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THE MAIN BANK SYSTEM AND CORPORATE MONITORING AND CONTROL IN JAPAN*

Paul SHEARD

Australian National University, Canberra, ACT 2601, Australia

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Analysis of the main bank system provides insights into the intermediate nature of economic organization in Japan. Close bank-firm ties are interpreted as evidence of a quasi-internal capital market in which the main bank internalizes the monitoring and control functions of the external capital market. A key insight is that the main bank system substitutes for the 'missing' takeover market in Japan. This interpretation is helpful in explaining some seemingly paradoxical aspects of bank behavior.

1. Introduction

One of the distinctive institutional features of capital market organization in Japan is the main bank system of industrial finance [Hodder and Tschoegl (1985, pp. 185–187)]. Traditionally large firms in Japan have relied heavily on direct bank finance, rather than equity or bond issues, and have maintained a close relationship with a particular bank, known as the firm's 'main bank'. The purpose of this paper is to provide an economic rationale for this main bank system. The explanation offered focuses on the role of the main bank as an agent that specializes in the collection, evaluation, and transmission of information about firms and their managements, and that provides a mechanism which substitutes for the missing takeover market in Japan.[1] What makes the main bank system particularly interesting is the fact that the main bank provides these informational 'services' as part of a quasi-internal form of economic organization. The analysis adds therefore to the growing literature on intermediate forms of economic organization that exist between Williamson's (1975) polar modes of market and hierarchy [e.g. Mariotti and Cainarca (1986)].

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[1]Schoenholtz and Takeda (1985) also characterize the main bank as a capital market monitor. Our analysis relates monitoring to other aspects of the main bank's role and behavior.

Recent literature in finance has focused on the role of information and monitoring in explaining the existence of financial intermediaries [Leland and Pyle (1977); Diamond (1984); Ramakrishnan and Thakor (1984); Williamson (1986)]. More generally the importance of monitoring has become an important theme in the theory of economic organization [Alchian and Demsetz (1972); Jensen and Meckling (1976)]. Another literature has developed examining the workings of the market for corporate control [Jensen and Ruback (1983)]. While these two sets of literature have proceeded along separate paths, recently Stiglitz (1985) has argued persuasively that the control function is more likely to be exercised by banks than through the takeover mechanism. The main bank system is interesting because, as it will be argued, it provides an example of a financial intermediary in which the monitoring and control functions are both vested. The analysis here echoes back to earlier work by Williamson (1975, ch. 8) on the role of the multidivisional structure as a miniature capital market. The multidivisional structure is poorly developed in Japan, but it is argued that the main bank system functions in an analogous way in monitoring and policing management in the context of a more diffuse quasi-internal capital market.

An important contribution of the paper is that it clarifies the way in which the market for corporate control operates in Japan. It should be noted however that, while the analysis contributes to the emerging comparative perspectives on the nature of economic organization in the increasingly important Japanese economy [see also Aoki (1986), Okuno-Fujiwara (1987)], it is not suggested that the Japanese system is superior to the Western model in any sense. The focus is on explaining in economic, as opposed to socio-cultural, terms how a seemingly peculiar Japanese institution works rather than assessing the dynamic or even static efficiency of the system, much less attempt a comprehensive welfare analysis. To understand the rationale for peculiar national institutions is one thing; to argue that they are more efficient, or would increase economic welfare if transferred to another national setting, is entirely another.

It should be noted that the analysis is partial in that it deals only with the relationship between large incorporated companies and financial institutions, and it cannot be assumed that the same economic processes are necessarily at work in the small and medium-sized firm sectors of the economy. Nor should it be overlooked that the main bank system has been subject to pressures for change in recent years as a result of deregulation and internationalisation of the financial system and structural changes in the economy. The somewhat static and stylised approach, adopted in the interests of clarity and economy of exposition, should not be taken to imply immutability in the Japanese system.

Table 1
Classification of listed Japanese firms into main-bank groupings.[a]

Name of grouping	Number of firms	Relative frequency (%)	Proportion of total assets: Relative frequency (%)	Proportion of total assets: Cumulative frequency (%)
Mitsui	105	12.0	18.0	
Mitsubishi	117	13.4	13.7	
Sumitomo	108	12.4	14.4	
Fuyo (Fuji)	105	12.0	10.3	
Sanwa	51	5.8	7.6	
Daiichi Kangin	71	8.1	9.7	73.7
Affiliation with one of above in state of flux	33	3.8	2.7	76.4
Seven other city banks	70	8.0	4.5	80.9
Industrial Bank of Japan	51	5.8	10.5	91.4
Long-Term Credit Bank	16	1.8	0.4	91.8
Other financial institutions	33	3.8	1.0	92.8
Affiliated with non-financial firm	52	6.0	1.9	94.7
Affiliation unknown	61	7.0	5.3	100.0
Total	873	100.0	100.0	–

[a]For the 873 non-financial firms listed on the Tokyo Stock Exchange (First Section) in 1982. Group affiliation was determined on the basis of shareholdings, borrowings, representation on boards of directors, and historical associations.
Source: Keizai chosa kyokai, 1983: *Keiretsu no kenkyu: daiichibu jojo kigyohen*, pp. 1–22.

