

## **Do Large Shareholders Monitor or Collude with Banks in Japan?**

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## **Do Large Shareholders Monitor or Collude with Banks in Japan?**

### **Abstract**

We argue that the deficiency of effective corporate governance of banks has caused inefficient management of banks in Japan for at least in the past two decades. Our focus is the role of the largest shareholders. Using a detailed ownership database covering the period 1980-2000, we find that banks and insurers have dominated the top five largest shareholders. We argue that even though banks and insurers are endowed with substantial power to vote against the management, they are less likely to be effective monitors for two reasons. First, they have business relations with the banks they hold shares. Second, they themselves appear to have weak corporate governance. Our empirical results show that the ownership of banks and insurance companies are associated with higher total loan growth and real estate loan growth, by negatively related to performance. We conclude that banks and insurance companies collude with the bank management.

*JEL classification:* G21; G33; G38

*Keywords:* Corporate Governance; Ownership Structure; Managerial Entrenchment; Shareholders Activism

## 1. Introduction

An abundant literature explores banks as delegated monitors who play an important role in corporate governance. Yet, existing literature is short on analysis of the mechanisms by which banks themselves are monitored and disciplined. The literature on bank governance has been accumulating slowly over the past decade, but has been colored by the evidence of the market-based economy, the U.S.<sup>1</sup>. Analyses of other more bank-oriented economies are shortage. Recent studies namely LaPorta, Lopez-de-Silanes, and Shleifer (2002) and Caprio, Laeven, and Levine (2004) are cross-country analyses focusing on the role of government and family ownership of banks, respectively. Given that the ownership structure, and hence the nature and role of governance differs across economies, it is also important to study other countries. We take this approach and focus on one large bank-oriented country, Japan. We investigate whether large shareholders influence corporate governance by studying the relation between the ownership by the largest shareholders and performance via lending practices.

Japan represents an ideal setting to address the gaps in the literature because it represents a bank role that goes beyond simply serving as source of credit. Japanese banks occupy a unique position in a firm's corporate governance especially in periods of financial distress<sup>2</sup>. Yet, little is known about the governance of Japanese banks. Japan's experience with banking problems which began in the early 1990s and festered and worsened throughout the decade until the present time has received attention worldwide. Using a similar definition to that of the U.S., the NPLs for all banks were around Yen 30 trillion in 1998-2000 (about 6 percent of GDP) and jump to about Yen 42 trillion (about 8.4 percent of GDP) in March 2002. The bad loans failed about 176 depository institutions of which 20 were banks during 1991-2001. To cope with the banking problems, a huge amount of funds including public funds was used. Specifically, since March 1995 until March 2002, about Yen 22.4 trillion was used via the Deposit Insurance Corporation (Hanazaki and Horiuchi 2003).

Among the causes of the banking problems was aggressive expansion of loans in particular to risky industries namely the real estate and construction industries, non-bank financial institutions, and the corporate sector for investment in stocks<sup>3</sup>. As also shown by Figure 1, loan growth at Japanese banks indeed continues through out both the boom period (1980-1991) and the bust period (1992-2000). Our analysis has a modest goal: to clarify whether the corporate governance of banks contributes to the prolonged Japan banking problems. Specifically, we analyze whether large shareholders influence such high risk lending practices.

Our focus here is large shareholders because many scholars argue that they are probably the only ones that might have an interest in monitoring the banks because they own sizable shares (see also Dinc 2003). Japanese depositors appear lack of monitoring incentives since they have been insured. Financial regulators were also not reliable monitors since they lack of expertise to verify banks' loan portfolios (Hanazaki and Horiuchi 2001 and 2003). In fact, Horiuchi and Shimizu (2001) find that retired financial regulators that serve on the board of directors (*amkudari*) turn out to undermine the role of the board in monitoring the management.

While so much has been written on the effectiveness of monitoring by large shareholders focusing on non financial firms, there is little evidence that such activism has affected decisions of management of banks and other non financial institutions. Among the few are Knopf and Teall (1996) who find that in thrifts risk taking behavior decreases with institutional shareholdings. Unlike Dinc (2003) and Anderson and Campbell (2003) who focus on the effects of the gross shareholdings of the top ten largest shareholders, we measure the

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<sup>1</sup> For example, Saunders, Strock, and Travlos (1990), Gorton and Rosen (1995), Knopf and Teall (1996), Demsetz, Saidenberg, and Strahan (1997), and Anderson and Fraser (2000).

