

Does Relationship Banking Matter? The Myth of the Japanese Main Bank

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The Japanese “main bank system” figures prominently in the recent literature on “relationship banking,” for by most accounts the “system” epitomizes relationship finance. Traditionally (according to the literature), every large Japanese firm had a long-term relationship with one bank that served as its “main bank.” That main bank monitored the firm, intervened in its governance through board appointments, acted as the delegated monitor for other creditors, and agreed to rescue the firm if it fell into financial distress. As Japan deregulated its financial markets in the 1980s, however, these firms abandoned their relational lender for market finance. As main banks then lost their ability to constrain the firms—as relationship banking unraveled—the firms gambled in the stock and real estate bubbles, and threw the country into recession. Using financial and governance data from 1980 through 1994, we show that none of this is true. The accounts of the Japanese main bank instead represent fables, mythical stories scholars recite because they so conveniently illustrate theories and models in vogue.

According to modern theory, banks mitigate adverse selection by screening applicants for loans, and do the same for moral hazard by monitoring borrowers. Although investors could do both themselves, to exploit scale economies they delegate the functions to banks. Because actions to which banks and borrowers would like to commit *ex ante* sometimes involve strate-

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gies from which they would prefer to defect ex post, however, these loans introduce problems of time inconsistency. To mitigate the latter, banks and borrowers may transact through long-term relationships.

To motivate this “relationship-banking” theory, scholars often turn to accounts of “the Japanese main bank system.” Every large Japanese firm has a long-term relationship with a leading bank, they recite. That bank—its “main bank”—monitors the firm, acts as delegated monitor on behalf of other creditors, through board appointments intervenes in the firm’s governance, and promises to rescue the firm should it fall into financial distress. The system contributed to Japan’s postwar growth during its heyday, the scholars continue, but exacerbated the current malaise when deregulation cut into the banks’ ability to monitor and control firms.

These accounts of the Japanese main bank system represent urban legends, no more and no less.¹ Like the oft-repeated stories about the GM-Fisher-Body merger or the QWERTY keyboard layout, they constitute fables (Spulber 2002). As such, they represent stories scholars collectively tell and retell not because the stories are true (they are not), but because scholars so badly wish they were true—because they so neatly fit theories currently in vogue.

We first outline modern banking theory and the place of the main bank within it (Section I). We then use data on Japanese banking practice to test the various claims about main banks. We first introduce our 1980–1994 data on the financial and governance arrangements at the 1,000-odd largest Japanese firms (Section II). With that data set, we ask how well it supports the conventional hypotheses about the main bank system, either during the booming 1980s or the depressed 1990s (Section III).

I. RELATIONSHIP BANKING AND THE JAPANESE MAIN BANK

A. Information Economics and Banking Theory

The economics of information figures prominently in current banking theory. According to that theory (Freixas & Rochet 1997:8), banks “screen

¹We describe other “fables” about the Japanese economy in Miwa and Ramseyer (2002a, 2002b, 2004a, forthcoming b, forthcoming c, forthcoming d). The most prominent of these is the fable of the “keiretsu,” as we note in Section IV.

the different demands for loans” to prevent adverse selection, and “monitor the projects” to forestall moral hazard. Both screening and monitoring entail costs, of course, and some of those costs can generate scale economies. To exploit those economies, small lenders lend through intermediaries, which then act as their “delegated monitors” (Diamond 1984). By depositing their money with banks, in other words, investors delegate to them the task of screening and monitoring the firms that borrow.

To monitor their borrowers, banks sometimes invest in information specific to a given borrower. Necessarily, these investments push the bank to lend through long-term relationships (Freixas & Rochet 1997:7; Mayer 1988). A bank may want to commit itself to a risky loan in order to encourage a firm to invest in a good project, for example, but fear that the firm will switch lenders once the project succeeds. A borrower may want to invest in a project long term, but fear that the bank will exploit its vulnerability at the time of renewal. The bank may want to commit itself not to exploit such a borrower, but fear that a long contractual term would encourage moral hazard—and so forth. Relationship-specific investments in information create these time-inconsistency problems, and through long-term relationships banks and firms mitigate them.

By the 1990s, this research had crystalized into the new subfield of “relationship banking.” Although to date scholars have avoided a common definition (but see Boot 2000:10), most writers use the concept to capture the case of a firm that works closely with a bank year after year. Each bank maintains ongoing relationships with a variety of debtors in these models, but each debtor borrows primarily from its relational bank.

This reliance by the firm on its relational bank generates several intriguing results. First, it gives the bank *ex post* “bargaining power” over the borrower (Rajan 1992). As Rajan and Zingales (1998:41) put it, the relational bank tries “to secure her return on investment by retaining some kind of monopoly power over the firm she finances.”

Second, the relational bank may agree implicitly to rescue the firm if it falls into financial distress. It uses its “monopoly power to charge above-market rates in normal circumstances,” explain Rajan and Zingales (1998:42; see Petersen & Rajan 1995). In return, it offers “an implicit agreement to provide below-market financing when [its] borrowers get into trouble.”

Third, the bank’s long-term “monopoly” fogs the firm’s price signals. The “relationship-banking proximity” can create a “potential lack of toughness on the banks’ part in enforcing credit contracts,” writes Boot (2000:16).

Potentially, this flexibility *ex post* can reduce the firm's incentive to maximize profits *ex ante*.

B. Japanese Main Banks

1. Introduction

Accounts of Japanese "main banks" figure prominently in relationship-banking studies. Scholars such as Mayer (1988) and Rajan (1992) use the Japanese example to motivate their classic accounts of relational banking theory, and well they might, for the stylized main bank fits the theory to a tee. According to Patrick (1994:359), the main bank is nothing less than "the epitome of relationship banking." As "a long-term relationship between a firm and a particular bank from which the firm obtains its largest share of borrowings," write Aoki and his co-authors, it captures the essence of "relational contracting between banks and firms."²

2. The Contours of the System

Consider the hypothesized content of the Japanese "main bank system." First, most large firms have a main bank. As Flath (2000:259) put it, "[a]lmost every large corporation in Japan maintains a special relationship with some particular bank, the company's 'main bank.'" Scholars may dispute how many small firms have a main bank, but virtually none contests the claim that most big firms have one (Patrick 1994:387).

Second, firms and banks arrange these main bank ties implicitly. Even according to the most committed of main bank scholars, they never make them explicitly. Scholars do not claim banks negotiate the contracts but leave them incompletely specified. Such contracts are still "explicit," and Japanese courts regularly enforce vague documents. Neither do they claim banks negotiate the contracts but leave them unwritten. Oral contracts are "explicit" as well, and Japanese courts regularly enforce them, too. Instead, scholars contend that banks and firms leave the arrangements to mutually unstated assumptions.

Third, the main bank serves as the firm's principal lender and a major shareholder and through those ties acquires information. In the process, as Milhaupt and West (2004:13) put it, it becomes the "central repository of information on the borrower." The "close information-sharing relationship

²Aoki et al. (1994:3); see Aoki and Dinc (2000:19); Peek and Rosengren (2003:3).

that exists between the bank and the firm,” adds Sheard (1989:403), constitutes the “cornerstone” of the system.

Fourth, the main bank uses that information to help govern the firm. “The main bank system is central to the way in which corporate oversight is exercised in the Japanese capital market,” explain Aoki et al. (1994:4). Indeed, writes Flath (2000:288), “main banks could be counted upon to closely monitor the investment choices of their client firms.” Typically, the main bank exercises this governance role through posts on the board. As Aoki et al. (1994:15) put it, the “main bank often has its managers sit as directors or auditors on the board of client firms.”³

Fifth, the main bank monitors on behalf of all creditors. Other banks delegate the job of monitoring the debtor to the main bank, in other words, and thereby skirt the duplicative monitoring that would otherwise ensue (Aoki 2000:16; Hoshi 1998:861; Peek & Rosengren 2003:3). Because each money-center bank serves as main bank to a group of firms it monitors, no one bank incurs excessive monitoring costs. Because “reputational concerns” cause each to stay informed about those firms, this reciprocally delegated monitoring system effectively “subjects firms to investor control” (Rajan 1996:1364).

Sixth, the main bank agrees to rescue its financially constrained debtors. By Hoshi and Kashyap’s (2001:5) account, it “step[s] up and organize[s] a workout” when “firms [run] into financial difficulty.” It launches “rescue operations [that] prevent the premature liquidation of temporarily depressed, but potentially productive, firms,” contends Aoki.⁴ Like an idealized textbook bankruptcy regime, it first distinguishes financial constraints from bad economic fundamentals. It then rescues and restructures those firms that are economically healthy but financially constrained.

3. The Main Bank and the Current Malaise

All this makes for a theoretically intriguing story but an elusive empirical quarry, for (given the “implicit” character of the arrangement) no bank, firm, or scholar has ever seen a “main bank” contract. Fortunately for the

³To similar effect, for example, Flath (2000:259, 279); Sheard (1996:181); Kester (1993:70). Given that main bank scholars focus on board appointments as the mechanism by which the bank intervenes, in this article we do not test whether other intervention mechanisms exist.

⁴(2001:86). To similar effect, for example, Milhaupt (2001:2086–88); Sheard (1989:407); Gilson (1998:210–11); Morck and Nakamura (1999a, 1999b).

empiricist, the 1990s depression introduces a more clearly testable hypothesis. According to main bank theorists, the firms that flirted with insolvency in the 1990s were those that had expanded most aggressively in the late 1980s. They had expanded during the late 1980s because the earlier financial deregulation had cut them loose from their main banks. Freed from the monitoring that had held them in check, they gambled badly in the late 1980s and suffered in the 1990s.

The deregulation matters to this account because of its effect on competition, and the competition matters because of its effect on relational stability. According to leading relationship-banking scholars, firms and banks can more effectively maintain stable long-term relationships when financial markets are less competitive. The “only way to promote relationships,” suggest Petersen and Rajan (1995:442), may be “by restricting credit-market competition.” “Since the theoretic models rely on future rents or quasi-rents to maintain incentive compatibility,” explain Gorton and Winton (forthcoming), “competition should . . . undermine relationships.”

According to the conventional wisdom, the Japanese government promoted relationship banking by restricting financial competition. Under the postwar regime, reasons Rajan (1996:1364), the “restrictions on bond market financing forced firms to stay in long-term relationships” with banks. In turn, the resulting stability gave those “banks both the incentive to subsidize them in times of distress and the ability to recoup the subsidy in the long run.”

When the government loosened the bond market restrictions in the 1980s, firms that could tap market finance did so and jettisoned their main banks. Alas, given the way investors had for decades relied on the main bank for monitoring, Japan lacked the monitoring mechanisms in place in other advanced economies. Effectively, the earlier main bank system had “obviate[d] a need” for “more arm’s length market-oriented” governance mechanisms to develop (Aoki et al. 1994:5; see Flath 2000:288).