2. Institutional features

It is difficult to specify in precise terms exactly what constitutes the 'main bank system' as the contracts involved are largely implicit in nature and the form of organization an intermediate one. First of all, in a main bank relation the bank and firm are commercially independent entities, unlike the relationship between the general office and divisions in an *M*-form firm. Moreover the main bank does not have any official or legal status as such. Nevertheless, there exists a general recognition among capital market participants and regulatory bodies as to which bank is 'main bank' to which firm. Japanese bankers, businessmen and officials routinely refer to the main bank system and there are even listings of main bank groupings of firms. It is fair to say that the main bank system is an integral institutional feature of the Japanese financial system, and most large firms have an identifiable main bank relation (table 1).[2]

The most basic distinguishing feature, and what provides the closest thing to an operational definition, of the main bank is that it maintains the largest

[2]Recently there has been considerable discussion in policy circles in Japan concerning the effect of financial liberalization and changes in corporate behavior on the main bank system [Kin'yu janaru (1984); Yoshitomi (1985)], but I will not explore this issue here.

Table 2
Analysis of listed Japanese firms according to rank of main bank as shareholder in 1980 and as source of borrowings in 1971.

	Breakdown of listed firms			
	Rank of main bank as shareholder, 1980		Rank of main bank as source of borrowings, 1971	
Rank	No. of firms	Relative frequency(%)	No. of firms	Relative frequency(%)
1	124	16.4	489	67.3
2	172	22.7	125	17.2
3	113	14.9	47	6.5
4	84	11.1	17	2.3
5	52	6.9	14	1.9
6	34	4.5	7	1.0
7	20	2.6	10	1.4
8	13	1.7	7	1.0
9	15	2.0	2	0.3
10 or more	131[a]	17.3	9	1.2
Total	758[b]	100.0	727[c]	100.0

[a]Includes 86 not among top twenty shareholders.
[b]Forty-four of the 809 firms examined had no borrowings in 1981, and for seven relevant information was not obtainable.
[c]Sixty-nine of the 809 firms examined had no borrowings in either or both 1980 and 1971, and for another thirteen information was not obtainable.
Sources: Compiled from Keizai chosa kyokai, 1973: *Keiretsu no kenkyu: daiichibu jojo kigyohen*; Kigyo keiretsu soran, 1981: *Kigyo keiretsu soran*.

share among private financial institutions of loans to a particular firm.[3] For firms having bank borrowings that were listed on the first section of the Tokyo Stock Exchange in 1980 the average loan share of the main bank was calculated by the author to be 25 per cent [Sheard (1983)]. For the larger listed firms the loan share tends to be lower, more typically ten to fifteen per cent.

A second important fact to note about the main bank is that it is typically a principal shareholder in the firm. Table 2 shows that for the same listed firms in 1980 the main bank had the largest or second largest shareholding in 39 per cent of cases and was among the top five shareholders in 72 per cent of cases.[4]

[3]In a small proportion of cases a government financial institution such as the Japan Development Bank or the Export–Import Bank has the largest loan share but in such cases the bank is not considered to be the firm's main bank.

[4]In 1977 concern over the excessive bank control caused the authorities to reduce the upper permissible limit on bank holdings of a firm's shares from ten to five per cent, with the banks having ten years to comply.

3. Informational role of the main bank

The cornerstone of the main bank system is the close information-sharing relationship that exists between the bank and the firm. As the 'main' bank, the bank is closely involved in the business and financial plans of the firm. In a 'good' main bank relationship, the firm will consult the bank closely when drawing up its business plans and will provide regular reports on its performance. This process of information exchange is often formalized by the main bank having a director link with the firm or through membership of a 'presidents' club' in which the bank and other affiliated firms participate.

It is possible to view the main bank system as functioning as a substitute for the kind of screening and monitoring institutions that are prevalent in other capital markets such as bond and credit-rating institutions and security analysis agencies. It is only with recent structural changes in Japan's financial system that corporate bond-rating agencies have emerged but the industry remains small in scale and limited in scope.[5]

An indication of the role of banks as capital market monitors is provided by evidence on director links: in 1985 there were 1,820 listed firms in Japan and these firms had a total of 1,721 directors who were formerly or concurrently executives of banks (about five per cent of total directorships) (Kigyo keiretsu soran, 1985, p. 55). What interests us here is the pivotal role of main banks in this bank monitoring. As table 3 indicates, about half of the listed firms that had bank borrowings in 1980 had at least one representative on their board from their main bank.

Each of the six major bank-centered industrial groupings has a regular forum at which top-level executives meet, and about 150 leading financial and industrial firms participate. Although it has no formal decision-making power as such, the presidents' club provides a further dimension to potential information exchange and coordination of decision-making. The participating firms have a common main bank relationship and significant interlocking shareholdings: in 1985, for instance, participating financial institutions supplied from 12 to 28 per cent of member firms' borrowings and from 14 to 25 per cent of participating firms' total shares were held within the group [Kigyo keiretsu soran (1985, pp. 22–23)].

The close association that the main bank has with the firm means that the bank is able to obtain inside access to the firm and its internal decision-making, allowing it to obtain information about the firm and its management which is not readily available, or available only at high cost, to the external capital market. Moreover, the main bank performs this screening and monitoring function as an 'insider' [Nakatani (1984, p. 231)], albeit one

[5]There are now five bond-rating agencies in Japan: the first appeared in 1979 as an offshoot of the Nihon keizai shimbun financial newspaper, a second was established in 1980 and there were three new entrants in 1985. But as of 1986 the total number of employees in these five agencies numbered only 138 [Arai (1986); Kurosawa (1986)].

Table 3
Analysis of outside directors of listed Japanese firms, 1980[a].