<sup>2</sup> For example, Sheard (1989, 1994), Hoshi, Kashyap and Scharfstein (1990), Prowse (1990), Flath (1993), Aoki and Patrick (1994), Kaplan (1994), Kaplan and Minton (1994), Kang and Shivdasani (1995, 1997), Morck and Nakamura (1999), Morck, Nakamura, and Shivdasani (2000).

<sup>3</sup> See Hamada (1995), Hoshi and Kashyap (1999), Ito (1999), Milhaupt (1999), Patrick (1999), Nakaso (2001), Kashyap (2002), van Rixtel, Wiwattanakantang, Souma, Suzuki (2003), and Hanazaki and Horiuchi (2004)

influence of large shareholders through ownership concentration and their identity. As argued by Brickley, Lease, and Smith (1988), the monitoring incentives by large shareholders are also affected by business ties with the firm they invest due to the conflict of interests between business and fiduciary.

To identify the identity of large shareholders, we construct a unique dataset of bank ownership. Our sample covers all listed banks in Japan for the period of 1980-2000. We find that banks, insurers, and non financial corporations predominate as the top five shareholders. They have been stable shareholders over a long period of time. We argue that banks and insurers are less likely to be effective monitors for the following two reasons. First, they have business relations with the banks in which they hold shares. For examples, insurance companies appear to receive the opportunity to walk in to bank offices and sell insurance policies to the bank's employees. Also, banks provide the board membership for retired employees of other bank that is their major shareholders. Second, banks and insurers appear to have weak corporate governance. Since they operated in a highly regulated environment together with a comprehensive safety net to prevent bank failures, they were not disciplined by depositors and other governance mechanisms (Hanazaki and Horiuchi 2001).

We argue that if banks managers are not effectively monitored, they have the incentive to secure private benefits by engaging in excessively risky activities including excessive lending and lending risky industries (Gorton and Rosen 1995; Knopf and Teall 2000). The incentives to extend lending are probably attributable to the promotion system that. In Japanese banks, the promotion system was closely tied to the amount of loans officers were able to lend, but not related to the loan performance. Our empirical results show that the ownership of banks and insurance companies are associated with higher total loan growth and real estate loan growth. The results indicate that loan extension is significantly associated with lower performance suggesting that loan extension is probably excessive risk taking behavior. Interestingly, we also find that banks in which insurers and banks alone are among the top three and top five largest shareholders extend more lending and perform poorer than other banks. These results support our argument that banks and insurance companies were passive in governance of banks in Japan.

This paper highlights one important issue in corporate governance that monitoring incentives are different across shareholders in the country other than the U.S and in the financial companies as well. Consistent with Brickley, Lease, and Smith (1988), Borokhovich, Brunarski, Harman, and Parrino (2004) and Almazan, Hartzell, and Starks (2004), we find that the identity of large shareholders also matter in the banking industry in Japan.

The rest of this paper is organized as follows. In Section 2 we describe the data and the ownership structure of banks in Japan. Section 3 discuss large shareholder monitoring incentives and develop testable hypotheses. Section 4 presents the methodology. Section 5 reports the main results. Section 6 concludes the paper.

## **2. Ownership and Control Structure**

In this section, we identify the largest shareholders and the degree of ownership concentration. This information is crucial in determining the degree of large shareholder activism, their incentives and abilities in disciplining bank managers (Demsetz and Lehn 1985; Barclay and Holderness 1989; Shleifer and Vishny 1997; Demsetz and Villalonga 2001).

### *2.1 Sample and data sources*

Our sample consists of all listed banks in Japan. The period of study is the fiscal year 1980-2000, which covers both pre and post bubble periods. As there were mergers and bank failures during this period, this panel data is unbalanced over the years. Specifically, the sample covers 93-118 banks which include nationwide banks ("city" banks, long-term credit banks, and trust banks) and regional banks.