Once firms found that their main banks could no longer police them, scholars continue, they gambled. Formerly well-run firms played the real estate and stock markets and fed speculative bubbles. When prices collapsed at the end of the decade, they found themselves without recourse. As their best clients abandoned them for bonds during the 1980s boom, moreover, the banks began to court firms they had earlier spurned. With new-found access to cash, these mediocre firms found they could play the bubble too (e.g., Dinc & McGuire 2002:7; Hoshi & Kashyap 1999:4). Unfortunately, the

“new lines of business . . . turned out badly” (Hoshi & Kashyap 1999:4; see Gao 2001:186). As prices fell, these firms failed as well.⁵

4. Applying Relational Banking Theory to Japan

At a logical level, this application of relationship-banking theory to the Japanese “main bank system” presents a puzzle. Crucial to the theory, after all, is the “monopoly power” the bank acquires over the borrower. As a result, the theory necessarily applies only to the least competitive financial markets, and within those markets only to the smaller firms. Fundamentally, the logic behind relationship-banking theory simply does not apply to big firms in competitive capital markets.

Yet large Japanese firms raise their capital in precisely such competitive markets, and have for decades. Elsewhere (Miwa & Ramseyer 2004a), we explore how competitive Japanese financial markets were during the purportedly highly regulated 1960s and 1970s. Consistently, we find that the regulations did not bind. Within these markets, large firms diversified their loans among multiple banks and borrowed at market rates (Miwa & Ramseyer 2002b). They took loans from insurance companies and regularly borrowed large sums from business partners as trade credit. The government never tried to limit stock issues, and firms raised roughly similar amounts through equity as U.S. firms.

As a result, the logic behind relationship-banking theory simply does not apply to the big Japanese firms. In truth, relationship-banking theorists themselves never claimed it applied to large firms anyway. In Petersen and Rajan’s (1995) classic formulation, relationship banking in the United States characterizes only small-firm finance. Bernanke (1983) uses an earlier variant of the theory to study the impact of bank failures on small firms in the 1930s. Degryse and Van Cayseele (2000) apply it to small firms in Europe, while Berger and Udell (1995) and Blackwell and Winters (1997) again apply it to small firms in the United States.

⁵The tale appears in a wide range of accounts, for example, Aoki (1994:137, 2000:91); Gilson (1998:216–17); Kester (1992:39); Miyajima (1998). Rajan and Zingales (1998) apply the logic to East Asia more generally, and Kaminsky and Reinhart (1999) and Hellman et al. (2000) use a similar logic to argue that financial liberalization explains the incidence of financial crises.

II. TESTING THE TALE

A. Testable Implications

Consider whether these accounts of the “Japanese main bank system” fit the data. For purposes of this article, we follow scholarly custom and define a firm’s main bank as the bank that lends the firm the largest share of its debt.⁶ The chief rival definition uses one of the “keiretsu” rosters to tie firms to banks.⁷ We reject this alternative approach because the rosters capture nothing of substance.⁸ Given our definition of the main bank as the principal lender, we do not test the proposition that all firms have a main bank. From the main bank literature, we instead extract the following testable implications.

1. Governance by Main Banks

If banks dominate corporate governance through board appointments, then most firms should include several representatives from their main bank on the board; if banks focus on their more troubled clients, then declines in firm performance should lead to increases in the number of main bank representatives on a board. Given that main bank scholars focus on board appointments in their discussions of bank intervention, we do not ask whether banks intervene in governance through other mechanisms.

2. Delegation of Monitoring

If a firm’s secondary lenders delegate their monitoring to the firm’s main bank, then banker-directors overwhelmingly should be affiliated with the main bank rather than with other banks.

3. Rescues by Main Banks

If a main bank implicitly agrees to rescue troubled firms, then a decline in performance should lead to (1) a decrease in a firm’s inclination to change

⁶More precisely, a firm’s main bank is the institution with the greatest amount of loans outstanding at the firm. Inter alia, this approach tracks Campbell and Hamao (1994), Kang and Stulz (2000), and Morck et al. (2000).

⁷For example, Weinstein and Yafeh (1998); Horiuchi et al. (1988); Morck and Nakamura (1999a); McGuire (2003).

⁸As we explain at length in Miwa and Ramseyer (2002a, 2002b, forthcoming). Note as well that the different rosters capture quite different populations of firms.

its main bank affiliation, and (2) an increase in the fraction of a firm's debt borrowed from the main bank.

4. Deregulation and the Depression

If deregulation-induced disintermediation caused economic decline by reducing bank monitoring, then (1) those firms that most sharply reduced their dependence on bank debt should have grown most rapidly in the booming late 1980s, and (2) those firms that grew most rapidly should then have earned the lowest profits in the depressed 1990s.

B. Data and Variables

Because observers attribute the main bank phenomenon only to the largest Japanese firms, we examine the nonbank firms listed on Section 1 of the Tokyo Stock Exchange (TSE). These are the biggest of the listed firms. We collect financial data from 1980 to 1994, and board composition data in 1980, 1985, 1990, and 1995. We take our basic financial data from the Nikkei NEEDS and QUICK databases. From the *Kabushiki toshi shueki ritsu*, we add shareholder returns, and from the *Kigyo keiretsu soran* gather information on board composition.⁹ With this data, we construct the following variables.

1. Board Composition Variables¹⁰

As of 1980, 1985, 1990, and 1995:¹¹

- PAST BANKERS: The number of directors on the board with a past career at a bank.

⁹Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyu jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyu jo, updated); Toyo keizai, ed., *Kigyo keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

¹⁰For this and other director variables, the data cover those directors who, after serving in management elsewhere, are named to the board within three to four years of joining a given firm. The numbers include statutory auditors (*kansayaku*), on the grounds that Japanese discussions of *yakuin* (colloquially translated as "directors") typically include the *kansayaku*.

¹¹That is, in most cases, the directors chosen at the first shareholders' general meeting after the 1980, 1985, 1990, and 1995 fiscal years. Because most firms hold their meetings in June and have an April–March fiscal year, the 1985 directors would be those selected in June 1986, after the end of fiscal 1985 (April 1985–March 1986).

- **CONCURRENT BANKERS:** The number of directors on the board with a concurrent position at a bank.
- **PAST MAIN BANKERS:** The number of directors on the board with a past career at the firm's main bank.
- **CONCURRENT MAIN BANKERS:** The number of directors on the board with a concurrent position at the firm's main bank.
- **PAST BANKER INCREASE:** The increase in the number of directors on the board with a past career at a bank, from 1980 to 1985, from 1985 to 1990, and from 1990 to 1995.
- **CONCURRENT BANKER INCREASE:** The increase in the number of directors on the board with a concurrent position at a bank, from 1980 to 1985, from 1985 to 1990, and from 1990 to 1995.
- **TOTAL BANKER INCREASE:** The increase in the number of directors on the board with a past career or concurrent position at a bank, from 1980 to 1985, from 1985 to 1990, and from 1990 to 1995.

We include summary statistics for these variables in Table 1.

2. Control Variables

Additionally, we construct the following control variables: the total number of directors on a board; the total annual shareholder returns on investment (annual rate of appreciation in stock price plus dividends received) for 1980–1985, 1985–1990, and 1990–1995 (ROI); the ratio of a firm's operating income (#95 of the Nikkei NEEDS database) to total assets (#89) for each year, averaged over 1980–1985, 1986–1990, and 1990–1994 (PROFITABILITY); a dummy variable equal to 1 if a firm's PROFITABILITY was positive, 0 otherwise, for 1980–1985, 1986–1990, and 1990–1994 (POSITIVE PROFITS); the average total assets of a firm (#89) over 1980–1985, 1986–1990, and 1990–1994 in million yen; the average ratio of a firm's tangible assets (#21) to total assets (#89) over 1980–1985, 1986–1990, and 1990–1994; the average ratio of a firm's total liabilities (#77) to total assets (#89) over 1980–1985, 1986–1990, and 1990–1994 (LEVERAGE); the average total of a firm's bank loans over 1980–1985, 1986–1990, and 1990–1994 in million yen; the increase (as a fraction) of a firm's bank loans during 1980–1985, 1986–1990, and 1990–1994 (TOTAL BANK LOAN INCREASE); and the mean fraction of a firm's bank loans from its main bank for 1980–1985, 1986–1990, and 1990–1994 (MB LOAN FRACTION).

Table 1: Selected Summary Statistics

	<i>N</i>	<i>Min.</i>	<i>Mean</i>	<i>Max.</i>
<i>A. Board Composition</i>				
Past Bankers				
1980	1,007	0	1.02	12
1985	1,029	0	1.06	19
1990	1,134	0	1.06	20
1995	1,197	0	1.09	17
Concurrent Bankers				
1980	1,007	0	0.25	5
1985	1,029	0	0.22	6
1990	1,134	0	0.21	5
1995	1,197	0	0.21	5
Past Main Bankers				
1980	1,007	0	0.56	10
1985	1,029	0	0.62	15
1990	1,134	0	0.60	18
1995	1,197	0	0.60	17
Concurrent Main Bankers				
1980	1,007	0	0.08	3
1985	1,029	0	0.06	6
1990	1,134	0	0.05	4
1995	1,197	0	0.05	3
Board Size				
1980	1,007	7	18.24	53
1985	1,029	6	19.49	54
1990	1,134	6	21.16	59
1995	1,197	7	21.26	60
<i>B. Selected Other Variables</i>				
Profitability				
1980–85	1,163	-0.07	0.07	0.99
1986–90	1,210	-0.34	0.05	0.45
1990–94	1,223	-0.13	0.04	0.37
Total Assets				
1980–85	1,163	1,250	163,000	7,520,000
1986–90	1,210	2,060	247,000	10,900,000
1990–94	1,223	3,180	327,000	11,700,000
Leverage				
1980–85	1,163	0.09	0.71	1.83
1986–90	1,210	0.09	0.65	2.16
1990–94	1,223	0.09	0.61	2.21
MB Loan Fraction				
1980–85	988	0.09	0.29	1
1986–90	1,030	0.06	0.33	1
1990–94	1,044	0	0.33	1

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran* [*Firm Keiretsu Overview*] (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu* [*Rates of Return on Common Stocks*] (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran* [*Firm Keiretsu Overview*] (Tokyo: Toyo keizai, as updated).

3. Industry Dummies

We add dummy variables for affiliation in the construction (113 firms), trade (164), service and finance (78) (but excluding banks), transportation (101) (including utilities and real estate), light industry (150), chemical (170), machinery (324), and metals (126) industries.

III. THE RESULTS

A. *Monitoring by Main Banks*

1. Introduction

According to the conventional accounts, main banks dominate the firms for which they serve as main bank by posting their officers to the firms' boards. In fact, they almost never do so. For each of the four years on which we have board composition data (1980, 1985, 1990, 1995), 92 to 96 percent of the firms had *no* main bank officer on their board (Table 2).

Fundamentally, scholars and journalists confuse bank officers with retired bank officers. If a bank wanted to use board representation to monitor, it would not rely on someone who had quit the bank, had no plans to return to the bank, and depended instead on the firm for his or her future livelihood. Notions of "Confucian loyalty" do not reach that far in the world of modern finance, and the banks themselves do not locate future board posts for their officers once they have retired. Instead, the bank would send a relatively young executive on the bank payroll who forfeited his or her bank career if the executive proved disloyal.