Number of directors	Breakdown of firms according to number of directors formerly or concurrently from: Outside the firm	Largest shareholder	Largest source of borrowings (main bank)	Civil service or government
1	96 (11.9)	156 (19.3)	252 (33.1)	145 (17.9)
2	102 (12.6)	90 (11.1)	89 (11.7)	48 (5.3)
3	89 (11.0)	52 (6.4)	26 (3.4)	29 (3.6)
4	95 (11.7)	27 (3.3)	5 (0.7)	20 (2.5)
5	82 (10.1)	19 (2.3)	3 (0.4)	14 (1.7)
6	67 (8.3)	24 (3.0)	–	7 (0.9)
7	48 (5.9)	18 (2.2)	–	2 (0.2)
8	43 (5.3)	13 (1.6)	–	2 (0.2)
9	36 (4.4)	10 (1.2)	–	1 (0.1)
10	28 (3.5)	5 (0.6)	–	2 (0.2)
11	14 (1.7)	6 (0.7)	–	1 (0.1)
12	8 (1.0)	3 (0.4)	–	1 (0.1)
13	6 (0.7)	2 (0.2)	–	–
14	6 (0.7)	2 (0.2)	–	–
15	4 (0.5)	–	–	–
16	3 (0.4)	–	–	–
17	2 (0.2)	–	–	–
18	1 (0.1)	–	–	–
19	2 (0.2)	1 (0.1)	–	–
None	77 (9.5)	381 (47.1)	386 (50.7)	537 (66.4)
Total	809 (100.0)	809 (100.0)	761[b] (100.0)	809 (100.0)

[a]All firms were listed on the Tokyo Stock Exchange (First Section) in 1980.
[b]Forty-three firms had no borrowings in 1980, and for five firms the largest source of borrowings could not be identified.
Source: Compiled from Kigyo keiretsu soran, 1981: *Kigyo keiretsu soran.*

that is further removed along the market-hierarchy spectrum than the general office in the *M*-form firm [Williamson (1975, ch. 8)].

There are two factors in the Japanese case that are particularly important in understanding the nature of monitoring by an agent such as the main bank. The first relates to the state of information availability. Generally speaking, standards of corporate accounting and disclosure have been poor in Japan by international standards [Ballon, Tomita and Usami (1976)]. For instance, until recently, there had been virtually no use of consolidated accounting, despite the fact that large Japanese firms are renowned for having extensive networks of subsidiaries and affiliates. Similarly, the Western system of external auditing is poorly developed in Japan, and assets are typically recorded at their historic rather than current value in corporate balance sheets, making published accounts of firms, on their own, of dubious value. In such a situation, the main bank system may have represented a way of economising on the costs of auditing corporate performance.

A second point relates to the structure of the managerial labor market in Japan. Under the 'lifetime' employment system, the managerial labor market tends to be highly internalized in Japan. Firms tend to hire personnel fresh from graduation and promote internally. The managerial labor market is both much less differentiated into professional sub-markets and less developed than in the United States for instance. At the same time, there appears to be a high firm-specific skill component in the human capital of Japanese managers; not only do managerial employees receive quite a lot of in-firm training but decision-making within the firm is orientated towards consensus and collectivism. It might be claimed that a managerial labor market of this kind will result in quite high monitoring costs for the capital market. Essentially this is because there is likely to be a higher degree of firm-specificity about the information that is relevant to the firm.

There is a further dimension to the issue that deserves mention. The discussion thus far has been in terms of the capital market attempting to obtain information about what is going on inside the firm. But there appears to be a sense in which the main bank system incorporates a voluntary disclosure mechanism on the part of managers [Diamond (1985); Verrecchia (1983)]. When serious informational asymmetries exist between security-holders and managers such as might be supposed to be so in the Japanese case, managers may seek to devise mechanisms to reduce the associated monitoring costs. This is because there is a strong chance that, depending on the nature of the managerial employment contracts, either directly or indirectly at least a part of these costs will fall on the managers themselves [Jensen and Meckling (1976) provide an extensive discussion of this issue]. Viewed in this light, the main bank system can be thought of as a cooperative monitoring/disclosure mechanism that is part of an 'organizational equilibrium' resulting from both capital and managerial market factors. This point will emerge more fully in the discussion of the main bank as a substitute for the takeover mechanism.

The main bank system seems to exemplify in a concrete way some other important aspects of monitoring that have been discussed in the literature. One is the duplication problem. The costs incurred in monitoring a particular firm are basically fixed. It makes sense therefore in terms of minimizing the total expenditure on monitoring for one, or at least a small number of, agents to be delegated the task of carrying out this monitoring [Diamond (1984)]. This is precisely what we observe in the case of the main bank system. As table 1 shows, as far as the major listed firms are concerned, a particular small subset of banks is specialized in monitoring activities.[6]

[6]The emphasis here is an analytic rather than historical one but it should be noted that the banks that are prominent as main banks are the ones with strong links to the prewar zaibatsu family conglomerates. For a more historical account see Hadley (1970).

This can be seen from the fact that more than two-thirds of the firms listed on the first section of the Tokyo Stock Exchange in 1982 had as their main bank one of seven major banks.

The sense in which the main bank represents a delegated monitor is slightly different from the sense in which Diamond (1984) uses the term. In Diamond's model, monitoring is delegated from depositors to an intermediary, whereas the main bank system can be characterized in terms of banks themselves delegating the monitoring of a particular firm to one particular bank (the main bank). That is, in Japan the main bank may be the only bank that monitors the firm, but it is not the only bank which lends to the firm.

There is also a well-known free-rider argument in the monitoring literature [Leland and Pyle (1977)]. If knowledge about the firm and its management is a public good, it may be that no agent will undertake the necessary monitoring since other agents will free ride on the results (particularly the improvements in firm value that the monitoring is ultimately aimed at providing). Leland and Pyle's (1977) solution to this problem is to have the monitoring agent buy and hold assets on the basis of its specialized information, under the assumption that outsiders cannot free ride on the agent's information merely by observing its portfolio choices.