The financial data are collected from the NIKKEI NEEDS database. Since the NIKKEI NEEDS provides the ownership data from 1984 onwards, we obtain the ownership data from two sources: the NIKKEI NEEDS (for FY 1984-2000) and the annual reports (for FY 1980-1983). We hand collected the ownership data from the annual reports (*yukashoken*

*hokokusho*) which is published in Japanese annually by the Ministry of Finance. The ownership and the financial data correspond to the end of a fiscal year, which is March in Japan.

## 2.2 Ownership structure

Figure 2 shows the aggregate shareholdings of banks for the period of 1980-2000. Shareholders are divided into the following categories: Domestic financial institutions, domestic non financial institutions, individuals and foreign investors. Financial institutions which include banks, life and non-life insurers, and security firms hold the largest fraction of banks' shares. Their shareholdings have been increasing over time. Specifically, financial institutions held about 37 percent of banks' shares in 1980, 42 percent in 1990, and 44 percent in 2000. The second largest group of shareholders has been domestic non financial institutions. Their shareholdings have been quite stable at around 30 percent over the 20 years. Individuals are the third largest groups of shareholders. They have gradually reduced their investment in banks' shares. In 1980, they held about 31 percent of the shares. By 2000, their shareholdings declined to be about 24 percent. Foreign shareholdings of Japanese banks are relatively very small.

Next, we investigate the ownership concentration. Our analysis cannot go beyond the top 10 largest shareholders due to data availability. Table 1 presents the mean percentage of the shares held by the top one, three, five, and ten largest shareholders. Similarly to banks in other developed countries, the ownership is relatively not concentrated (see Caprio, Laeven, and Levine (2004)). The mean shareholdings by the largest shareholder range from 4.94% to 6.97% during the period 1980-2000. The median shareholdings are about 5%. The top three largest shareholders hold about 13.1%, 12.7%, and 14.7% in 1980, 1990, and 2000, respectively. The average shares held by the top five largest shareholders are around 18% to 20% during the period 1980-2000. The mean shareholdings by the top ten largest shareholdings are around 28.5% to 30.45% during the period 1980-2000.

Table 2 provides information on the identity of the top five largest shareholders and the shareholdings by each category of shareholders. We classify the largest shareholders into six categories: Bank, insurer, non financial company, *employee investment fund (jukyoin mochi kabu kai)*, foreign investor, and others. Insurers include life and non-life insurers. But, more than the majority are life insurers which are mutual companies<sup>4</sup>. The *employee investment fund* is an investment fund owned by the bank's employees with the objective of investing only in the bank's stock. Other shareholders include finance and security companies, local governments, pension funds, and individuals. Given also that Japanese banks and insurance companies are restricted to holding no more than 5% and 10% of a firm's outstanding shares, respectively, the ownership we present here can be considered roughly as the ultimate ownership.

Interestingly, banks and insurers dominate the top five largest shareholders. The mean aggregate shareholdings by banks are about 8.08%, 8.75%, and 10.1% in 1980, 1990, and 2000, respectively. The mean shareholdings by insurers are about 5.63%, 5.28%, and 4.95% in 1980, 1990, and 2000, respectively. Non financial companies are much less common in the top five largest shareholders. Their average shareholdings are about 3.03%, 3.11%, and 1.91% in 1980, 1990, and 2000, respectively. Other types of shareholders are not much less common in the top five. The median shareholdings of the "*employee investment fund*," foreign investors, and others are zero for all periods.

The ownership structure differs between nationwide banks and regional banks. For nationwide banks, insurers are the dominant shareholders. The mean shareholdings by insurers are about 10.26%, 9.71%, and 5.74% in 1980, 1990, and 2000, respectively. Until 1994 non-financial companies were the second largest shareholder after insurers, but were surpassed by banks afterwards. The corporate shareholdings account for about 4.21%, 4.17%, and 2.64% in 1980, 1990, and 2000, respectively, which are much smaller compared to the

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<sup>4</sup> As of March 2000, 14 out of 46 life insurance companies in Japan are mutual companies. These 14 companies are so large that they share about 94 percent of the total assets (Shikano 2001).

shareholdings by insurers.

