of outsider overvaluation.

Why then were big Japanese companies so eager to issue convertible bonds in the late 1980s? Managers of those firms reportedly explained that convertibles were preferable to bank loans and other means of raising funds because convertibles could be issued at extremely low coupon rates when investors had strong bullish expectations about the firms' stock prices.<sup>14</sup> But this explanation is not convincing from the viewpoint of shareholders of those firms because low coupon rates on convertibles imply a high probability that shareholders will be forced in the near future to yield some valuable shares in their firms to bond investors. Extraordinarily bullish expectations, such as those observed in the stock market during the latter half of the 1980s, would not necessarily induce firms to issue convertibles if their concern was purely that of maximizing profits on behalf of their current shareholders.

If managers are not sufficiently constrained by the principle of maximizing shareholder profits, however, incentives may exist for them to issue convertible bonds and reduce borrowing from banks. In particular, bullish expectations

13. The importance of internal funds (i.e., depreciation and retained profits) was very low during the high-growth period in Japan. The proportion of internal funds in the total amount of funds raised by major companies was 30.2 and 42.4 percent in the 1960s and 1970s, respectively. However, internal funds have relatively increased since the early 1970s. From 1980 to 1984, the average proportion of internal funds was 56.4 percent. From 1985 to 1989, the proportion did not significantly decrease, remaining at 53.6 percent (BOJ, various issues).

14. E.g., it was widely known that many Japanese firms could issue convertible bonds in Switzerland at zero coupon rates in 1989.

of stock prices may more strongly induce corporate managers to issue more convertibles than otherwise. We explain this by introducing a simple two-period model.

### 6.3.3 A Simple Model

We assume here that there is no problem of asymmetric information between insiders and outside investors of the sort considered, for example, by Jensen and Meckling (1976) and Stein (1992). Therefore, if they are perfectly disciplined to maximize current shareholder profits, incumbent managers have no particular reason to prefer issuing convertibles to borrowing from banks. Furthermore, managers are assumed to be constrained by the extremely high penalty of bankruptcy. In other words, it is assumed that they want to avoid default at any expense because in bankruptcy they incur huge pecuniary and psychological costs. The assumptions both of no asymmetric information and of the constraints of bankruptcy costs on managers are plausible in the case of Japan's well-established firms. The managers of those companies have accumulated intangible assets embodied in themselves whose value will be totally lost should their firms go bankrupt.

A firm is assumed to have an investment opportunity with positive net present value. The amount of external funds that must be raised to proceed with this investment opportunity is denoted  $I$ . When this investment is carried out, the value of the firm will in the next period be  $X_H$  with probability  $P$ , and  $X_L$  ( $X_H > X_L$ ) with probability  $1 - P$ . We assume that the managers of the firm can enjoy a perquisite or a "pet" investment represented by  $Z$  in addition to the normal investment  $I$ . The managers raise  $I + Z$  either by borrowing from banks or by issuing convertible bonds. For simplicity, we assume that all agents are risk-neutral and the equilibrium interest rate is zero.<sup>15</sup>

*The case of borrowing from banks.* When the firm borrows from a bank, the maximum amount of funds will be denoted  $X_L$  because of the assumption of prohibitive bankruptcy costs. Thus,

$$(1) \quad I + Z \leq X_L .$$

The present value of the firm's stock  $V$  is given by the following equation:

$$\begin{aligned} V &= P(X_H - I - Z) + (1 - P)(X_L - I - Z) \\ &= PX_H + (1 - P)X_L - I - Z \\ &= V_0 - Z, \end{aligned}$$

15. In practice, it is difficult to identify perquisite expenditure by incumbent managers. But, e.g., we may regard various investment expenditures in order to preserve and/or increase job opportunities for present employees as typical perquisite expenditure. Many Japanese firms engaged in financial investment called *zai-tech* during the late 1980s. Those financial activities may also be perquisites because they were associated with an undue increase in the risk from the viewpoint of shareholders.



where  $V_0$  is the firm's share value when the managers do not take any perquisite at all. We assume an efficient capital market here, so that managers' expenditure on perquisite  $Z$  leads to a decline in the firm's value  $V$ .