Yet to the extent firms name anyone from the banking sector to the board, they name *retired* bankers. During our four years, 53 to 56 percent of the firms had a retired bank officer on their board, and 38 to 40 percent had a retired officer from their main bank. Even so, the firms do not name many retired bankers. The firms had a mean of 1.1 retired bank officers on their boards. They had only 0.2 to 0.3 directors serving at a bank concurrently.

2. The Kaplan and Minton Hypothesis

a. Introduction. Why do the firms that do name bankers to the board name them? After all, the banks could—but do not—negotiate a contractual right to name board members as a condition of their loans. To our knowl-

Table 2: Bankers and Retired Bankers on Corporate Boards

	Main Bank				Any Bank			
	1980	1985	1990	1995	1980	1985	1990	1995
<i>Mean Number of Directors per Firm Holding</i>								
Conc. bank apps.	0.078	0.059	0.052	0.048	0.254	0.216	0.211	0.210
Past bank apps.	0.562	0.619	0.598	0.599	1.021	1.060	1.060	1.087
<i>Percentage of Firms with No Directors Holding</i>								
Conc. bank apps.	0.927	0.949	0.956	0.954	0.820	0.846	0.854	0.851
Past bank apps.	0.617	0.591	0.618	0.623	0.459	0.466	0.470	0.467

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran* [*Firm Keiretsu Overview*] (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsū* [*Rates of Return on Common Stocks*] (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran* [*Firm Keiretsu Overview*] (Tokyo: Toyo keizai, as updated).

edge, the banks do not demand board representation even implicitly. Yet half the firms appoint no bankers at all, those that do appoint bankers appoint only ones with no incentive to stay loyal to the bank, and even they appoint too few to let them “dominate” governance. Why do the firms that do name bankers do so?

According to the now-classic Kaplan and Minton (1994) study, bankers and ex-bankers appear on Japanese boards because banks use them to monitor and control declining borrowers. Banks somehow place their officers and retired officers on a borrower’s board when the borrower falls into distress. Once there, these bankers then represent creditor interests and pressure the distressed firm to replace its CEO.

Kaplan and Minton assemble board composition and financial data on the 119 largest TSE-listed firms from 1980 to 1988. They then use logit regressions on the panel data to estimate the likelihood that a firm will appoint a new banker-director. A firm is more likely to do so, they find: (1) if it earned low stock returns the previous year (similarly, Morck & Nakamura 1999a), or (2) if it had a pretax loss (a dichotomous variable) that year. They locate no evidence that a firm’s pretax income (as a continuous variable) predicts banker appointments.

b. The Puzzle. These are striking results. Rational shareholders would not radically change their governance structure after either a one-year stock return drop or a one-year accounting loss. Neither would a rational creditor radically change its monitoring strategy. Instead, rational shareholders (as principals) and managers (as agents) would have tried to structure their relationship *ex ante* to align the managers’ incentives with shareholder preferences.

Granted, shareholders will never align their managers’ incentives perfectly. If they cannot observe managerial effort or ability, they may then sometimes choose to reward or punish their managers after the fact. Yet if they do have access to information about either effort or ability, they will use that information rather than outcome measures. When forced nonetheless to rely on outcome, they will choose measures with as little noise as possible.

For several reasons, most Japanese firms have both (1) relatively reliable information about effort and ability, and (2) less noisy indices of outcome. Most Japanese firms pick most executives through internal tournaments rather than recruit them on the lateral market. Necessarily, they will usually have elaborate information about the ability and work habits of their senior managers.

Japanese firms will also have access to less noisy indices of performance than either shareholder returns or pretax losses. Returns fluctuate widely, both by year and by industry. Pretax losses similarly include noise, for by their nature losses are transitory. A “firm has an abandonment put option to discontinue the loss-making . . . operation and recoup the book value of the firm’s assets,” explains Kothari (2001:132–33). “So, only firms expecting to improve will continue operations, which means that observed losses would be temporary.”

3. An Alternative Explanation

a. The Exercise. To examine the Kaplan-Minton hypothesis more closely, we explore these issues from a slightly different vantage. First, where they use data on the 119 largest TSE firms, we study all Section 1 firms (the largest 900–1,000 firms). Second, where they end their study in 1988, we extend it through 1994. This lets us study purported bank monitoring in both good times and bad.

Third, where Kaplan and Minton group retired bank officers with those holding concurrent bank appointments, we disentangle the two. The two groups face fundamentally different incentives: retired bankers will never again work at the bank, while concurrent bankers have careers that hinge on their loyalty to it. If banks put people on boards to intervene on their behalf, they ought primarily to use current officers rather than those who have quit.

Fourth, where Kaplan and Minton use a panel data set, we use semi-decanal averages. Although this forces us to regress board changes on performance in the same period, it lets us ask whether any apparent governance shift is more than temporary. Simultaneously, it lets us ask whether those governance shifts that are long term reflect long-term performance patterns.

Fifth, where Kaplan and Minton use a binary variable equal to 1 if a firm appoints *any new* banker-director (analogously, Morck & Nakamura 1999a), we use a continuous variable that reflects the *net change* in banker representation on the board. This lets us capture shifts in the magnitude of the banking industry’s representation on the board, and lets us focus on those banker appointments that genuinely alter bank representation. As Kaplan and Minton (1994:233) note, 45 percent of the new bankers merely replace other bankers.

Sixth, where Kaplan and Minton (1994:228) base their accounting measures on “current or pre-tax income,” we use “operating income.” This

is not a trivial distinction. For the typical firm, operating income (which is also before taxes) will equal its revenues less costs of goods sold, direct selling expenses, advertising costs, and R&D. To derive its “pretax income,” it will make a variety of additional discretionary adjustments both in nonoperating income and expenses and in extraordinary gains and losses.

Because of this discretionary element to the calculation of pretax income, pretax income typically shows a much looser association to stock returns than does operating income. Obinata (2003:12–14), for instance, tests the association between stock prices and various accounting measures in Japan. As logic would suggest, he finds substantially greater association between rates of return on stock and operating income than between rates of return and pretax income.

Last, where Kaplan and Minton use only year dummies as additional explanatory variables, we add further controls: the size of the board, the firm’s total assets, its leverage, the ratio of its tangible assets to total assets, the increase in its bank loans, the fraction of its loans it borrows from its main bank, and industry dummies.

For our dependent variable, we use the change in the number of past, concurrent, and total bankers on the board over each of our three periods: PAST BANKER INCREASE, CONCURRENT BANKER INCREASE, and TOTAL BANKER INCREASE over 1980–1985, 1985–1990, and 1990–1995. We focus on the two right-hand variables closest to those that Kaplan and Minton find significant—a firm’s stock returns (ROI) and a dummy variable equal to 1 if a firm’s profitability (operating income/total assets) is positive (POSITIVE PROFITS)—and add PROFITABILITY for reference. To study whether banks respond quickly or more deliberately, we alternately regress our dependent variable on (1) the independent variables for the same half-decade and (2) on those variables for the preceding half-decade.

Readers may note that a firm’s stock market performance is plausibly endogenous to the firm’s expected board appointments.¹² That endogeneity, however, is not unique to our specification. Instead, it is basic to the Kaplan and Minton study that we explore here.

We report our coefficients and *t* statistics in Table 4. To conserve space, we report them only for our key performance variables.¹³ We use OLS rather

¹²See various discussions in, for example, Miwa and Ramseyer (forthcoming d) and Eisenberg et al. (1998).

¹³The coefficients and *t* statistics for the control variables are available for the first panel in Miwa and Ramseyer (2004b).

Table 3: Change in Bank Representation on Boards, by Profitability Quartile

	Total Firms	% w/ Banker Decrease	% w/ Banker Increase	% w/ None at Outset
<i>1. 1980–85</i>				
Very low	265	9.1	4.9	82.4
Low	257	8.2	6.2	76.7
High	255	4.3	5.9	82.1
Very high	181	7.2	2.8	87.1
<i>2. 1985–90</i>				
Very low	290	5.9	4.8	86.2
Low	271	4.1	5.5	80.4
High	268	4.9	6.3	85.8
Very high	201	5.0	4.0	86.6
<i>3. 1990–95</i>				
Very low	299	5.4	9.0	84.3
Low	299	5.4	5.0	83.3
High	289	5.2	5.9	86.9
Very high	247	5.3	5.3	87.9

NOTE: Firms are partitioned by quartiles on the basis of PROFITABILITY. The sizes are uneven because not all firms with accounting data also have board composition data. Banker refers to CONCURRENT BANKER; data on PAST BANKER changes are available in Miwa and Ramseyer (2004b). The table gives the total number of firms in each quartile, the percentage of firms with a decrease or increase in the number of CONCURRENT BANKERS, and the percentage of firms with no CONCURRENT BANKERS at the beginning of the period.

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

than Poisson both because our dependent variable can take negative values, and because of the stringent requirements relating to the mean and variance of any data used with Poisson.¹⁴

b. Our Results—Summary Measures. At least by the summary statistics of Table 3, the data show little evidence that banks appoint bankers to the boards of firms that fall into distress. During all periods, most firms—whether profitable or unprofitable—choose not to change the number of

¹⁴See Greene (1997:937). For reference, we include the Poisson equivalents in Miwa and Ramseyer (2004b:App. A-2).

Table 4: Net Increase in Banker Appointments to Boards (OLS)

	80–85		86–90		90–94
<i>I. Using PAST BANKER INCREASE as Dependent Variable</i>					
A. Same period independent variables					
ROI	-0.006 (1.89)		-0.001 (0.22)		-0.001 (0.31)
Positive Prof	0.002 (0.01)		0.076 (0.44)		0.110 (0.84)
Profitability		-0.253 (0.64)		1.120 (1.33)	-0.395 (0.45)
B. Prior period independent variables					
ROI			-0.006 (1.68)		0.002 (0.46)
Positive Prof			0.048 (0.12)		0.116 (0.86)
Profitability				-0.885 (1.15)	0.073 (0.09)
<i>II. Using CONCURRENT BANKER INCREASE as Dependent Variable</i>					
A. Same period independent variables					
ROI	0.004 (2.06)		0.002 (1.19)		0.002 (1.08)
Positive Prof	-0.349 (2.19)		0.110 (1.44)		-0.143 (2.04)
Profitability		-0.226 (0.77)		0.703 (1.65)	-1.202 (2.12)
B. Prior period independent variables					
ROI			-0.002 (1.52)		0.000 (0.07)
Positive Prof			0.289 (1.24)		-0.074 (1.39)
Profitability				0.461 (1.07)	-0.956 (1.96)

bankers on their boards. Although some firms do increase the number of bankers, about the same number reduce them. What is more—and contrary to the bank-monitoring hypothesis—the firms that increase their bankers are not disproportionately underperformers. Instead, profitable firms sometimes increase their banker directors, too. Whether the least profitable firms appoint more or fewer bankers seems to vary both by the period involved and by whether we examine retired or concurrent bankers. In all periods and for both categories of bankers, however, most firms leave the number of banker directors unchanged.