For regional banks, other banks, which often are nationwide banks, are the dominant shareholders. Banks hold on average about 9.83%, 10.05%, and 10.85% of the shares of regional banks in 1980, 1990, and 2000, respectively. Interestingly, we find that the shareholdings are one way: from nationwide banks to regional banks. After banks, insurers and non-financial companies have been the second and third largest shareholders, respectively.

We also find that the employee investment fund often appears among the top five shareholders in regional banks. The mean shareholdings of the employee investment fund vary about 1.17% to 2.46% over 20 years (Table 2). In the nationwide banks, however, the employee investment fund only appears among the top five shareholders in 1980-1983 and disappeared afterwards.

Table 3 shows the ownership structure of the top ten largest shareholders. We observe a similar ownership structure to the top five. That is, banks, insurers, and non financial firms dominate the top ten largest shareholders.

To show the importance of insurers, in particular life insurers, and banks as the top shareholders, we count the number of banks in which only insurers and banks appear as the top three and top five shareholders. Table 4 shows the results. The proportion of banks with insurers and banks in the top three shareholders is 41.9%, 55.1%, and 53.3% in 1980, 1990 and 2000, respectively. In about 20.43%, 34.74%, 31.78% of banks in 1980, 1990 and 2000, respectively, insurers and banks alone appear as the top five shareholders. Compared to regional banks, the percentage of banks and insurers alone in the top three and five shareholders is greater in nationwide banks in all periods. For example, among the top three, while banks and insurance companies alone appear in more than a half of the nationwide city banks, they appear in only 16.9%, 27.1%, and 24.7% of regional banks in 1980, 1990 and 2000, respectively. We also find that there are very few banks that do not have a single bank or insurer among the top three shareholders. Specifically, these banks account for only 3.2%, 3.4% and 0.9% in 1980, 1990 and 2000, respectively.

To show how stable the ownership is, we count the number of banks in which the same shareholders remained in the top three and top five largest shareholders over 5, 10, and 20 years. Table 5 shows the results by bank types. When we consider ownership changes every five years, we observe that the ownership rarely changes. For examples, the top three largest shareholders remained the same in about 81.82% and 76.2% of the nationwide banks over the period of 1985-1990, and 1991-1995, respectively. We also find that the ownership structure is stable for a longer period of time in particular for the top three. When consider ownership changes every ten years, the results show that in about 54.55% and 21.05% of the nationwide banks, the top three largest shareholders remained the same over the period of 1980-1990, and 1991-2000, respectively. When we exclude the year 2000 in which many mergers occurred, the percentage of banks where the top three remained the same during the period of 1991-1999 is 45%.

We also find that about 8.18% of all banks in our sample, the top three largest shareholders remained the same over 20 years from 1980 to 2000. When the year 2000 is excluded, the number increases to 11.82%. Again, nationwide banks have more stable ownership compared to regional banks. About 23.81% and 8.99% of the nationwide banks and regional banks, respectively, the top three largest shareholders remained the same over the period of 1980-1999.

Among all the banks, the ownership of the "city" banks is the most stable. Out of the 13 city banks, the ranking and the shareholders of the top three largest shareholders remained the same in nine banks at least from 1980 until the 1990s when some of the banks merged or went bankrupted. Among them, the Sanwa Bank had an amazingly stable ownership structure. The top three largest shareholders have been the Meiji Life Insurance, the Nippon Insurance, and the Daido Insurance during 1980-1998 when the Sanwa Bank merged with other banks.

In summary, institutional shareholders namely life insurance companies, banks, and non financial companies have dominated as the largest shareholders. The ownership structure is unique in that the shareholdings are stable for a long period of time.