*The case of issuing convertible bonds.* To raise funds  $I + Z$ , the firm could issue convertible bonds whose total face value is  $F$ . The bonds will be converted into 100C percent of the firm's shares in the future when its stock value turns out to be  $X_H$ . But when the stock value is  $X_L$  in the second period, they will not be converted into shares, so that the managers will have to repay  $F$  to bondholders. The constraint of bankruptcy costs assumed above requires that  $F$  be no larger than  $X_L$ ; that is,

$$F \leq X_L.$$

The present value of the convertible bond  $I + Z$  is

$$I + Z = PCX_H + (1 + P)F.$$

Therefore, the maximum amount of  $I + Z$  is given by the following condition:

$$\begin{aligned} (2) \quad I + Z &\leq PCX_H + (1 - P)X_L \\ &= X_L + P(CX_H - X_L). \end{aligned}$$

As theoretical consistency requires  $CX_H > X_L$ , the maximum value of  $I + Z$  can be larger than  $X_L$  when the firm issues convertibles. The assumption of an efficient capital market ensures that the present stock value of the firm  $V$  is equal to  $V_0 - Z$ .

If the firm is allowed to freely change the conversion ratio  $C$ , it can increase the maximum amount of perquisite expenditure  $Z$  by offering a higher ratio  $C$  to investors. But the present rules governing the issuing of convertibles prevents managers from manipulating  $C$  in Japan. Under the present institutional framework, we can assume this conversion ratio to be exogenously given.<sup>16</sup>

By comparing inequalities (1) and (2), we can see that the managers can increase the amount expended on the "pet" investment  $Z$  by issuing convertibles. An increase in  $Z$  will lead to capital loss for the firm's current shareholders. Therefore, if shareholders are able to instill sufficient discipline in managers so as to maintain profit maximization as their only goal, there is no

16. The ratio  $C$  is equal to the face value  $F$  of the convertible bond divided by the conversion price. In Japan the conversion price is determined by

$$(1 + S) \times (\text{the standardized stock price}) \times (\text{the number of stock shares}),$$

where  $S$  is institutionally determined by self-regulation among securities companies. The standardized stock price of an issuing firm is determined as an average of the firm's stock price over several days immediately before the issuing data. Thus, the conversion ratio  $C$  given by the following formula can be regarded as a constant:

$$C = F / [(1 + S) \times (\text{the standardized stock price}) \times (\text{the number of stock shares})].$$

particular incentive for managers to issue convertibles. If incumbent managers are to some extent free from the discipline of maximizing shareholder profits, however, they have incentives to increase expenditure  $Z$  by issuing convertibles at the expense of present shareholders. In this primitive model, investors' bullish expectations are presented by a higher value of either  $P$  or  $X_H$ . Thus, equation (2) shows that when investors have more bullish expectations of the firm's value, as during the late 1980s, managers' incentives to issue convertibles become stronger, other things being constant.

Our model assumes imperfect corporate governance in Japan in the sense that corporate managers have latitude more or less to direct firms' resources to satisfy their own (and probably employees') preference for perquisite expenditure. On the basis of this assumption, we can explain the surge in convertible issues during the latter half of the 1980s. The liberalization of the convertible bond market that started in the early 1980s weakened the severity of bankruptcy constraints for corporate managers and thereby increased their perquisite expenditure. The sharp rise in stock prices during the second half of the 1980s produced optimistic expectations of future stock prices, which helped managers expand the latitude of perquisite investment as equation (2) suggests. In contrast, since 1990, when pessimistic expectations began to prevail in the stock market, Japanese firms have lost their enthusiasm for issuing convertibles. The amount of convertible bond issues has substantially decreased since 1990 as figure 6.2 shows.<sup>17</sup>

#### 6.3.4 Evidence Supporting the Hypothesis

We can derive two propositions from our hypothesis of imperfect corporate governance. The first proposition is that the active issuance of convertibles by a firm tends to increase its perquisite expenditure, thereby deteriorating the firms' performance from the shareholders' viewpoint. The second is that the more optimistic the stock market is, the more strongly stimulated managers are to issue convertibles to increase perquisite expenditure. In the following, we consider whether statistical evidence supports these propositions.