Table 4: Continued

	80-85	86-90	90-94
<i>III. Using TOTAL BANKER INCREASE as Dependent Variable</i>			
A. Same period independent variables			
ROI	-0.003 (0.82)	0.001 (0.39)	0.001 (0.12)
Positive Prof	-0.347 (1.25)	0.186 (1.02)	-0.034 (0.26)
Profitability	-0.479 (1.05)	1.823 (1.88)	-1.597 (1.64)
B. Prior period independent variables			
ROI		0.004 (0.91)	0.002 (0.48)
Positive Prof		0.337 (0.83)	0.042 (0.30)
Profitability		-0.424 (0.72)	-0.883 (0.93)

NOTE: All regressions include control variables (board size, total assets, leverage, tangible assets/total assets, total bank loan increase, and main bank loan fraction), industry dummies, and a constant term. In each case, we give the coefficient, followed by the absolute value of the *t* statistic (calculated using OLS with robust standard errors) in the parenthesis below.

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK johō, K.K., NEEDS (Tokyo, Nikkei QUICK johō, as updated); Nikkei QUICK johō, K.K., QUICK (Tokyo, Nikkei QUICK johō, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

c. Regression Results. Whether the Kaplan-Minton effect appears in the regressions depends heavily on the specifications. First, the regressions involving retired banker appointments consistently generate insignificant coefficients on the performance variables (Table 4, Panel I). This holds true whether we use same-period (Panel I.A) or prior-period (I.B) independent variables. It also holds true whether we use the performance indices closest to those in Kaplan and Minton (ROI and POSITIVE PROFITS) or simple PROFITABILITY. Given that firms appoint many more retired bankers than concurrent bankers, the regressions involving all bankers (whether retired or concurrent) yield similarly insignificant results (Panel III).

Second, the regressions involving concurrent banker appointments are haphazard (Panel II). On the one hand, firms do seem to appoint more concurrent bankers when accounting profitability falls, at least in the first and last periods. On the other, however, in at least one of the periods they appoint more concurrent bankers when stock market performance rises—exactly the opposite of what Kaplan and Minton find.

Rather than advance a “spin” on why concurrent banker appointments would fall with accounting profitability but rise with stock market performance, we suggest that the results are just haphazard. At root, very few firms appoint directors with concurrent bank posts. Of all our firms, 82–86 percent had no such directors (Table 2), and even most loss firms had none. Of the 14 loss firms in 1980–1984, 11 had no concurrent banker-directors; of the 48 in 1990–1994, 41 had none.¹⁵

Kaplan and Minton’s own result hinges on very small numbers. In their panel data set, they included 933 firm-years. Of those observations, 8.8 percent involved negative earnings (82 firm-years), and 7.5 percent involved a new banker appointment (70 firm years). Kaplan and Minton calculate that the odds of appointing a banker increased at the loss firms from 7.5 percent for the sample at large by an additional 12.9 percentage points.¹⁶ Apparently, the firms subject to the 82 loss firm-years appointed about 17 bankers. Absent the extra 12.9 percent, they would have appointed six. During the nine years Kaplan and Minton studied (and given average director tenure of about eight years), their 119 firms would have appointed over 2,000 directors. Their loss-based evidence for bank monitoring, however, lies in the 11 extra bankers appointed during those nine years.

d. Stock Measures Rather Than Flow. Might the reason underperforming firms do not increase their banker-directors be that they already have plenty? Might the right measure of bank intervention, in other words, be not the “flow” of new directors but the “stock”?

Even the lower-performing firms have relatively few banker-directors. More basically, most firms have no directors concurrently holding a bank position. Whether profitable or not, 80–90 percent of the firms have none. Even retired bankers do not dominate the boards: the mean firm has about one retired director; 35–60 percent have none.

¹⁵To replicate their study more closely, we tried restricting our sample to the largest 100 firms. We abandoned this effort, though, when we found that *none* of the 100 biggest firms had negative earnings for the first (1980–1984) five-year period. In the second period, only one did, and in the third only three.

¹⁶Morck and Nakamura (1999a:324) obtain what are apparently even smaller effects: a fall in performance from the industry median to the lowest quartile raises the probability of a banker appointment from 6.3 percent to 6.7 percent, and a fall to the lowest decile raises it to 6.8 percent.

To explore these issues further, we regress the total number of past and concurrent banker-directors on selected independent variables (Table 5). As our dependent variable, we use the number of banker-directors at the beginning and end of each half decade, and as independent variables use the mean figures for the period.¹⁷ In the first column of Table 5, for example, we regress PAST BANKER for 1980 on the 1980–1984 independent variables, and in the second column regress 1985 PAST BANKER on the same independent variables. To measure firm performance, we again use POSITIVE PROFITS, ROI, and PROFITABILITY.

We find the results haphazard enough to raise doubts about any “stock” version of the bank-intervention hypothesis. First, the *concurrent* bank officers are at the better-performing firms. Basic principal-agent theory suggests that if banks used board appointments to intervene in a firm, they would use concurrent rather than retired officers. Yet Table 5, Panel II.A indicates that the concurrent bank officers are not at the loss firms. Instead—and directly contrary to the literature—they serve at the better-performing firms. As with the results on concurrent banker appointments in Table 4, we do not suggest either that firms deliberately appoint bankers when their performance improves, or that bankers necessarily raise firm performance (Miwa & Ramseyer 2005). Instead, we suspect the phenomenon merely reflects the very small number of concurrent bankers involved.

The worse-performing firms do seem to have more *retired* bankers on their boards. In the early 1980s, the number of retired bankers is negatively associated with stock-market ROI, and in the late 1980s and early 1990s with accounting PROFITABILITY (the coefficients on POSITIVE PROFITS are insignificant in all regressions). Yet here, too, the magnitude of the effect is modest. Fundamentally, the coefficients suggest that although firms may consider performance in deciding whom to appoint to the board, it is only one factor among several—and not the most important at that.

Instead, unreported coefficients to the control variables used in the Table 5 regressions suggest a more mundane logic to board appointments: firms appoint retired bankers when they think they might benefit from their financial expertise. First, firms are more likely to appoint bankers if they are in the financial services industry: in the early 1980s, financial firms appointed 0.4 more retired bankers than those in the metals industry, and

¹⁷As in Table 4, we use OLS rather than Poisson because of the stringent requirements relating to the mean and variance of the data for use of the latter. See Greene (1997:937). However, for reference, we include the Poisson results in Miwa and Ramseyer (2004b).

Table 5: Total Stock of Bankers on Boards (OLS)

	<i>Independent Variables from 80–85</i>		<i>Independent Variables from 86–90</i>		<i>Independent variables from 90–94</i>	
	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1990</i>	<i>1990</i>	<i>1995</i>
<i>I. Using PAST BANKER as Dependent Variable</i>						
A. And POSITIVE PROF as an independent variable	-0.160 (0.40)	-0.174 (0.38)	-0.318 (1.29)	-0.218 (0.89)	-0.192 (0.67)	-0.025 (0.12)
B. And ROI as an independent variable	-0.008 (1.98)	-0.012 (2.51)	-0.006 (1.37)	-0.008 (1.57)	-0.008 (1.06)	-0.009 (1.28)
C. And PROFITABILITY as an independent variable	-0.242 (0.36)	-0.519 (0.83)	-2.549 (2.04)	-1.670 (1.30)	-3.361 (2.34)	-3.490 (2.29)
<i>II. Using CONCURRENT BANKER as Dependent Variable</i>						
A. And POSITIVE PROF as an independent variable	0.206 (2.05)	-0.134 (0.64)	0.074 (1.05)	0.203 (3.61)	0.184 (4.33)	0.043 (0.66)
B. And ROI as an independent variable	-0.003 (1.53)	0.001 (0.30)	0.001 (0.43)	0.002 (1.00)	0.001 (0.42)	0.003 (1.33)
C. And PROFITABILITY as an independent variable	0.366 (0.95)	0.127 (0.24)	0.487 (0.91)	1.133 (2.27)	0.940 (1.51)	0.256 (0.50)
<i>III. Using TOTAL BANKER as Dependent Variable</i>						
A. And POSITIVE PROF as an independent variable	0.046 (0.11)	-0.308 (0.63)	-0.244 (0.94)	-0.014 (0.06)	0.042 (0.19)	0.018 (0.08)
B. And ROI as an independent variable	-0.011 (2.39)	-0.011 (2.21)	-0.006 (1.09)	-0.006 (1.03)	-0.007 (0.83)	-0.006 (0.77)
C. And PROFITABILITY as an independent variable	0.124 (0.18)	-0.393 (0.58)	-2.063 (1.42)	-0.537 (0.37)	-2.421 (1.46)	-3.234 (1.99)

NOTE: All regressions include control variables (board size, total assets, leverage, tangible assets/total assets, and main bank loan fraction), industry dummies, and a constant term. In each case, we give the coefficient, followed by the absolute value of *t* statistic (calculated using OLS with robust standard errors) in the parenthesis below. In the first column, we regress the stock of banker-directors at the firm in 1980, on the 1980–1985 independent (financial) variables. In the second column, we regress the stock of 1985 banker-directors on the same independent variables.

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

in the late 1980s and early 1990s appointed nearly 1.5 to 2.0 more retired bankers. Second, firms are more likely to appoint bankers if they are highly leveraged: a one-standard-deviation increase in LEVERAGE raises the number of retired banker appointments by about 0.3.

Third, smaller firms appoint more bankers: a one-standard-deviation increase in total assets cuts the number of retired banker appointments by 0.1 to 0.2. Last, firms with smaller stocks of mortgageable assets appoint more retired bankers: a one-standard-deviation increase in TANGIBLE ASSETS/TA reduces the number of retired bankers by about 0.15 (though not in the late 1980s).

4. Reconciling the Results

Although Kaplan and Minton follow the literature in interpreting their results as bank intervention, these regressions suggest another hypothesis: perhaps the very worst-performing firms sometimes just replace their directors en masse. Perhaps, in other words, the shareholders at the most troubled firms in the Kaplan-Minton data set sacked most of their directors, and then appointed new bankers at the same time that they replaced the others. Because Kaplan and Minton examined only directoral appointments for bankers and a few others, they would not have noticed the rest of the new appointments. Yet the firms would not have appointed bankers to facilitate bank intervention. Instead, they simply would have replaced the bankers for the same reasons they replaced the rest.

Consider the two alternatives in more detail. If banks placed bankers on the boards of troubled firms to intervene on their behalf, then economic distress (1) would trigger the appointment of *additional* bankers, but (2) would not trigger the *replacement* of existing bankers with new ones. Conversely, if the most troubled firms sometimes replaced their entire board, then (provided they kept the ratio of bankers to nonbankers constant) economic distress (1) would trigger the replacement of existing bankers, but (2) would not trigger the appointment of any additional bankers. Consistent with the latter hypothesis but not the former, Kaplan and Minton find that loss firms do appoint *new* bankers while we find that they do not appoint *additional* bankers.

Kaplan and Minton focus on firms that post a loss-year, and accounting scholars do suggest that firms sometimes time those losses to coincide with restructuring. In the United States, for example, when new senior executives take over troubled companies they sometimes accelerate discretionary

expenses to post a “big bath.”¹⁸ In Japan, departing senior executives of troubled companies are said sometimes to accelerate losses on their way out. If departing executives did choose to accelerate losses, Kaplan and Minton’s pretax income would reflect it. Because pretax income comes net a variety of discretionary gains and losses, Japanese CEOs hoping to defer a loss can do so by deferring depreciation allowances or selling appreciated stock. CEOs determined to post a “big bath” can do the opposite.