### **3. Large Shareholders Influence and Lending Practices**

#### *3.1 The moral hazard and large shareholder monitoring*

Similar to Morck, Shleifer, and Vishny (1988), Gorton and Rosen (1995) contend that bank managers tend to be entrenched when they hold substantial shares to enjoy the private benefits of control and make risky lending decisions. Similarly, Saunders, Strock, and Travlos (1990), Demsetz, Saldenber, and Strahan (1997), and Anderson and Fraser (2000) find that bank risk levels are positively related to managerial shareholdings in the U.S. As in non financial firms, a number of mechanisms might be used to mitigate the moral hazard problem. Our focus here is monitoring by large shareholders. Large shareholders have the incentive to undertake costly monitoring activities because they hold sizable shares and hence the benefits from monitoring would be sufficient to compensate the costs (Grossman and Hart 1980; Shleifer and Vishny 1986; Huddart 1993; Admati, Pfleiderer, and Zechner 1994).

Chidambaram and John (2000) argue that large shareholders would be effective monitors if they have invested in the firm for some time as the information asymmetries are likely to be mitigated by having close ties. Objectives and preferences by large shareholders also determine the effectiveness of the monitoring (see Gillan and Starks 2003). Brickley, Lease, and Smith (1988) find that institutional investors that have current or potential business ties with the firm are likely to vote in line with the firm's management on controversial issues. These pressure-insensitive investors are namely banks, non trust banks, insurance companies, and employee stock ownership plans (ESOPs). In contrast, public pension funds, mutual funds, endowments, and foundations are more likely to oppose management. Consistent with this view Borokhovich, Brunarski, Harman, and Parrino (2004) also find the negative relationship between announcement date abnormal returns and the ownership of outside blockholders that have potential business ties to the firm they hold shares. These blockholders are namely commercial and investment banks, insurance companies, and ESOPs. The abnormal returns, however, are positively related to the ownership by other blockholders that are not affiliated to the firm such as non financial firms, and asset management companies, and individuals. Along this line, Almazan, Hartzell, and Starks (2004) find a positive relation between the ownership by investment companies and independent advisers and the pay-for-performance sensitivity of the firm. But, they find no evidence that the pay-for-performance sensitivity is related to the ownership by passive institutional investors, namely banks trust department and insurance companies.

#### *3.2 Insurers, banks, and non financial companies as monitors of banks in Japan*

We build up our hypothesis based on the literature discussed in Section 3.1. Similar to the U.S., we argue that both insurers and banks in Japan are not trustworthy as monitors because they want to protect their current and potential business relationship with the banks in which they own shares. Anecdotal evidence suggests that banks allow insurance companies, who are the large shareholders, to send their sales representatives inside bank offices to sell insurance policies to the banks' employees. This business transaction would be obviously lost once the relationship is terminated. For example, in 1988 when the Asahi life Insurance company sold out its shareholdings of the Industrial Bank of Japan, the banks' employees terminated the insurance contracts (see Komiya 1994). Given that the size of banks is relatively large, the business that insurance companies have with the banks should be substantial. Unfortunately, as insurers are not listed companies, there is no statistically evidence available to back this argument. But, this business should be very large given the size of the banks. Some scholars argue that this business could even be more worthwhile to insurers than the capital gains and dividends received as shareholders, and hence would reduce the monitoring incentive (Komiya 1994; Fukao 2004).

In addition, it turns out that insurance companies have relied on banks for funding since they have been in financial trouble starting around the latter half of the 1990s. Fukao (2004) shows that as of March 2000, banks provided about yen 2.3 trillion of subordinated credit and surplus notes to life-insurance companies. Life-insurance companies in turn provided 6.7 trillion yen of subordinated credit to banks while also holding another 7.7 trillion

yen of banks stocks.

Similarly, it appears that as major shareholders of smaller banks, bank management obtains some kinds of benefits. For example, we find that banks provide job opportunities to retired employees of the bank that are their large shareholder. Sometimes, this so called “*amakudari*” practice extends to include employees from companies that are in the same group of the bank as well (see also Horiuchi and Shimizu 2000). For example, a regional bank, Mie Bank, has had the Sumitomo Bank as the fourth largest shareholder since 1982-2000 who has owned about 4.83% of the shares. Besides the Sumitomo Bank, three more companies affiliated to the Sumitomo group have been among the top ten largest shareholders. Interestingly, about a half of the board of directors of the Mie Bank has been occupied by retired employees from companies affiliated to the Sumitomo group during the period 1980-2000.