What the main bank does seems to be consistent with the Leland and Pyle analysis. That is, the bank which does the monitoring is also the bank with the largest loan share and also holds a significant stake in the firm as a shareholder. Presumably, providing that the private cost-benefit calculation makes it profitable for the bank to undertake the monitoring then it will do so, even if some banks with small loan shares are able to free ride on this monitoring effort. Having a sufficiently large loan share may be the way in which the bank ensures that it obtains an adequate return on its monitoring outlays. In this regard, it is worth noting the free-rider problem may be mitigated somewhat by virtue of the fact that non-monitoring banks will not be able to mimic the loan portfolio of the main bank in size or even composition given that there is a strong element of bilateral negotiation involved and that loans are not marketable securities in which agents can take unilateral, anonymous positions.

It is worth asking why it is that the main bank as the monitoring agent does not supply a larger proportion or even all of the funds required by the firm. One obvious reason why it does not could be government regulation. Banks and other financial institutions in Japan are closely monitored by, and subject to the regulation and administrative guidance of, the Ministry of Finance and the Bank of Japan, and it is unlikely that these regulatory authorities would have permitted the banks to supply all of the borrowing requirements of large firms even if the banks wanted to. Indeed the Ministry of Finance placed restrictions on the size of bank loans (as a proportion of the bank's capital) in the 1970s and incorporated these in the revisions of the Banking Law in 1981.

But even in the absence of regulation there are several reasons why in general we would not expect the main bank to supply all of the firm's borrowings. The first is that although it may be economical for one bank to do the monitoring, or at least the bulk of it, that bank may not want to bear all of the risk of lending to the firm. A second point is that although we have talked about the main bank being the delegated monitor among banks as if this was a purely administrative arrangement, in point of fact the major banks to a certain extent will be competing as suppliers in the implicit market for monitoring services. A third point is that, consistent with the aim of maintaining a sound main bank relationship, the firm will want to diversify its sources of bank finance, not least of all to limit the potential monopoly power of the main bank.

4. Intervention

An aspect of main bank behavior that is closely related to the monitoring function is the role of the main bank in corporate intervention. If monitoring is the 'passive' side of the main bank's informational role in the capital market, then intervention is the 'active' part. Main bank intervention refers to the fact that the bank will often intervene in various ways and to varying degrees in the management of the firm when it is not performing adequately or is in need of some kind of restructuring. The argument here is that this function of the main bank provides an important substitute mechanism for what in effect is a 'missing' takeover market in Japan; or to put it somewhat differently the main bank system serves to internalize the market for corporate control [Manne (1965); Jensen (1983)].

Main bank intervention can take a number of forms, ranging on the one hand from cases where the main bank stipulates certain measures that it requires the firm to take in exchange for the bank's support during a period of corporate downturn to cases where the bank sends in officers to take over the management and carry out the reorganization of a firm that is on the verge of bankruptcy (or more accurately that would be bankrupt but for the actions of the main bank) on the other.

A prominent part of the business ideology surrounding the main bank system in Japan is the notion that the main bank will look after the firm should it incur financial difficulties.[7] In particular, having a sound main bank relationship is seen as providing a form of insurance against the unfavorable contingency of bankruptcy, since the main bank will tide the firm over periods of financial crisis.

[7]In Japanese, the notion is captured in the saying 'mein banku wa iza to iu toki ni mendo o miru'.

There is a considerable amount of case-study evidence which suggests that the main bank does indeed provide special assistance to its client firms. Table A.1 in the appendix documents some of the cases since the 1970s of main banks providing major packages of financial assistance to struggling firms. These assistance packages typically involve the provision of emergency finance in the first instance and then reductions or exemptions of interest payments for anything up to a three or five-year specified adjustment period.

Intervention by the main bank in such cases is often subtle in nature in that the bank will require a recovery plan to be devised and submitted to it for approval and in the course of agreeing to this plan the bank will typically require measures such as labor-force reductions and asset disposals to be implemented. The plan is usually drawn up in close consultation with the main bank, again reflecting its role in monitoring. In some cases it is no exaggeration to say that the bank devises the plan itself.

In other cases, the intervention is much more direct and dramatic. It involves the bank sending in its own executives to supervise the rationalization from within the firm or to take control of the management of the firm. Details of a number of notable cases of such intervention are provided in table A.2 in the appendix. Japanese businessmen refer to this as being placed under 'bank management'; Pascale and Rohlen (1983, p. 229), in a case study of the car-maker Toyo Kogyo, accurately describe it as a process whereby '[the bank puts] the company in a quasi-receivership status, but without any involvement from courts or lawyers'.

In the course of intervening in and managing the reorganization of the firm, a number of things are commonly observed. First, the bank may oust the president or other key managers, whose intransigence or incompetence it is that has often precipitated the crisis. The bank will overhaul the management structures and implement major asset disposals and changes to the corporate organization, extending to and often centering on the affiliate network. Third, the bank will often arrange some kind of tie-up or merger with another firm, which is commonly a firm also having this bank as its main bank. Such an arrangement will typically signal the withdrawal of the bank from direct management in the firm.

One of the curious aspects of the capital market in Japan is the virtual absence of an active external takeover market. In particular, hostile takeovers of the kind prevalent in the United States and elsewhere are almost unheard of in Japan.[8] The absence of a hostile takeover market is related closely to the nature of intercorporate shareholdings in Japan. The management of large firms in Japan have been able to insulate themselves from the external

[8] I say 'almost' because there are one or two maverick firms that have attempted takeovers in the past (e.g. Sanko Steamship and Miniature Bearings). Also in the 1970s there was a certain amount of cornering of shares by speculator-cum-investment groups for the purposes of 'greenmailing' management [see Sheard (1986a) for more details].

takeover market by arranging their shareholding structures so that a majority of their shares are held by interests 'friendly' or sympathetic to the firm. These are known as 'stable shareholders' (*antei kabunushi*) in Japan and comprise principally long-term transaction partners (including financial institutions), firms with a common main bank or 'group' affiliation, and subsidiary and affiliate firms, all of which share the common aim of insulating themselves from the external market for corporate control [Sheard (1986a) contains more details and references to the Japanese literature].