Take the shipbuilding industry in the late 1980s. Although firms in most industries did well throughout the booming 1980s, shipbuilding firms found themselves in crisis. By the middle of the decade, the earlier tanker sales boom had collapsed. In compiling their accounting statements, the firms then took a variety of tacks. According to securities filings, Kawasaki Heavy Industries had positive operating profits in 1984 and 1986, but posted pretax losses. Mitsui Shipbuilding had operating losses of 28 billion yen in 1988, but increased its “nonoperating income” and “extraordinary gains” to post a pretax gain. Hitachi Shipbuilding had operating losses of 37 billion that year, but similarly accrued “extraordinary gains” to post a pretax gain.

Those firms that did decide to post a pretax loss sometimes also replaced much of their board. All but one of the principal eight shipbuilders posted at least one loss-year over 1986–1988. Several also had high board turnover. In general, Japanese directors serve about eight years. Had they done so here, the firms would have had annual board turn-over rates of 12 percent, and over the two years would have replaced a quarter of their directors. Of the eight shipbuilding firms, only Kawasaki replaced fewer than a quarter. Two firms replaced about 30 percent, and two replaced about 40 percent. Mitsubishi (with no loss-years) replaced half, and Hitachi and Sasebo replaced almost all.

The loss firms that replaced their boards did not necessarily appoint additional bankers. Despite the many changes the shipbuilding firms made to their boards, two firms cut the number of bankers on their boards, and three kept it unchanged. One firm increased its banker-directors by one, and two increased them by three.

Consider the implications. If this example generalizes to other industries, board appointments at loss firms do not indicate that “pressures from banks, corporate shareholders, and corporate groups play an important role

¹⁸For example, Kothari (2001:133); Pourciau (1993); Murphey and Zimmerman (1993). Not all studies reach this conclusion.

in linking firm performance and managerial rewards" (Kaplan & Minton 1994:257). Instead, they reflect more the general restructurings where loss firms replace most of their boards, bankers and nonbankers alike.¹⁹

B. Delegation of Monitoring

The conventional accounts also posit that the main bank serves as *exclusive* monitor: rather than waste resources in duplicative monitoring, secondary banks delegate all monitoring to a firm's main bank. Suppose banks did make these arrangements. If current and retired banker-directors monitor on behalf of banks, then virtually *all* banker-directors should come from a firm's main bank.

Suppose, however, that secondary banks do not delegate their monitoring to the main bank. Because firms will generally have the most contact with their main bank (after all, by definition they borrow the most money from it), they would probably still appoint more directors from the main bank than from the other banks. Because they also deal regularly with the other banks (the mean firm borrowed only 29 to 33 percent of its bank debt from its main bank), however, they would probably appoint a substantial number of directors from other banks as well.

Our data show no evidence that secondary banks delegate monitoring to the main bank. In 1985, for example, our firms recruited only 57 percent of their retired banker-directors from their main banks. The mean firm had about 1.1 directors who had retired from any bank, but only 0.6 who had retired from its main bank. It had about 0.2 who concurrently worked at any bank, but only 0.04 to 0.08 who concurrently worked at its main bank.

C. Main Bank Rescues

1. Introduction

By most accounts, Japanese banks implicitly agree to rescue those distressed clients for which they act as main bank. Although scholars vary in what they consider a rescue, many claim that the main bank agrees to lend the firm money even when other banks would refuse. The claim appears routinely, but is difficult to test.

¹⁹Though the coefficient on earnings loss for appointments of directors from other corporations is not statistically significant in Kaplan and Minton (1994).

The claim is hard to test because it posits only an “implicit” deal—no firm or bank actually negotiates such an agreement. And even in Japan, firms do fail routinely (Miwa & Ramseyer 2002a:418). Even there, banks do not necessarily rescue troubled clients. Absent identifiable contracts, the easy response to a bank that jettisons a distressed client is to claim *ex post* that the firm must not have had a main bank *ex ante*.

Some observers attribute the rescue obligation only to the more committed main banks (e.g., Sunamura 1994:298), but this only compounds the problem.²⁰ Absent a way to identify “strong” ties *ex ante*, the easy response is—again—to claim that if a bank does not rescue a firm *ex post*, the firm must not have had strong ties with the bank *ex ante*.

Many proponents claim that main banks agree to rescue only economically viable firms (Aoki 2000:ch. 5; Patrick 1994:399), but this variant is almost as nontestable as the others. Suppose a bank does not rescue a given firm. If the firm survives anyway, it must not have been truly distressed—and the bank would have faced no obligation to rescue. If the firm fails, it must not have been economically viable—and as it has now disappeared, that nonviability is almost impossible to contest.

To date, even main bank theorists have not tried systematically to show that these rescue agreements exist. They instead collect anecdotes. To be sure, they collect many. In one study alone, Sheard (1994:213–26) lists 42. Yet absent a more systematic approach, the anecdotes show only that some banks sometimes rescue some firms—and that, of course, is beside the point. Try as creditors might to avoid the quandary, sometimes they find that lending a defaulting debtor extra funds or renegotiating a debt will cut their losses. That they sometimes do either does not mean they agreed to rescue *ex ante*. It may just mean they failed to notice the firm’s travails until it was too late to pull their loans.

Given these problems, we take a different approach. We first survey the extent to which firms rely on their “main banks” for loans (Subsection 2). We then ask which firms switch their “main banks” (Subsection 3), and which increase the amounts they borrow from them (Subsection 4). We conclude by examining “main bank loans” to a smaller sample of more seriously distressed firms (Subsection 5).

²⁰Some observers use a firm’s purported *keiretsu* affiliation as a proxy for relational strength, but this fails for reasons we discuss in Miwa and Ramseyer (2002b).

Table 6: Reliance on Main Bank, by Outstanding Debt and Profitability

	Profitability			
	Very Low	Low	High	Very High
<i>A. Main Bank Loan Fraction, 1980–1985 (Mean Values)</i>				
Outstanding debt				
Very low	0.493 (12)	0.412 (20)	0.436 (46)	0.492 (47)
Low	0.330 (46)	0.274 (40)	0.326 (46)	0.361 (34)
High	0.271 (54)	0.250 (60)	0.267 (40)	0.231 (21)
Very high	0.215 (74)	0.193 (59)	0.205 (48)	0.292 (11)
<i>B. Main Bank Loan Fraction, 1986–1990 (Mean Values)</i>				
Outstanding debt				
Very low	0.588 (22)	0.561 (42)	0.503 (54)	0.494 (58)
Low	0.331 (44)	0.285 (49)	0.338 (55)	0.354 (37)
High	0.301 (63)	0.267 (66)	0.268 (48)	0.276 (22)
Very high	0.252 (78)	0.214 (63)	0.181 (43)	0.286 (23)
<i>C. Main Bank Loan Fraction, 1990–1994 (Mean Values)</i>				
Outstanding debt				
Very low	0.565 (24)	0.449 (31)	0.546 (52)	0.515 (41)
Low	0.392 (43)	0.351 (38)	0.301 (46)	0.328 (37)
High	0.294 (58)	0.267 (53)	0.288 (41)	0.272 (23)
Very high	0.277 (67)	0.235 (76)	0.242 (39)	0.271 (17)

NOTE: The data are partitioned into quartiles, by PROFITABILITY (by columns) and by TOTAL BANK LOANS (by rows). In each case, we give the MAIN BANK LOAN FRACTION for that cell, followed by the number of firms in that cell, in parentheses. Quartiles are uneven because we exclude firms that changed their main bank affiliation during the period.

SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, updated); Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

2. Main Bank Dependence

Suppose main banks provide implicit insurance policies against financial or economic distress. The firms most likely to be “collecting” on the policy will be those closest to insolvency. If so, then on average the nearly insolvent firms should be borrowing a larger fraction of their loans from their lead bank than the other firms.

In fact, the least profitable firms do not borrow more from their lead bank than other firms. Consider Table 6. To construct the table, we partition the firms by their profitability (the columns) and by the total amounts

they borrow from banks (the rows). For each of the resulting 16 cells, we then calculate the mean of the fraction of bank debt that the firms borrow from their main bank. We give the number of firms in each cell in parenthesis. We exclude firms that change their main bank during the period (generating uneven quartile sizes). Thus, in 1980–1985, there were 12 firms that (1) did not change their main bank affiliation, (2) were in the least profitable quartile, and (3) were in the quartile that borrowed the least from banks. These 12 firms borrowed a mean 0.493 of their bank loans from their main bank.

At least during the 1980s, we find that the least profitable firms may have borrowed less from their main bank than their more profitable peers. During 1980–1985, the 186 firms in the least profitable quartile borrowed 27.8 percent of their loans from their lead bank, while the firms in the other three quartiles borrowed 30.6; during 1986–1990, firms in the least profitable quartile borrowed 32.0 percent from their lead bank while the others borrowed 33.9. Only during 1990–1994 did the least profitable borrow more: then, they borrowed 34.4 percent while the others borrowed 33.8. None of the differences are significant at the 5 percent level, and the main bank loan fraction figures in Table 6 do not fall from left to right as the bank-rescue hypothesis would predict.

Given the costs involved in bank monitoring, all else equal, firms might find it more efficient to borrow only from one bank. After all, the major Japanese banks are big enough to handle the debt of most of these firms. Nonetheless, the firms do not. Apparently, they worry about exactly the monopoly power that relationship-banking theory posits banks have, and diversify their loans to make certain they do not face it.

Because borrowing from any given bank does involve substantial fixed costs, however, a firm borrowing large amounts will more often find it cost effective to borrow from several sources than will a firm borrowing less. If so, then the extent to which firms diversify their borrowing will increase with the total amounts they borrow. This is exactly what Table 6 shows—the fraction falls from the top row to the bottom.

To clarify the correlation between outstanding debt levels, profitability, and loan diversification (we do not claim to test causation), we offer a simple OLS regression of MB LOAN FRACTION on TOTAL LOANS (the source of the Table 6 quartiles) and PROFITABILITY:²¹

²¹The absolute values of the Huber-White corrected robust *t* statistics are in parenthesis. The coefficients on TOTAL LOANS are multiplied by 10⁷.

1980–1985: MB LOAN FRACTION =	0.273	– 1.23	TOTAL LOANS	+	0.551	PROFITABILITY
	(16.64)	(3.55)			(2.19)	
1986–1990: MB LOAN FRACTION =	0.319	– 0.775	TOTAL LOANS	+	0.442	PROFITABILITY
	(18.51)	(3.25)			(1.38)	
1990–1994: MB LOAN FRACTION =	0.336	– 0.280	TOTAL LOANS	+	0.168	PROFITABILITY
	(20.14)	(1.81)			(0.45)	

As logic predicts, for each of the periods, MB LOAN FRACTION is negatively associated with TOTAL LOANS—during the 1980s at more than the 1 percent level and during the early 1990s at 10 percent. Contrary to the implications of main bank rescues, it is if anything positively correlated with PROFITABILITY.