*Responses of stock prices to convertible bond issues.* The most straightforward statistical test of the first proposition is to examine the responses of individual firms' stock prices to issues of convertible bonds. This is an event study. According to our hypothesis of imperfect corporate governance, issuing convertible bonds signals to the stock market the managers' intent to increase perquisite expenditure. Thus, provided that the stock market is efficient, the stock price would respond negatively to the announcement of a convertible bond

17. As was explained in section 6.2, the eligibility requirements for domestic convertible bond issues have been substantially eased since the late 1980s. This mitigation has extended opportunities for small-scale businesses to issue convertible bonds. Thus, the number of firms listed on the over-the-counter market that issued convertibles increased in the early 1990s.

issue. On the other hand, under the standard theory of corporate finance, issuing convertibles is good news for outside investors, who suffer from imperfect information about corporate management. Therefore, stock prices would respond positively to the announcement of a convertible bond issue.

We test the response of stock prices to issues of convertible bonds in Japan's domestic market from 1985 to 1991. Specifically, we examine changes in the rate of return on shares in issuing firms compared with the average rate of return on shares in their peer firms. If an issue of convertibles is bad news for outside investors, the announcement of such an issue will decrease the stock price and thereby reduce its rate of return.

It is essential for our test to identify when news of a convertible issue is made public by an issuing firm. When the managers of a firm want to issue a convertible bond, they must submit an application to an underwriting securities company at least four months before the scheduled date of the bond issue. The underwriter introduces the application to the regular meeting organized by major underwriters to examine the feasibility of the proposed issue. After the regular meeting has decided that the proposed issue is feasible, the firm's board of directors officially determines to issue convertibles with specific issuing conditions and releases the decision to the press. At the same time, the firm is required to submit a securities registration statement to the MOF following the stipulation of the Securities Exchange Act.

Although the length of the time lag between the press release and the day when the bonds are actually issued varies from case to case, it is usually several weeks. We can identify the precise date of announcement of individual issues by consulting newspapers. We select convertible bond issues announced to the press from January to December 1988, when Japanese firms most actively issued convertibles. The number of sample firms thus collected is a little less than 300. We had to exclude from our sample firms not listed on the Tokyo Stock Exchange because the data on holding period return on their stocks are not available to us. The total number of sample firms is 262: 188 cases issuing in the domestic market and 74 issuing in foreign markets.

If an issue of convertibles is bad (good) news for investors, the press release of the plan to issue bonds will decrease (increase) the firm's stock price immediately, and the holding period rate of return on the stock will be lower (higher) than those of peer firms during the specific month. The holding period rate of return  $R_i(t)$  of firm  $i$  in the month  $t$  when the firm announces the plan of issuing convertibles and the industrial average of holding period return  $R_i(t)$  can be obtained from the Japan Securities Research Institute. Table 6.7 summarizes the average  $\sum_i [R_i(t) - R_i(t)]/n$  of estimated responses in holding period return on issuing firms' stocks, where  $n$  is the size of the sample. Our concern is whether the average is significantly negative as the hypothesis of imperfect corporate governance predicts. If this hypothesis is true, the holding period returns on issuing firms' stocks are on average lower than the industrial averages over the three months preceding their issues of convertibles.

The result in table 6.7 is, unfortunately, ambiguous. In total, the average of

**Table 6.7**                    **Relative Rate of Return on Stock When a Firm Decides to Issue Convertible Bonds Compared with Industrial Average, January to December 1988 (%)**

	Number of Firms	Average	Standard Errors
Domestic issues	188	0.24	0.48
Foreign issues	74	-0.88	0.81
Total	262	-0.07	0.41

*Sources:* *Koshasai Yoran* (Handbook of Japanese Bonds) (Tokyo: Nomura Research Institute, 1989); *Kabushiki-toshi Shuekiritu* (Rates of Return on Common Stocks) (Tokyo: Japan Securities Research Institute, 1990).