The insight to be gained from the analysis in this paper is that, together with the system of stable interlocking shareholdings (in which the main bank itself plays a pivotal role), the main bank performs a role that closely parallels in its effect the external takeover market: in particular in bringing about the displacement of ineffectual management and the reorganization of corporate assets to improve efficiency. Large firms in Japan appear to have been fairly successful in developing forms of economic organization that mitigate against the operation of a competitive external takeover market. But this does not mean, as some authors suggest, that there is no market for corporate control in Japan or that managers have complete autonomy vis-a-vis the capital market. As one example of this kind of view, consider the following quote [Shirai (1983, p. 370, p. 372)]:

> ... the ownership and management of companies in Japan is now more distinctly separate than in most other capitalist countries in the world. 'Capitalist control' ... can be said to be virtually absent in the leading private sector enterprises ... it might be said that large corporations in Japan have realized not only the separation of management from ownership, but also the establishment of a system in which management enjoys almost unrestricted power over the owners.

What characterizes the Japanese case is not that there is no market for corporate control but rather the form that the 'market' takes on in Japan. Recent developments in the literature relating to the market for corporate control allow the analysis of the main bank system (and related aspects of corporate organization such as stable shareholdings and internalized managerial labor markets) to be set in a more general conceptual framework than previously has been the case.

Traditionally, economists have cited the existence of the takeover mechanism as providing the capital market disciplining necessary to ensure that managers, who were not owners of the firm, would adopt profit maximization as the objective function of the firm. More recently, several authors have identified problems associated with takeovers as a capital market control instrument, and these appear to be germane to our understanding of the main bank system.

Williamson (1975, ch. 8) argues forcefully that the presence of informational asymmetries together with the existence of opportunism and the costliness of its detection severely limits the effectiveness of the external takeover mechanism as a capital control instrument. Williamson (1975, p. 143) poses the question of how, in a complex and uncertain world, 'is the interested stockholder (or his agent) to distinguish between bona fide and opportunistic takeover agents'.

In the traditional story, takeover agents (sometimes known as corporate raiders) serve a usual social purpose because they seek out assets that are not being managed properly and by taking over those assets, or by providing the threat of doing so, they serve to raise the efficiency of asset utilization [e.g. DiLorenzo (1981)]. The stochastic nature of, and existence of 'noise' in, economic processes makes it difficult to distinguish what part of a poor firm outcome was due to managerial factors (such as shirking, incompetence, X-inefficiency and so on) and what part to random exogenous disturbances beyond the control of management. Williamson's point is that in such a world the takeover mechanism will be open to 'abuse' by agents attempting to make profits through the strategic exploitation of this imperfect information problem.

Williamson argues that as a result of such problems the internal control and incentive apparatus of the multi-divisional firm has supplanted that of the external capital market. But the alternative to the external market need not be internal organization. Observation of the operation of the main bank system in Japan suggests that the control function of the capital market may also take on an intermediate form of economic organization.

Some authors have argued that because ensuring that the firm is managed well has a public good aspect to it there will be a free-rider problem associated with the takeover mechanism [Grossman and Hart (1980); Stiglitz (1972, p. 480)]. It is commonly observed that with the dispersion of ownership in the modern corporation individual shareholders will have little interest in monitoring the actions of the managements of particular firms [Fama (1980)]; but if individual shareholders believe the takeover agent's claim that he will be able to improve the management of the firm they will have an incentive to hang on to their shares in order to benefit from the ex post realization of the expected improvement in the value of the firm. Grossman and Hart's (1980) solution to this problem is to have the shareholders write exclusionary devices into the corporate charter. Shleifer and Vishny (1986) overcome the free-rider problem by suggesting that large shareholders will perform the monitoring and takeover function since as the largest consumers of the public good they may be induced to provide it themselves.

Stiglitz (1985, p. 140) goes further in questioning the role of the takeover mechanism as an effective instrument of capital market control and argues that 'to the extent that control is exercised, it is by banks, by lenders, and not by the owners of equity, in spite of the legal form that invests responsibility for control in the hands of the owners of equity'. These kinds of observation seem to accord with the various characteristics of the main bank as a monitoring agent and instrument of corporate intervention described in this paper and suggest that from an analytical perspective the main bank system may be less of a peculiarity to Japan than has been thought in the past.[9]

5. Risk-bearing role of the main bank

One of the curious aspects of the main bank system is that the main bank often behaves as if it were a kind of residual risk-bearer among creditors and even among security-holders as a whole. This kind of behavior, documented in more detail below, is rather difficult to rationalize in terms of conventional theory because we normally think of the shareholders or owners of the firm as being the residual risk-bearers. I suggest here that residual risk-bearing by the main bank is consistent with the role of the main bank as the delegated monitoring and intervention agent in the capital market. Specifically, I suggest that residual risk-bearing is part of an incentive structure which serves to economize on the agency costs of the delegated monitoring relationship between main and non-main banks.