In creating Table 6, we drop those firms that changed main banks during a given period. If we rerun our regressions on the entire sample with MB CHANGE (defined as 1 if the identity of a firm’s main bank changed, for each of our three periods) an additional explanatory variable, we obtain:

1980–1985: MB LOAN FRACTION =	0.270	– 1.36	TOTAL LOANS	+	0.608	PROFITABILITY	–	0.057	MB CHANGE
	(17.56)	(3.70)			(2.62)			(5.75)	
1986–1990: MB LOAN FRACTION =	0.322	– 0.847	TOTAL LOANS	+	0.393	PROFITABILITY	–	0.062	MB CHANGE
	(21.26)	(3.28)			(1.44)			(4.79)	
1990–1994: MB LOAN FRACTION =	0.329	– 0.384	TOTAL LOANS	+	0.392	PROFITABILITY	–	0.067	MB CHANGE
	(23.24)	(2.14)			(1.37)			(5.47)	

The results remain largely unchanged: MB LOAN FRACTION is associated with TOTAL LOANS negatively, and with PROFITABILITY positively if at all. As one might expect, those firms that change main bank affiliation borrow a smaller fraction of their debt from their lead bank.

Table 6 suggests two related observations, both of which imply that economically distressed firms do not collect on any bank rescue insurance policy. First, among the firms most dependent on their main bank (the quartile with the least outstanding debt, where the MB LOAN FRACTION is highest), in each of the three periods more firms are in the profitable half than in the unprofitable half (for 1980–1985, 93 firms compared to 32). Among the firms that borrow the most (very high outstanding debt), during the 1980s the most profitable firms relied more on their main bank (0.292 for 1980–1985) than the least (0.215). More basically, neither comparison—nor any other aspect of Table 6 of which we are aware—suggests that main banks offer distressed firms extra loans.

3. Main Bank Stability

If main banks offer implicit insurance policies against financial distress, then the firms closest to insolvency should have the most stable relationship with their main bank. After all, a healthy 35-year-old might switch life insurance firms, but not a terminally ill 80-year-old. By hypothesis, the troubled firm has paid the main bank its implicit insurance premiums for years. At the very point at which it might collect on its implicit policy against financial distress, it will not cancel that insurance coverage and look for another carrier.

If financially distressed firms do switch main banks, they do so either because the main bank has reneged on its rescue obligation or because it never offered coverage against distress in the first place. In fact, the two explanations come to much the same thing: if main banks regularly renege, no rational firm would pay the necessary premiums *ex ante*; if no firms pay the premiums, no rational bank would offer the rescue package *ex post*. If distressed firms regularly switch main banks, firms and main banks must not be contracting for insurance.

To explore these issues, in Panel A of Table 7 we calculate the percentage of firms in the lowest profitability quartile that change main bank affiliation during our three periods. We further compare that percentage with those of the top three quartiles. Lest we exaggerate the extent of the main bank shifts, we code as “main bank change” only those shifts that are definite. Where the data leave main bank affiliation unclear, we instead code the relationship as stable. For expositional simplicity, we do not partition firms by loan size. Instead, we simply extract the firms most likely to be collecting on their rescue insurance (the least profitable firms) and compare them against all others.

According to Panel A, main bank relations are not stable. For each of the half-decades, a fifth to a third of the firms switch their main banks. This is true not just of the higher performing firms but of those in the lowest quartile as well. Fundamentally, a firm’s propensity to switch main banks is not tied to its profitability. The differences between the lowest quartile and the others are not significant at the 5 percent level, and the correlation between PROFITABILITY and MAIN BANK CHANGE is uniformly insignificant. Firms that switch once do tend disproportionately to switch again, however. Of the firms that switched main banks in 1980–1985, 43 percent switched again in 1986–1990 (but only 12 percent of the others). Of the firms that

Table 7: Main Bank Stability and Loans to Distressed Firms

	1980–85	1986–90	1990–94
<i>A. Main Bank Switch Rates (Mean Values)</i>			
1. Bottom quartile firms, by PROFITABILITY	0.281	0.229	0.266
2. Top three quartile firms, by PROFITABILITY	0.303	0.201	0.283
<i>B. MB LOAN FRACTION INCREASE (Mean Values)</i>			
1. Bottom quartile firms, by PROFITABILITY	0.021	0.033	−0.023
2. Top three quartile firms, by PROFITABILITY	0.030	0.034	−0.012

NOTE: Panel A gives the fraction of firms that switched their main bank affiliation during the period, for each period.

SOURCE: Toyo keizai, ed., *Kigyo keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK johō, K.K., NEEDS (Tokyo, Nikkei QUICK johō, as updated); Nikkei QUICK johō, K.K., QUICK (Tokyo, Nikkei QUICK johō, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, as updated); Toyo keizai, ed., *Kigyo keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

switched main banks in 1986–1990, 58 percent switched again in 1990–1994 (and 20 percent of the others).

As in the previous subsection, to explore the correlations (not causation) more closely, we offer some simple OLS regressions.

1980–1985: MB CHANGE = 0.309 – 2.12 TOTAL LOANS + 0.208 PROFITABILITY	(11.77)	(2.71)	(0.063)	
1986–1990: MB CHANGE = 0.221 – 1.23 TOTAL LOANS + 0.048 PROFITABILITY	(10.53)	(4.35)	(0.14)	
1990–1994: MB CHANGE = 0.268 – 1.24 TOTAL LOANS + 0.820 PROFITABILITY	(11.03)	(5.10)	(1.59)	
1986–1990: MB CHANGE = 0.128 – 0.811 TOTAL LOANS – 0.028 PROFITABILITY + 0.322 80–85 MB CHANGE	(6.60)	(3.42)	(0.09)	(10.04)
1990–1994: MB CHANGE = 0.186 – 0.880 TOTAL LOANS + 0.776 PROFITABILITY + 0.376 86–90 MB CHANGE	(8.42)	(4.48)	(1.73)	(10.07)

As with MB LOAN FRACTION, MB CHANGE is strongly and negatively correlated with TOTAL LOANS for all three periods. Whether a firm changed its main bank affiliation in one period also strongly predicts whether it will change it again in the next. Crucially, however, MB CHANGE is *not* correlated with PROFITABILITY.

4. Increases in MB LOAN FRACTION

According to the conventional accounts, the main bank implicitly agrees to shoulder a disproportionate amount of any extra debt a troubled firm may

need. In general, a main bank should lend additional funds to healthy firms in rough proportion to their outstanding debt. To distressed firms, however, according to main bank theorists, the bank should lend more than its proportional share.

In Panel B of Table 7, we compare (1) the mean increase in the MB LOAN FRACTION (for each of our three periods) for the most distressed quartile of firms against (2) the mean increase at all other firms. By the standard accounts, the increase should be larger at the distressed firms than at the others. It is not. Instead, for two of the three periods the main bank increased its debt share at the healthy firms more than it increased it at the distressed; for the third period, it cut back its share less at the healthy firms than at the distressed (the differences are not significant at the 5 percent level). During the booming 1980s (when by conventional wisdom most firms could freely borrow), the main bank lent to the profitable and unprofitable firms alike; once firms hit hard times in the 1990s, it may have favored the former over the latter. The moral is simple: the main bank does not help the least profitable firms. If anything, it avoids them.

5. Failing Firms, Pre-1980s Firms

Finally, to explore bank lending at the most troubled firms, we examine loans to the 134 nonfinancial firms listed in an August 11, 1984 issue of the Japanese *Business Week* equivalent (*Shukan toyo keizai*) as “endangered” (we discuss these distressed firms in more detail in Miwa and Ramseyer (2004c)). These represent all exchange-listed nonfinancial firms with at least three consecutive loss-years (after interest but before extraordinary gains and losses) as of 1984. Of the 134, 33 firms had disappeared from the exchanges by 2001, most through merger but about one-third through bankruptcy. The sample thus represents a more seriously distressed group than our bottom PROFITABILITY quartile.²²

Again, suppose main banks implicitly agree to lend distressed clients amounts they could not obtain elsewhere. If so, then among our firms the main bank should have increased its loan share during these firms’ most troubled years. For them, these would have been the 1981–1984 years—after all, our firms had incurred at least three consecutive loss-years by 1984. In fact, the main banks did not increase their loan share at the troubled firms

²²For sample details and a further critique of the main bank rescue literature, see Miwa (1996:115–19).

(Table 8). Instead, they cut it. Even as loans to Japanese businesses grew explosively in the boom years of the late 1980s, the loans to these distressed firms stagnated (Table 8).

Nor was this absence of bank “rescues” a 1980s development. The 1974 oil crisis threw the Japanese economy into a prolonged recession. With business down, many firms posted losses, and as they did, the business press published the predictable articles about the highest risk firms. In one April 1978 study, the *Toyo keizai tokei geppo* printed a list of 320 loss firms (i.e., firms with a loss carryforward) that “make banks tremble.” For our purposes, note that the firms exhibited characteristics similar to those in the 1984 list (we discuss these firms in more detail in Miwa and Ramseyer (2004c)). Of the 320 firms, 10.3 percent vanished immediately, and 20.9 percent had not recovered six years later: 33 firms disappeared (e.g., by liquidation, by merger, or simply by delisting the stock) within a year, and 67 had remained sufficiently underperforming to qualify for the 1984 list. Of the 33 disappearing firms, 24 had been insolvent.

Of the 320 loss firms, 24.1 percent had recently changed main bank affiliation: that is, 77 had shifted their main bank during the preceding three years. Among the 87 insolvent firms in the group, 32 (36.8 percent) had changed their main bank, and 24 (27.6 percent) had disappeared. And of the 320 firms, consider the 113 with at least 10 billion yen debt in 1977. The records show no systematic evidence of serious main bank rescues among these firms either: of the 113, 95 increased their debt during the next year, but the main bank increased its share of the debt only at about half of those 95 (52 firms; raising its mean loan share from 17.3 percent to 24.3 percent), and cut its share at the other half (43 firms; lowering its share from 19.9 percent to 15.4 percent).

D. Deregulation and Depression

To explore the possible connection between the alleged deregulation-induced decline of main bank monitoring in the late 1980s and the depression in the 1990s, consider Table 9.²³ To construct this table, in Panel A we

²³We take these assumptions as given only for the sake of argument. In fact, because the earlier regulation of lending behavior had not bound, the 1980s deregulation could not have significantly affected bank-borrower ties (Miwa & Ramseyer 2004a). Given that the “main bank system” had never existed, there was no “main bank monitoring” to decline. In Miwa and Ramseyer (2005), we show that board composition did not change during the period at issue. Moreover, as note 24 of this article suggests bank loan patterns did not substantially change.