*Note:* The basic data are holding period returns (from the end of the previous month to the end of the current month) on stock, when issuing firms announced their issuing plans, minus the average of industries' holding period return. The sample consists of all firms that announced a plan to issue convertibles from January to December 1988. Our sample excludes those firms not listed on the Tokyo Stock Exchange, because data on their holding period returns were not available in our data source. There were some cases in which a firm issued a few convertible bonds on the same day to raise a large amount of funds. In this table, we do not treat the multiple issues separately. Therefore, the number of issuing firms in this table is smaller than the number of issues recorded in table 6.6.

holding period returns is slightly negative compared with the industrial average. But it is not statistically significant at all. In the case of foreign issues, the stock prices seem to show a slightly stronger negative response to the announcement. But it is not significant either.

Therefore, our event study does not give clear-cut support to the hypothesis of imperfect corporate governance. The standard hypothesis of convertible bond issues, which expects a positive response of stock prices to the announcement, is not supported either. However, we need to mention a caveat. The validity of our event study depends crucially on the presumption that the stock market is efficient in Japan. This presumption is problematic. We have not yet reached any unambiguous conclusion concerning the efficiency of the Japanese stock market (see, e.g., Hoshi 1987). However, in my understanding, there is a lot of casual evidence that casts doubt on the validity of the efficiency hypothesis in Japan. Therefore, we should refrain from deriving a definite conclusion based on the event study summarized in table 6.7.

*Profitability after convertible bond issues and the influence of stock price increases on convertible bond issues.* In the following, we examine the relevancy of the hypothesis of imperfect corporate governance by using statistical methods alternative to the event study we explained above. Specifically, on the basis of panel data from the mid-1980s to early 1990s, we test whether the firms that issued convertible bonds systematically experienced deterioration of their profit rates after the issue, compared with peer firms in the same industries. The sample is 509 Japanese firms. They are major firms, and until the late 1980s they had been eligible to issue convertibles without collateral. In other words, they had been given the widest range of options in their fund-raising

until the late 1980s. The dependent variable,  $PRG(t)$ , is the profit rate of each firm compared with the average profit rate of peer firms belonging to the same industry. Independent variables are the lagged profit rate compared with the industrial average,  $PRG(t-1)$ , and the amount of convertibles issued each year divided by total assets with suitable lags,  $CB(t-i)$  for  $i = 1, \dots, 4$ . The sample period is the seven years from 1985 to 1991.

The result of the panel-data estimation is summarized in table 6.8. The result clearly shows that an increase in convertible issues significantly decreased the profit rate of issuing firms with two or three years' lag. This suggests that managers of major companies tend to issue convertibles in order to pursue their own objectives rather than profit maximization on behalf of current shareholders.

The second proposition derived from our model is that an increase in expected stock prices will induce incumbent managers to issue convertibles because it mitigates the constraint of bankruptcy for them. We examine whether this prediction was true during the late 1980s. We choose the amount of convertibles issued each year divided by total assets as a dependent variable ( $CB(t)$ ). Independent variables are lagged variables  $CB(t-1)$  and  $CB(t-2)$ , lagged stock prices  $ST(t-1)$  and  $ST(t-2)$ , and lagged profit rates  $PR(t-1)$  and  $PR(t-2)$ . We introduce lagged variables  $CB(t-1)$  and  $CB(t-2)$  because rules concerning convertible issues in Japan have greatly influenced the pattern of issuing behavior of individual firms.<sup>18</sup> The lagged stock prices are introduced on the assumption that they essentially determine investor expectations of the stock prices. We are particularly interested in the statistical significance of these lagged stock prices in the following investigation. We choose the Tobit model to test the proposition because the frequency with which the dependent variable  $CB(t)$  takes the value zero is rather high—nearly 80 percent of dependent variable values are zero. The estimated result is summarized in table 6.9.

The result shows that higher stock prices induced firms to issue larger amounts of convertible bonds in the following year. Since we may suppose that an increase in stock prices positively influences the market expectations of stock prices, the result suggests that the higher level of expected prices stimulated convertible issues during the late 1980s. The result in table 6.9 thus supports our hypothesis that bullish expectations in the stock market will induce corporate managers to issue convertible bonds. This suggests that corporate governance has been inefficient in Japan from the viewpoint of shareholders.