The sense in which the main bank is a residual risk-bearer is as follows. When bank assistance is directed towards a struggling firm or when losses are incurred as a result of the firm's failure, the main bank commonly assumes a significantly larger burden than would be expected. As was discussed earlier, banks have provided struggling firms with financial assistance during periods of adjustment, involving large-scale interest subsidies, and this assistance has centred on the main bank (table A.1). The main bank may be the only bank providing the assistance; where the other banks provide some assistance the main bank will often give larger reductions or, what is tantamount to this, allow its loan share to increase; or the main bank may implement special assistance measures such as providing an injection of share capital or take actions which essentially amount to allowing the firm to default on some of its borrowings from the main bank.[10]

In cases of bankruptcy or major reorganization under main bank interven-

[9]The main bank has a parallel in the shape of the 'house bank' in West Germany [OECD (1986, p. 59; Cable (1985)]. Mintz and Schwartz (1985, ch. 4) have an interesting account of the nature of 'bank intervention' in the United States, and the characterization by Stiglitz (1985) of banks as a capital control mechanism could just as easily be based on observations of the main bank system. The major commercial banks in Australia appear to have a policy of not funding hostile takeover attempts where the target is a long-standing customer (*Australian*, 1987). The returns to further analysis in this area could be high.

[10]More case study evidence on these points is given in Sheard (1986b, ch. 3–4).

tion, the main bank will typically absorb a share of losses exceeding its loan share.[11] There have been some notable instances where this has occurred in recent years. In the case of the general trading company Ataka & Co., which failed in 1975, Sumitomo Bank, as the main bank, bore some 59 per cent of the company's losses, despite having a loan share of about fifteen per cent at the time of the failure.[12] Indeed, according to Kawakami (1979, p. 55), when it came to the banks having to write off their loans some banks argued to the regulatory bodies that Sumitomo, as the main bank, should bear all of the residual losses!

Another example of residual risk-bearing by the main bank has been where a firm has gone bankrupt but the main bank (or sometimes banks) have bought up the outstanding bonds of the firm. Notable instances of this practice were the bankruptcies of Sanko Steamship (1985), Eidai Sangyo (1978) and Kojin (1975). Interestingly this practice has been criticized by the Nihon keizai shinbun (Japan's financial newspaper) [NKS (21 February 1978, p. 15; 31 August 1985, p. 2)] on the grounds that it renders meaningless the risk-bearing role of investors in holding corporate bonds.

It is possible to rationalize this seemingly paradoxical behavior of the main bank in view of its role as a monitoring agent. We observe the main bank bearing a disproportionately large share of the assistance burden to firms that are in the process of undergoing adjustment. This may just reflect the 'superior' information that the bank possesses as a result of its past and current monitoring and the potential moral hazard problems associated with the transmission of this information to other banks.

Assume that a firm is performing badly in a particular period and the capital market has to decide whether to continue and possibly increase its financing towards the firm or let the firm go bankrupt or be liquidated. Assume further that the main bank incurs the costs of obtaining the necessary information to make such a judgement (such as sending one or more executives into the firm to undertake a bank audit). Although the bank may see continued financing of the firm as having positive net present value it may not want to bear all of the risk itself. The bank will then be faced with the problem of how to convince the rest of the capital market (i) that it has done a proper audit and (ii) that it is being honest and not opportunistic. In particular, there will be a concern on the part of the other banks that the main bank's assurance of good prospects is not a strategic move designed to minimize its own losses after having ascertained that the firm's prospects are anything but good. In short, by taking a disproportionately large share of the burden the main bank makes its signals credible.

At a more general level it might be claimed that there must be a sense in

[11] As hinted above, this can occur de facto in any case if the loan share of the main bank rises during the period of reorganization.

[12] See Sheard (1985, pp. 53–62) for more details of the Ataka case.

which the main bank is given the correct incentives not to shirk on its monitoring. The implicit convention in Japan that the main bank bears a disproportionately large share of any losses incurred can be viewed as part of an incentive mechanism which economizes on the agency costs of having one set of banks delegate monitoring to one bank.[13] The extra losses to the main bank represent a penalty which the main bank incurs as a result of the fact that ex post its monitoring was shown to be 'bad'. Even if the failure of the firm had nothing to do with the quality of the main bank's monitoring, given the structure of information, only the main bank will know this and consequently it will still incur the loss as a kind of bonding cost [Jensen and Meckling (1976, p. 308)]. Behavior of the kind that Sumitomo exhibited in the Ataka case can be viewed then as serving to enhance the bank's reputation as a credible monitor.

6. Conclusion

The main bank system plays an important informational role in the Japanese capital market by monitoring firms and by intervening as necessary in their management. The Japanese main bank system provides an example of a form of intermediate economic organization: the functions of corporate monitoring and control are concentrated in the hands of a specialised capital market agent, whose relationship with the firm is neither internal (as in the case of the *M*-form firm) nor external (as in the case of bond-rating agencies or corporate raiders). In effect, the main bank substitutes for the missing *external* markets for corporate control and monitoring services. Characterizing the main bank system in these terms helps to explain some seemingly paradoxical aspects of the Japanese banking system and points to the usefulness of applying recent theories of monitoring and economic organisation to the study of 'real-world' economic institutions.

Although no attempt was made to provide an historical explanation for the development and persistence of the main bank system, it was suggested that the main bank system represents an important analog in the capital market to the 'lifetime employment system' of the managerial labor market. Much attention in recent years has been focused on the Japanese management system and many authors have cited this system as a causal factor in Japanese economic growth and performance [e.g. Abegglen and Stalk (1985, ch. 2); Vogel (1979, ch .6)]. Leaving aside for the moment the contentious issue of whether there is any substance to the latter claims, this literature has paid little attention to the issue of how other institutional mechanisms in the economy facilitate the operation of the internalized managerial labor markets. The analysis in this paper suggests that there is an

[13] In this case, the main bank is the agent and the other banks are the principals.

important link between the capital and labor markets in Japan and that this is manifest in the particular kind of corporate organization that is observed. The main bank system is a concrete example of a general analytic point: that the firm is a device that connects the capital and labor markets and that in developing theory about the contractual nature of the firm the nature of the contractual arrangements operating between the capital market and labor market sides of the firm needs to be studied.