Table 8: Main Bank Loans to Firms with Three or More Consecutive Loss-Years as of 1984

	N	1972	1978	1981	1983	1984	1987	1990	1996
<i>A. Mean Amounts (in Million Yen) Borrowed from All Sources</i>									
Mean of all firms	134	16,182	32,055	37,876	41,870	39,775	40,153	38,972	48,608
Outstanding debt									
>100 bill. yen	15	88,730	191,977	250,569	271,031	255,853	266,234	229,873	273,926
10-100 bill.	40	14,396	24,914	24,952	27,497	26,552	27,088	25,705	29,946
5-10 bill.	25	3,528	6,592	6,224	7,189	7,202	10,841	19,069	35,020
<5 bill.	54	2,096	3,658	3,021	2,745	2,562	3,199	7,008	10,362
<i>B. Mean Percentage Borrowed from Main Bank</i>									
Mean of all firms	134	19.9	18.2	18.1	16.9	16.8	18.3	20.6	20.5
Outstanding debt									
>100 bill. yen	15	14.1	15.3	15.6	14.2	14.1	15.6	18.9	20.6
10-100 bill.	40	30.8	23.4	23.7	21.3	20.9	24.5	23.7	20.6
5-10 bill.	25	29.7	23.7	24.8	28.0	29.8	21.5	14.4	14.1
<5 bill.	54	24.2	26.4	29.5	35.7	36.8	33.0	21.7	23.7

NOTE: The firms are the 134 nonfinancial exchange-listed firms listed in *Shukan toyo keizai*, August 11, 1984, as having three or more consecutive loss-years (after interest, but before extraordinary gains and losses). The "mean percentage borrowed" is the percentage of the total debt in each tier borrowed from the main bank. Debt categories are based on amounts outstanding as of March 1984.

SOURCE: Toyo keizai, ed., *Kigyō keizetsu soran [Firm Keizetsu Overviews]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shuuki ritsū [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, as updated); Toyo keizai, ed., *Kigyō keizetsu soran [Firm Keizetsu Overviews]* (Tokyo: Toyo keizai, as updated).

Table 9: Growth and Profitability Quartiles

A. By 1986–90 Growth Quartiles (All Firms)						
	1. Growth			2. Profitability		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	19.493	11.463	10.848	0.058	0.036	0.033
Low	25.203	39.043	17.017	0.066	0.052	0.042
High	30.096	63.656	18.827	0.072	0.053	0.042
Very high	33.346	157.153	30.379	0.084	0.071	0.052
	3. Leverage			4. Total Bank Loan Incr		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	0.763	0.708	0.673	0.595	−0.032	0.372
Low	0.704	0.642	0.613	0.585	0.221	4.497
High	0.672	0.625	0.596	0.215	0.625	0.961
Very high	0.689	0.604	0.554	0.855	3.471	11.938
	5. MB Loan Fraction			6. MB Change		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	0.277	0.290	0.294	0.246	0.169	0.220
Low	0.290	0.306	0.319	0.292	0.198	0.233
High	0.296	0.330	0.327	0.353	0.264	0.349
Very high	0.319	0.381	0.383	0.292	0.206	0.330
B. By 1990–94 Profitability Quartiles (All Firms)						
	1. Growth			2. Profitability		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	27.956	54.474	3.481	0.053	0.025	0.009
Low	22.620	59.021	15.960	0.060	0.041	0.033
High	28.061	65.077	24.989	0.070	0.054	0.048
Very high	29.069	94.780	42.896	0.101	0.093	0.086
	3. Leverage			4. Total Bank Loan Incr		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	0.739	0.686	0.675	0.248	1.871	10.431
Low	0.735	0.677	0.647	0.563	1.019	0.914
High	0.705	0.646	0.615	0.688	0.195	2.766
Very high	0.639	0.577	0.509	0.739	0.158	0.444
	5. MB Loan Fraction			6. MB Change		
	1980–85	1986–90	1990–94	1980–85	1986–90	1990–94
Very low	0.292	0.322	0.312	0.278	0.215	0.266
Low	0.274	0.301	0.298	0.303	0.179	0.252
High	0.285	0.323	0.337	0.304	0.224	0.300
Very high	0.331	0.366	0.382	0.282	0.218	0.302

NOTE: In Panel A, the data are partitioned by 1986–90 GROWTH and by the other variables given; in Panel B, they are partitioned by 1990–94 PROFITABILITY and the other variables given. SOURCE: Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated); Nikkei QUICK joho, K.K., NEEDS (Tokyo, Nikkei QUICK joho, as updated); Nikkei QUICK joho, K.K., QUICK (Tokyo, Nikkei QUICK joho, as updated); Nihon shoken keizai kenkyū jo, ed., *Kabushiki toshi shueki ritsu [Rates of Return on Common Stocks]* (Tokyo: Nihon shoken keizai kenkyū jo, as updated); Toyo keizai, ed., *Kigyō keiretsu soran [Firm Keiretsu Overview]* (Tokyo: Toyo keizai, as updated).

divide the database into quartiles by a firm's 1986–1990 *GROWTH* (percentage increase in asset base). We then provide selected summary statistics for each quartile. For Panel B, we segment the data by a firm's 1990–1994 *PROFITABILITY* (operating income/total assets) and collect similar statistics. Elsewhere (Miwa & Ramseyer 2004b), we verify our conclusions with OLS—we do so by regressing 1990–1994 performance (*PROFITABILITY* and *GROWTH*, as the dependent variables) on 1986–1990 financial variables (including *PROFITABILITY* and *GROWTH*, as the independent variables). The results largely confirm the intuitive results of Table 9.

Recall the conventional explanation for the 1990s depression: due to the earlier deregulation, firms reduced their ties to their main bank; main banks lost the ability to monitor effectively; because of their reduced monitoring, firms played the bubble and expanded aggressively; and when the bubble burst, the most aggressive firms failed. Theoretically coherent perhaps, the story does not fit the facts. Instead, the facts suggest a much more mundane tale: the best firms grew rapidly in the booming 1980s and weathered the troubled 1990s; the worst firms grew only haphazardly even during the 1980s, and floundered badly in the 1990s.

Most basically, the firms that expanded in the late 1980s did not collapse in the early 1990s (Table 9, Panel A.2). Despite the many claims to the contrary, the firms that aggressively expanded were not the ones that failed. Instead, the firms that grew in the late 1980s were firms that had faced good prospects in the past, and continued to face them in the future: the high-growth firms in the late 1980s were the firms that had grown in the early 1980s, and that continued to grow into the 1990s (Table 9, Panel A.1).²⁴

These fast-growing firms prospered (Table 9, Panel A.2). As befits firms facing the best prospects, they had been among the most profitable in the early 1980s. They stayed profitable into the 1990s.

The fast-growing firms in the late 1980s grew in part by borrowing heavily. Although they maintained lower leverage than the slower-growing firms (presumably by expanding equity; Table 9, Panel A.3), they dramati-

²⁴The notion that any substantial disintermediation occurred is itself largely mythical. From 1979 to 1989, the total bank loans outstanding at all listed firms rose from 531 billion yen to 1,034 billion. Among the largest 30 borrowers, this figure rose from 222 billion to 576 billion, and among the largest 10 borrowers from 131 billion to 343 billion. The identity of the largest 30 borrowers remained largely unchanged during this period (Toyo 1991); see Miwa and Ramseyer (2003) for details.

cally increased the amounts they borrowed from banks (Panel A.4). Only the slowest-growing firms cut their bank loans. Predictably, the correlation between 1986–1990 GROWTH and TOTAL BANK LOAN INCREASE is 0.08 (significant at the 0.02 level).

The fast-growing firms also borrowed heavily from their principal lender. Where the slowest-growing firms borrowed only 30 percent from their principal lender, the fastest-growing quartile borrowed 40 percent (Table 9, Panel A.5). The correlation between 1986–1990 MB LOAN FRACTION and GROWTH is 0.13 (significant at 0.001), and between 1986–1990 MB LOAN INCREASE and GROWTH is 0.26 (significant at 0.001). Not that firms attributed much permanence to their “main bank ties” (Table 9, Panel A.6): for each quartile in each half-decade, the odds that a firm would switch main banks ranged from 15 to 40 percent. The correlation between 1986–1990 MB CHANGE and GROWTH is not statistically significant.

In Panel B of Table 9, we undertake the reverse exercise: we segment the database by 1990–1994 PROFITABILITY and trace the firms’ antecedents. Preliminarily, note that firms were far from universally troubled even during the putative 1990s depression. Indeed, the most profitable half earned only marginally lower profits during the depressed early 1990s than they had during the booming late 1980s (Panel B.2).

As in Panel A, Panel B suggests that the firms skirting bankruptcy in the early 1990s were not firms that had grown rapidly in the late 1980s. Instead, they were firms that had been marginal all along. They had grown the least in the 1980s, and had earned the lowest profits (Table 9, Panel B.1). Necessarily, they would have had the least chance of tapping the bond market and the least chance of resisting bank intervention.²⁵

IV. CONCLUSION

Relationship banking may indeed matter. With its present theoretical base in information-based “monopoly power,” however, it does not matter at exchange-listed firms. It may explain some financing patterns at the small Japanese firms, just as it may explain some small-firm finance in the West.

²⁵Elsewhere (Miwa & Ramseyer 2004b), we partition our sample by industry and calculate analogous tables for the construction, trade, and machinery firms. Largely, the results confirm the conclusions we reach from Table 9.

Yet to date, that is not how scholars have applied it to Japan. Instead, they have applied it through tales of a large-firm-based “main bank system.”

Unfortunately for the relationship-banking theorist, that “system” does not exist. And at least as applied to Japan through the concept of that “main bank system,” relationship-banking theory does not explain the 1980s Japanese asset price increase. It does not explain the 1990s recession, does not appear in any intervention through boards of directors, does not capture any delegation of monitoring duties among banks, and does not reflect any implicit contract to rescue troubled borrowers.

Japanese firms do sometimes appoint retired bankers to their boards—but most appoint none with a concurrent bank job, half have no bankers at all, few have more than one or two, and those in the financial services industry are far more likely to appoint them than firms anywhere else. Banks may sometimes take turns monitoring common debtors—but if they do, no trace of it appears in board appointment patterns. Japanese banks may sometimes bail out troubled firms—but, after all, here or there, doing so sometimes lets a bank cut its losses *ex post*. Japanese banks in the 1980s may well have spent fewer resources monitoring those borrowers that turned to the bond market—yet those were not the firms that failed.

At root, the theory of the Japanese “main bank system” is a theory without a phenomenon. At root, the only charitable interpretation of the system is that it does not exist, and never did. Consider it an urban legend, a fable: a tale scholars collectively repeat because they collectively wish it were true. They wish it were true because of the way it illustrates the economics of information and because of its implications for modern banking theory and comparative legal and political-economy theory more generally.

As such, the “main bank” tale tracks the fable of the “keiretsu,” those mythical corporate groups that supposedly dominate the Japanese economy. Indeed, some of the better-known main bank studies (particularly those by Hoshi et al. (1990, 1991) and those by Morck) explicitly piggyback on the keiretsu rosters. As we explain elsewhere (Miwa & Ramseyer 2002a, 2002b, forthcoming), however, observers did not create the rosters in the 1950s and 1960s to describe anything they saw in the economy. Instead, they created them to fill an empirical hole in the Marxist theory that dominated Japanese economics departments at the time. Unfortunately, some Western scholars seem determined to continue using the rosters—blithely oblivious to the substantive vacuum at their core.