### 6.3.5 A Discussion

We can summarize our investigation concerning the relationship between the surge of convertible bond issues and liberalization in the bond market dur-

18. Since 1973, the self-regulatory rule determined by the group of underwriting securities companies has restricted the length of intervals between issues of convertibles so that firms are in effect required to take an interval of at least one year to reissue convertibles.

**Table 6.8** Profit Rates and Convertible Bond Issues, 1985–91 (panel-data estimation; random-effects method)

Variable	Estimation
PRG ( $t-1$ )	0.60100 (50.19)
CB( $t$ )	-0.00379 (-0.49)
CB( $t-1$ )	-0.01362 (-1.81)
CB( $t-2$ )	-0.03833 (-4.79)
CB( $t-3$ )	-0.03616 (-4.16)
CB( $t-4$ )	-0.01777 (-1.86)
Constant	0.00725 (11.17)
Mean of dependent variable	0.00821
Sum of squared residuals	1.55409
Standard error of regression	0.02258
Adjusted $R^2$	0.3126

Source: NIKKEI NEEDS. TS. COMPANY (Tokyo: Nihon Kezai Shimbun, Division of Datebank, 1994).

Notes: Dependent variable is PRG( $t$ ) = the operating profit rate (per total assets) of each firm minus the average profit rate of the industry. CB( $t$ ) = the amount of convertible bonds issued by each firm divided by total assets. Numbers in parentheses are  $t$ -values.

**Table 6.9** Stock Prices and Convertible Bond Issues, 1985–91 (Tobit estimation)

Variable	Estimation
Constant	-0.19034 (-15.73)
CB( $t-1$ )	-0.16596 (-2.11)
CB( $t-2$ )	0.32382 (4.20)
ST( $t-1$ )	0.02374 (3.35)
ST( $t-2$ )	0.00170 (0.26)
PR( $t-1$ )	0.96481 (5.83)
PR( $t-2$ )	-0.48500 (-2.05)
Log of likelihood function	-735.923
Percent of positive observations	0.20236

Source: NIKKEI NEEDS. TS. COMPANY (Tokyo: Nihon Kezai Shimbun, Division of Datebank, 1994).

Notes: Dependent variable is CB( $t$ ). ST( $t$ ) = stock price at end of year  $t$ , standardized by setting stock prices at 1991 year-end to 100.0. PR( $t$ ) = profit rate per total assets in year  $t$ . Numbers in parentheses are  $t$ -values.

ing the 1980s in Japan. The liberalization stimulated Japanese firms to issue a large amount of convertible bonds, thereby reducing their reliance on bank loans. Although this impact of liberalization in the bond market seems remarkable, it is doubtful whether the impact was genuinely productive. Convertible bonds and other equity-related bonds, such as warrant bonds, are instrumental for firms facing serious agency problems because they have just started business or because they have not yet achieved excellent performance and more important because they do not enjoy favorable treatment resulting from a long-

term relationship with their main banks. In theory, such bonds would not be so attractive for firms that have established themselves in the Japanese economy because they are not confronted with agency problems caused by asymmetric information.

The liberalization in the Japanese corporate bond market has allowed more and more firms to utilize convertibles and warrants as a means of fund-raising. But the eligibility requirements confined the possible use of those instruments to relatively large scale and well-established firms during the 1980s. The requirement excluded from the corporate bond market those firms that most needed the instruments. For example, firms registered on the over-the-counter market, most of which were promising small and medium-sized companies, are not allowed to issue warrants at all and find stricter constraints imposed on them when issuing convertibles, compared to well-established firms.

It should be noted that these small-scale firms have rarely participated in the traditional main bank relationships that are supposed to weaken pressure from capital markets on incumbent managers. Managers of small firms cannot afford to abuse the freedom of issuing convertible bonds for the purpose of increasing perquisite expenditure instead of reducing agency costs as suggested by the standard theory.