It might be tempting to conclude on the basis of the description of the industry-finance relationship in Japan that the financial-cum-managerial system is the main factor behind the successful growth and performance of the Japanese economy, as is often argued in popular writings on the Japanese economy.[14] But the analysis permits of no such conclusion. In order to say anything meaningful about the causes of Japanese economic growth and performance requires a framework that incorporates the impact of all of the possible contributing factors, including technology, factor mobility, macro-economic policy and industry policy. That is an entirely different exercise from the partial institutional analysis that has been attempted here.

[14] As one example, Roberts and Ames (1986) claim that 'the special nature of corporate ownership and control is probably the basic source of Japanese companies' strength and dominance in worldwide markets.'

Appendix

Table A.1
Examples of bank assistance for struggling firms.

Name of firm (major line of business)	Main-bank affiliation	Banks reported to be providing assistance	Nature and amount of financial assistance	Period of assistance	Source
Kojin (textiles)	DKB	DKB and others	Interest payments shelved	Period prior to bankruptcy in August 1975	NKS, 27 Aug., 1975, p.3.
Nippon Yakin Kogyo (stainless steel)	IBJ	IBJ and others	Reduction of interest rate on L–T borrowings to S–T prime rate (less in case of IBJ) yielding interest saving of 300 million – 1 billion yen per year	From April 1975 for 3 years	NKS, 9 Sept., 1978, p. 11.
Hokkaido Tanko Kisen (coal)	Mitsui	Mitsui and others	Interest payments shelved		NKS, 10 June, 1978, p. 13.
Chori (textile trading company)	Unknown	DKB, Fuji, Sanwa, Mitsui Trust	Interest payments shelved on 60 billion yen of borrowings yielding interest saving of more than 3.2 billion yen per year	Sept. 1975–1977 then for another 3 years	NKS, 15 Sept., 1977, p. 1.
Kanematsu-Gosho (general trading company)	Tokyo	Tokyo, DKB	Large-scale interest reductions on 15 billion yen of borrowings associated with electric furnace steel industry and shelving of interest payments on 20 billion yen of borrowings associated with real-estate investments and similarly for borrowings associated with apartment-house division	From 1977 for 3–5 years	NKS, 28 Apr., 1977, p. 1.
Keisei Electric Railway (passenger railways)	Mitsui	IBJ, Mitsui Trust and 7 others	Reduction of interest rate on portion of L–T borrowings to S–T prime rate (5.25%) yielding interest saving of 1–2 billion yen per year	From 1977 for three years	NKS, 24 Aug., 1977, p. 1.

Table A.1 (continued)

Name of firm (major line of business)	Main-bank affiliation	Banks reported to be providing assistance	Nature and amount of financial assistance	Period of assistance	Source
Nitto Tyre (tyres)	Mitsubishi	Mitsubishi Trust and others	Interest reductions/exemptions	From March 1977	NKS, 11 Aug., 1977, p. 11.
Daisue Construction (construction)	Sanwa	Sanwa	Interest reductions and interest payments shelved on more than 35 billion yen of borrowings on land investments transferred to subsidiary in 1977 (loans written off as bad debts by the bank in 1983 and 1984)	1977–1984	NKS, 31 May, 1984, p. 3; Asahi shinbun, 1 May 1984, p. 1; Shukan toyo keizai (No.4437), 26 Mar., 1983, p. 101.
Nippon Light Metal (aluminium)	DKB	DKB, IBJ, Asahi Life Insurance	Reduction of interest rate on L–T and S–T borrowings (50 billion yen) from quasi-prime rate to S–T prime rate yielding interest saving of 900 million yen per year	April 1978 –May 1981	NKS, 12 Aug., 1978, p. 1; 4 July, 1981, p. 6.
Nichiro Gyogyo (fishing)	Norin Chukin	Norin Chukin, Hokkaido Takushoku	Reduction of interest rate to S–T prime rate on 4.1 billion yen of borrowings (interest reductions by four other banks on 1.2 billion yen)	1981–	NKS, 31 Mar., 1981, p. 15.
Toyo Pulp (pulp/paper)	IBJ (?)	IBJ and 21 other major banks	Interest payments totalling 2.5 billion yen exempted (1981–1984); interest payments shelved (1984–)	1981–	NKS, 26 Mar., 1984, p. 1; 1 Apr., 1984, p. 5.
Mitsui Toatsu (chemicals)	Mitsui	Mitsui	Considering conversion of L–T borrowings to S–T rate		NKS, 17 Nov., 1982, p. 1.