Perhaps relationship-banking theory explains a variety of financing patterns among Japanese small firms in isolated areas, just as it may explain a

variety of patterns among small regional firms in the West. Fundamentally, however, with its focus on the “monopoly power” a relational bank acquires over a firm through its investment in firm-specific information, relationship-banking theory is a theory of small-firm finance in noncompetitive financial markets. In their attempt to apply the theory to Japan, scholars have focused on the large, exchange-listed firms and their mythical “main bank” relationships. In effect, they have applied the theory to a phenomenon that simply does not exist.

REFERENCES

- Aoki, Masahiko (1994) “Monitoring Characteristics of the Main Bank System: An Analytical and Developmental View,” pp. 109–41 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- (2000) *Information, Corporate Governance, and Institutional Diversity: Competitiveness in Japan, the USA, and the Transitional Economies*, S. Jehlik, trans. Oxford: Oxford Univ. Press.
- Aoki, Masahiko, & Serdar Dinc (2000) “Relational Financing as an Institution and Its Viability Under Competition,” pp. 19–42 in M. Aoki & G. R. Saxonhouse, eds., *Finance, Governance, and Competitiveness*. Oxford: Oxford Univ. Press.
- Aoki, Masahiko, Hugh Patrick, & Paul Sheard (1994) “The Japanese Main Bank System: An Introductory Overview,” pp. 1–50 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- Berger, Allen N., & Gregory F. Udell (1995) “Relationship Lending and Lines of Credit in Small Firm Finance,” 68 *J. of Business* 351.
- Bernanke, Ben S. (1983) “Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression,” 73 *American Economic Rev.* 257.
- Blackwell, David W., & Drew B. Winters (1997) “Banking Relationships and the Effect of Monitoring on Loan Pricing,” 20 *J. of Financial Research* 275.
- Boot, Arnoud W. A. (2000) “Relationship Banking: What Do We Know,” 9 *J. of Financial Intermediation* 7.
- Campbell, John Y., & Yasushi Hamao (1994) “Changing Patterns of Corporate Financing and the Main Bank System in Japan,” pp. 325–49 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- Degryse, Hans, & Patrick Van Cayseele (2000) “Relationship Lending Within a Bank-Based System: Evidence from European Small Business Data,” 9 *J. of Financial Intermediation* 90.
- Diamond, Douglas W. (1984) “Financial Intermediation and Delegated Monitoring,” 51 *Rev. of Economic Studies* 393.

- Dinc, Serdar I., & Patrick M. McGuire (2002) *Did the Japanese Stock Market Price Real Estate Prior to the Collapse of Real Estate Prices*. Unpublished manuscript.
- Eisenberg, Theodore, Stefan Sundgren, & Martin T. Wells (1998) "Larger Board Size and Decreasing Firm Value in Small Firms," 48 *J. of Financial Economics* 35.
- Flath, David (2000) *The Japanese Economy*. Oxford: Oxford Univ. Press.
- Freixas, Xavier, & Jean-Charles Rochet (1997) *Microeconomics of Banking*. Cambridge: MIT Press.
- Gao, Bai (2001) *Japan's Economic Dilemma: The Institutional Origins of Prosperity and Stagnation*. Cambridge: Cambridge Univ. Press.
- Gilson, Ronald J. (1998) "Reflections in a Distant Mirror: Japanese Corporate Governance Through American Eyes," 1998 *Columbia Business Law Rev.* 203.
- Gorton, Gary, & Andrew Winton (forthcoming) "Financial Intermediation," in G. Constantinides et al., eds., *Handbook of the Economics of Finance*. Amsterdam: North Holland.
- Greene, William H. (1997) *Econometric Analysis*. Upper Saddle River, NJ: Prentice-Hall.
- Hellmann, Thomas F., Kevin C. Murdock, & Joseph E. Stiglitz (2000) "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough," 90 *American Economic Rev.* 147.
- Horiuchi, Akiyoshi, Frank Packer, & Shin'ichi Fukuda (1988) "What Role Has the 'Main Bank' Played in Japan?" 2 *J. of Japanese & International Economies* 159.
- Hoshi, Takeo (1998) "Japanese Corporate Governance as a System," pp. 847-75 in K. J. Hopt et al., eds., *Comparative Corporate Governance: The State of the Art and Emerging Research*. Oxford: Clarendon Press.
- (2000) *What Happened to Japanese Banks?* DP 2000-E-7. Institute of Monetary & Economic Studies, Bank of Japan.
- Hoshi, Takeo, & Anil Kashyap (1999) *The Japanese Banking Crisis: Where Did it Come from and How Will it End?* NBER Working Paper 7250.
- (2001) *Corporate Financing and Governance in Japan: The Road to the Future*. Cambridge: MIT Press.
- Hoshi, Takeo, Anil Kashyap, & David Scharfstein (1990) "The Role of Banks in Reducing the Costs of Financial Distress in Japan," 27 *J. of Financial Economics* 67.
- (1991) "Corporate Structure, Liquidity, and Investment: Evidence from Japanese Industrial Groups," 106 *Q. J. of Economics* 33.
- Kaminsky, Graciela L., & Carmen M. Reinhart (1999) "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems," 89 *American Economic Rev.* 473.
- Kang, Jun-Koo, & Rene M. Stulz (2000) "Do Banking Shocks Affect Borrowing Firm Performance? Analysis of the Japanese Experience," 73 *J. of Business* 1.
- Kaplan, Steven N., & Bernadette A. Minton (1994) "Appointments of Outsiders to Japanese Boards: Determinants and Implications for Managers," 36 *J. of Financial Economics* 225.
- Kester, W. Carl (1992) "Industrial Groups as Systems of Contractual Governance," 8 *Oxford Rev. of Economic Policy* 24.

- (1993) “Banks in the Board Room: Japan, Germany, and the United States,” in S. L. Hayes, III, ed., *Financial Services: Perspectives and Challenges*. Boston, MA: Harvard Business School Press.
- Kothari, S. P. (2001) “Capital Markets Research in Accounting,” 31 *J. of Accounting & Economics* 105.
- McGuire, Patrick M. (2003) *Bank Ties and Bond Market Access: Evidence on Investment-Cash Flow Sensitivity in Japan*. NBER Working Paper 9644.
- Milhaupt, Curtis J. (2001) “Creative Norm Destruction: The Evolution of Nonlegal Rules in Japanese Corporate Governance” 149 *Univ. of Pennsylvania Law Rev.* 2083.
- Milhaupt, Curtis J., & Mark D. West (2004) *Economic Organizations and Corporate Governance in Japan: The Impact of Formal and Informal Rules*. Oxford: Oxford Univ. Press.
- Miller, Merton H. (1998) “Financial Markets and Economic Growth,” *J. of Applied Corporate Finance*.
- Miwa, Yoshiro (1996) *Firms and Industrial Organization in Japan*. Houndmills: Macmillan.
- Miwa, Yoshiro, & J. Mark Ramseyer (2002a) “The Myth of the Main Bank: Japan and Comparative Corporate Governance,” 27 *Law & Social Inquiry* 401.
- (2002b) “The Fable of the Keiretsu,” 11 *J. of Economics & Management Strategy* 169.
- (2003) “Financial Malaise and the Myth of the Misgoverned Bank,” pp. 339–72 in C. J. Milhaupt, ed., *Global Markets, Domestic Institutions: Corporate Law and Governance in a New Era of Cross-Border Deals*. New York: Columbia Univ. Press.
- (2004a) “Directed Credit? The Loan Market in High-Growth Japan,” 13 *J. of Economics & Management Strategy* 171.
- (2004b) *Does Relationship Banking Matter? Japanese Bank-Borrower Ties in Good Times and Bad*. Available at <www.ssrn.com/sol3/papers.cfm?abstract_id=441981>.
- (2004c) “Conflicts of Interest in Japanese Insolvencies: The Problem of Bank Rescues,” 6 *Theoretical Inquiries in Law* 301.
- (2005) “Who Appoints Them, What Do They Do? Evidence on Outside Directors from Japan,” 14 *J. of Economics & Management Strategy* 299.
- (forthcoming) “The Multiple Roles of Banks? Convenient Tales from Modern Japan,” in K. Hopt & H. Baum, eds., *Changes of Governance in Europe, Japan, and the U.S.* Oxford: Oxford Univ. Press.
- Miyajima, Hideaki (1998) “The Impact of Deregulation on Corporate Governance and Finance,” pp. 33–75 in L. E. Carlile & M. C. Tilton, eds., *Is Japan Really Changing Its Ways? Regulatory Reform and the Japanese Economy*. Washington, DC: Brookings.
- Morck, Randall, & Masao Nakamura (1999a) “Banks and Corporate Control in Japan,” 54 *J. of Finance* 319.
- (1999b) *Japanese Corporate Governance and Macroeconomic Problems*. Harvard Institute of Economic Research DP 1893.
- Morck, Randall, Masao Nakamura, & Anil Shivdasani (2000) “Banks, Ownership Structure, and Firm Value in Japan,” 73 *J. of Business* 539.

- Obinata, Takashi (2003) "Rieki, sonshitsu oyobi jun shisan boka joho no Relevance [The Relevance of Earnings, Losses and Book Value of Equity]," 69 *Keizaigaku ronshu* 2.
- Patrick, Hugh (1994) "The Relevance of Japanese Finance and its Main Bank System," pp. 353–408 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- Peek, Joe, & Eric S. Rosengren (2003) *Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan*. NBER Working Paper 9643.
- Petersen, Mitchell A., & Raghuram G. Rajan (1995) "The Effect of Credit Market Competition on Lending Relationships," 110 *Q. J. of Economics* 407.
- Pourciau, Susan (1993) "Earnings Management and Nonroutine Executive Changes," 16 *J. of Accounting & Economics* 317.
- Rajan, Raghuram G. (1992) "Insiders and Outsiders: The Choice Between Informed and Arm's-Length Debt," 47 *J. of Finance* 1367.
- (1996) "Review of Aoki, et al. (1996)," 34 *J. of Economic Literature* 1363.
- Rajan, Raghuram G., & Luigi Zingales (1998) Which Capitalism? Lessons from the East Asian Crisis," 11(4) *J. of Applied Corporate Finance* 40.
- Sheard, Paul (1989) "The Main Bank System and Corporate Monitoring and Control in Japan," 11 *J. of Economic Behavior & Organization* 399.
- (1994) "Main Banks and the Governance of Financial Distress," pp. 188–230 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- (1996) "Banks, Blockholders and Corporate Governance: The Role of External Appointees to the Board," in P. Sheard, ed., *Japanese Firms, Finance and Markets*. Melbourne: Addison-Wesley.
- Spulber, Daniel F. (2002) *Famous Fables of Economics: Myths of Market Failure*. Malden, MA: Blackwell.
- Sunamura, Satoshi (1994) "The Development of Main Bank Managerial Capacity," pp. 295–324 in M. Aoki & H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies*. Oxford: Oxford Univ. Press.
- Toyo keizai, ed. (1991) *Kigyo keiretsu soran [Firm Keiretsu Overview]*. Tokyo: Toyo keizai.
- Weinstein, David E., & Yishay Yafeh (1998) "On the Costs of a Bank-Centered Financial System: Evidence from the Changing Main Bank Relations in Japan," 53 *J. of Finance* 635.