Therefore, the liberalization in corporate bond markets brought forth only superficial consequences in the 1980s. Most managers in Japan's big companies enthusiastically welcomed the liberalization because it widened the possibility of increasing their perquisite expenditure by mitigating the constraint of bankruptcy. Our statistical examination confirms that the surge in issues of convertibles tended to be associated with increases in perquisite expenditure during the latter half of the 1980s in Japan.

We may conclude that financial liberalization in Japan's corporate bond markets has been conducted in a distorted manner. The process indicates how timid or distrustful the related parties, including the monetary authorities, are about the productivity of the full-scale corporate bond market mechanism. They should acknowledge that the firms with a significant possibility of default can be efficiently treated in the market. In other words, corporate bond markets do not play a meaningful role when only blue-chip firms without any risk of default are permitted to issue various instruments. There remain serious obstacles for small-scale and venture businesses in Japanese corporate bond markets. The surge of convertible issues in the late 1980s and the subsequent deteriorating performance of issuing companies in the early 1990s suggest the remaining weakness of Japanese capital markets.

## **6.4 Concluding Remarks**

In this paper, we investigated the process of liberalization in Japanese bond markets during the 1980s and its consequences in the late 1980s. The domestic bond market has been greatly liberalized since the early 1980s, mainly because

of pressure from abroad associated with internationalization of financial markets. But the process of liberalization was distorted and imperfect in the sense that only well-established firms were permitted wide opportunities in choosing various bonds as a means of fund-raising, and small-sized and relatively newly established firms were not allowed access to such instruments. In theory, firms of the latter type would have had genuine need for convertibles and other equity-related bonds. The consequence of the distorted liberalization was an increase in perquisite expenditure by well-established firms because convertible bonds mitigated the constraint of bankruptcy they had confronted during the high-growth era.

This paper provides two lessons. First, Japan should more boldly accept the market-oriented consequences of financial liberalization. Many Japanese, particularly the Japanese monetary authorities, are still skeptical about the efficiency of market mechanisms in the financial system and have an irresolute attitude toward full-scale liberalization. There appears to be a somewhat self-congratulatory attitude in their belief that their "careful" and conservative policy of liberalizing the financial system in Japan ("gradualism" in this paper) has contributed to stability in spite of drastic structural changes since the mid-1970s. We should, however, pay enough attention to the negative effects of their conservative policy, such as those we have emphasized in this paper.

Second, the present situation of corporate governance in Japan deserves further careful investigation. In this paper we discussed the possibility that the nature of governance, which is imperfect from the shareholders' viewpoint, resulted in inefficient expenditure by corporations in the late 1980s. Many people might claim that the present structure of corporate governance actually stimulated rapid industrial development in the Japanese economy. Mutual shareholding among major corporations has protected incumbent managers from capital market pressures, thereby promoting managerial decision making from a long-term perspective. At the same time, the main bank relationship between banks and borrower firms is regarded as efficiently monitoring and disciplining managers to pursue efficient management, in place of capital markets.<sup>19</sup>

However, our recent experience indicates that we have not yet established the perfect structure of corporate governance in Japan. During the high-growth era, the primary objective of corporate managers was to exploit the abundant opportunities of rapid growth. The Japanese corporate structure, which give

19. See, e.g., Aoki, Patrick, and Sheard (1994). There are some empirical studies which support the hypothesis that Japanese corporate governance led to efficient management, particularly through the monitoring and disciplining provided by the main bank relationship. See Hoshi, Kashyap, and Scharfstein (1990a, 1990b, 1991), Lichtenberg and Pushner (1992), Morck and Nakamura (1992), and Prowse (1990). Most of their analyses are confined to the period up to the late 1980s. If they had considered the structural changes in Japanese industry from the late 1980s to the early 1990s, they might have obtained more pessimistic results on the efficiency of current Japanese corporate governance.



wide discretionary power to incumbent managers and current employees, did not lead to serious losses for the other stakeholders mainly because the rapid growth of corporations covered up potential conflicts of interest between different stakeholders. When an industry is confronted with severe structural changes, however, the Japanese way of promoting wide discretion of incumbent managers and employees may have the weakness of delaying the restructuring of corporations. As Boot (1992) exemplifies, insiders of corporations tend to resist fundamental structural changes in order to preserve their own vested interests.