Daito Woollen Spinning and Weaving (textiles)	Mitsui	Mitsui Trust and others	Interest reductions/exemptions planned	April 1984–	NKS, 7 Mar., 1984, p. 10.
Fuji Kosan (petroleum refining)	Tokyo	Tokyo, IBJ, LTCB, Daiwa	Reduction of interest rate from L–T (7.9%) to S–T prime rate (5.5%) (4–4.5% in Tokyo's case) on portion of L–T borrowings and *similarly on 30 billion* of L–T borrowings shifted to new company	August 1984–	NKS, 28 Apr., 1984, p. 1.
Japan Line (overseas shipping)	IBJ	IBJ, JDB, and 10 others	Interest shelved on 50 billion yen of borrowings on 11 tankers transferred to paper company; interest shelved on borrowings of overseas subsidiaries (IBJ); interest shelved/reduced on 12–16 billion yen of borrowings of new subsidiary set up to take over 4 tankers previously leased; injection of 27 billion yen share capital centring on IBJ and other financial institutions	From March 1984 for 4 years	NKS, 3 Mar., 1984, p. 8; 25 Mar., 1984, p. 4.
Sanko Steamship (overseas shipping)	Daiwa	Daiwa, Tokyo, LTCB and others	Repayments on 290 billion yen of borrowings frozen and interest rate reduced to S–T rate and similarly for 60 billion yen of subsidiaries' borrowings; 16 tankers and 70 billion yen of borrowings transferred to paper company and interest payments exempted	From 1984 for 3 years	NKS, 17 Apr., 1984, p. 16; 20 Apr., 1984, p. 9; 24 May 1984, p. 9.
Taiheiyo Kaiun (overseas shipping)	Mitsubishi	Mitsubishi and others	Repayments frozen and interest reductions/exemptions on 27 billion yen of borrowings and injection of 1 billion yen share capital under consideration	From 1984 for 3 years	NKS, 29 May, 1984, p. 9.

Abbreviations:

DKB	Daiichi Kangyo Bank	LTCB	Long-Term Credit Bank of Japan
IBJ	Industrial Bank of Japan	S–T	Short-term
JDB	Japan Development Bank	L–T	Long-term
		NKS	Nihon keizai shinbun

Table A.2
Examples of intervention by main banks.

Name of firm (major line of business)	Main-bank	Position assumed by manager(s) sent in by main bank (position in bank at the time, if known)	Rationalisation/assistance measures taken by bank	Source
Ataka & Co. (general trading company	Sumitomo	Top Advisor (Senior Managing Director) and 12 assistants (Jan. 1976) then President (June 1976)	Sumitomo split the bankrupt GTC into parts and arranged for C.Itoh to absorb the largest part (29% of sales and employees as of 1975) and as main bank absorbed the greatest share of Ataka's 497 billion yen losses (conservative estimate of 59% compared with loan share of 13% in 1975), wrote off 113.2 billion yen in 1977.	Sumitomo Ginko koshi henshu iinkai, 1979, pp. 664–681.
Toyo Kogyo (auto maker)	Sumitomo	Vice-President (Director), Advisor (former President), Director (Department Chief) and 6 other officers	Sumitomo arranged a 30 billion yen emergency finance package to meet the auto-maker's cash shortfall, carried out major internal rationalisations centring on the disposal of assets (including the Tokyo and Osaka offices) and shares, organisational changes, labour force reductions and the despatch of over 8,000 workers to the dealer network, and arranged a 25% capital tie-up with Ford	Pascale and Rohlen, 1983.
Daishowa Paper (pulp/paper)	Sumitomo	Vice-President (Director) Director (Research Officer)	Sumitomo carried out large-scale asset disposal program centring on real estate and shares, reducing the level of borrowings by 260 billion yen within two years (from 600 billion yen in early 1981), and labour-force reductions (1,000) and organisational changes including establishment of a president's office	NKS, 20 May, 1981, p. 9; 16 Dec., 1981, p. 13; 29 Mar., 1983, p. 10.

Sanoyasu Dockyard (shipbuilding)	Sumitomo	President (Executive Managing Director) Vice-President Executive Managing Director	Cost-cutting rationalisations carried out, interest reductions of 170 million yen (half year) by Sumitomo and strengthening of tie-up with Sumitomo Heavy Industries (also a shipbuilder)	NKS, 25 May, 1981; p. 8; 21 Aug., 1981, p. 9; 29 May, 1982, (evening) p. 4.
Hakodate Dockyard (shipbuilding)	Fuji	President	Internal cost-cutting and labour-force rationalisations (1,110 reduction at end of 1978), shelving of interest payments and arranging takeover by Kurujima Dockyard	Ohara shakai mondai kenkyujo, 1979, p. 109; 1983, pp. 128–129; Daiwa toshi shiryo, 1979, p. 26; NKS, 7 June, 1984, p. 9.
Japan Line (overseas shipping)	Industrial Bank of Japan (IBJ)	President (Senior Managing Director)	Major financial assistance and reorganisation	
Nihon Yakin (stainless steel	IBJ	President Senior Managing Director Auditor-Director	Spin-off of smelter (5.2 billion yen special profit), internal cost-cutting and organisational streamlining, tie-ups and assistance from Showa Denko and Nippon Steel Corporation, interest reductions	Shukan toyo keizai (No. 3984) 22 Jan., 1977, pp. 86–87; NKS, 9 Sept., 1978. p. 11.

Table A.2 (continued)

Name of firm (major line of business)	Main-bank	Position assumed by manager(s) sent in by main bank (position in bank at the time, if known)	Rationalisation/assistance measures taken by bank	Source
Ikegai Tekko (machine tools)	IBJ	President Director	Labour-force reduction (300), tightening of industrial relations, asset disposals (Kawasaki plant), interest reductions and tie-up arranged with Tsugami (another machine-tool maker)	NKS, 19 April, 1984 p. 9.
Akai Electric (audio equipment)	Mitsubishi	President Director	Internal rationalisations, asset disposals, tie-up with Mitsubishi Electric	
Yamazen (Machinery trading company)	Daiwa Fuji	Senior Executive Managing Director (Department Chief) Senior Executive Managing Director	Real estate and apartment-house division transferred to wholly-owned subsidiary with 23 billion yen of borrowings in 1977 and financial assistance	NKS, 27 Sept., 1975; Shoken (Vol. 30), 1978, p. 42.

NKS – Nihon keizai shinbun.

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