Full-scale financial liberalization is expected to strengthen the capital market monitoring of corporate management, thereby building an efficient mechanism of corporate finance in Japan that is somewhat different from the traditional one that has dominated Japan's corporate sector for more than four decades. Thus, we should be much more positive in liberalizing Japanese capital markets.

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## Comment      Won-Am Park

Horiuchi argues quite interestingly that the active issue of convertible bonds by well-established Japanese firms during the financial liberalization in the 1980s created distortions. This happened because the managers of well-established firms tended to utilize convertibles to increase their perquisite expenditures instead of requisite expenditures, while small firms were not allowed to issue convertible bonds. The author thinks that small firms should have been allowed to issue convertible bonds to mitigate the agency problem existing between shareholders and creditors (debtholders).

These arguments, unfortunately, are not entirely convincing. First, imperfect information will not accord with full-scale financial liberalization as shown in the credit-rationing literature. In contrast, the author seems to argue that fuller financial liberalization, particularly in corporate finance, is desirable because of asymmetric information and easily misguided corporate governance. The author must clarify why imperfect information does not support credit rationing but requires fuller financial liberalization.

Second, the author does not provide a consistent explanation for perquisite expenditure or “pet” investment by managers of well-established firms. It appears that managers of those firms were eager to reap large capital gains by issuing convertible bonds at extremely low coupon rates when investors had strong bullish expectations about the firms’ stock prices. This is the asymmetric information problem between insiders and outsiders. Then the paper reads

as if this would not explain Japanese capital markets in the latter half of the 1980s because shareholders did not concurrently reduce their equity positions nor did Japanese firms reduce the share of internal funds in the total amount of funds. The author should explain this conflicting evidence in a consistent way.

Third, the panel-data econometric studies are shown in table 6.7 to confirm that convertible bond issues financed requisite expenditure. However, the econometric investigation in table 6.7 needs to be refined. The panel data could be rearranged to remove too many zeros in convertible bond issues (it has been said that nearly 80 percent of convertible bond issue data are zeros). The fixed-effect regression, as well as the random-effect regression, should be done as a robustness check. In addition, time dummy variables or time-varying coefficient estimation should be included because eligibility requirements for convertible bonds issues have been loosened gradually (table 6.5). The finding that more convertible bond issues led to lower profit rates may not be evidence that convertible bond issues financed requisite expenditures. Even if convertible bond issues financed requisite investments, operating profit rates could have gone down in the beginning as new equipment was installed. Considering all these aspects, it will be better to investigate whether more convertible bond issues led to lower stock prices.

The author does not carry out empirical tests on the responses of stock prices of individual firms to issues of convertible bonds for some ambiguous reasons. My hunch is that more convertible bond issues by well-established firms were associated with higher stock prices because outside investors had bullish expectations of stock prices in the latter half of the 1980s, and because most shareholders were outsiders who care about stock prices. In this situation, managers of well-established firms, as insiders, would issue more convertible bonds to finance both requisite and requisite investments at low coupon rates. The asymmetric information between insiders and outsiders would create distortions in the capital market. However, the distortions did not seem severe enough to bring about significant changes in equity positions and less reliance on internal finance. This is my explanation for the conflicting evidence on the profit-seeking activities of the managers of well-established firms.

Overall, the conclusions drawn in this paper could change with a more balanced view of the Japanese experience with corporate bond market liberalization. Managers of well-established firms might behave as insiders. If this is true in the case of well-established firms, it will also be true in the case of small firms. Managers of small firms will take advantage of their insider position once they are allowed to issue convertible bonds. As long as outside investors have bullish expectations of stock prices, the agency problem of small firms will not be cured by the issuance of convertible bonds. Actually convertible bond issues by small firms will emphasize the insider-outsider problem. Viewed in this way, one can justify Japan's gradual approach to corporate bond market liberalization.