Besides the business relationship, we argue that insurance companies and banks might not be good monitors because they themselves have weak corporate governance. Until the latter half of the 1990s, both the banking and insurance industries had operated in highly regulated environment in which the status quo was protected under the so-called “convoy system” (Patrick 1999; Spiegel 1999; Hoshi and Kashyap 2001; Hoshi 2002). Under this system, banks and insurers were assured that, *de facto*, there would be no competition, and they would grow roughly at the same rate<sup>5</sup>. In addition, there was a comprehensive safety net to prevent any failures (Hanazaki and Horiuchi 2003a). Under this environment, there exists no market mechanism to discipline the management from fraudulent activities (see Allen and Gale 2000). Depositors lack the monitoring incentives since they have been insured. The financial authority lacked not only incentives but also the inspection expertise which was thought as one of the reasons why the Ministry of Finance, who had been responsible for overseeing bank management for many decades, was replaced by a new regulatory agency, the Financial Supervisory Agency, in June 1998.

Regarding non financial companies, it is not clear a priori whether they are effective monitors of banks in Japan. On one hand, as addressed by a number of previous studies, corporate blockholders appear to play a key corporate governance role in Japanese firms. For example, Kaplan and Minton (1994) find that corporate blockholders facilitate board turnover. Kang and Shivdasani (1997) show that corporate blockholders put pressure on poorly performing firms to restructure. Morck, Nakamura, and Shivdasani (2000) and Yafeh and Yosha (2003) find that the ownership by corporate blockholders is positively related to firm value.

On the other hand, the stable ownership pattern shown in Section 2 suggests that the relationship between companies and banks that they hold shares has been in place for a long period of time. Also, it could be that these companies have the banks as their main banks and rely on the banks for funding and routine financial transactions. So, as suggested by the U.S. literature, the business relation with banks may lessen the monitoring incentives.

### 3. 3 Large shareholders and lending practices

We argue that if bank managers are not effectively monitored by large shareholders, they would become entrenched and be likely to take excessive risky actions (Saunders et al. 1990; Gorton and Rosen 1995; Knopf and Teall 1996; Dinc 2003; Anderson and Campbell 2004). In this study, we focus on lending behavior as lending has been the most important investment activity of Japanese banks. Lending is considered as risky if it results in poor performance (see Knopf and Teall (1996)).

Bank managers may accumulate a number of private benefits by extending risky loans. In the Japanese bank context, the incentive of increasing loans is partly due to the promotion system. For loan officers, until recently, the performance evaluation was based on the ability to extend lending, not on the loan performance. The amount of lending was crucial in particular to

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<sup>5</sup> This was achieved via regulatory measures such as controlling interest rates, insurance premiums, fees and financial products, dividing business lines and branch restrictions, and restriction on new entry to the banking and financial business.

senior officers who aimed to be promoted to the top executive level; the highest achievement in their careers. To achieve this, senior officers have to gain support not only from the incumbent top executives but also from their junior colleagues. Favors to junior colleagues could be done by establishing new branches so that their junior colleagues could also have the chance of getting promoted to branch managers. To create a demand for new branches, they had to extend more loans.

Even after the bubble collapsed and the investment opportunities deteriorated, the lending continued rising during the 1990s (see Figure 1). We argue that incumbent managers were able to continue lending because they were not pressured by large shareholders. The incumbent managers appear to play the wait-and-see game hoping that bad loans would be recovered when the economy picked up. The intention was probably to avoid taking responsibility since the disposition of bad loans was likely to reduce the capital bases substantially to below the BIS standard (Hanazaki and Horiuchi (2001)).

#### 4. Methodology

We investigate the influence of the three types of the largest shareholders on the bank lending practices and performance. To investigate whether or not the lending is excessively risky, we relate the lending behavior to performance. Specifically, if the lending is risky and based on poor credit assessment, it would result in poor performance. To address potential concerns about the endogeneity of loan and profitability, we estimate a two-equation system in which loan growth and performance are simultaneously determined. As outlined in Clark (1986) and Molyneux et al. (1995), maximizing behavior provides a two-equation system in which loan growth depends on risk and return variables, and performance is determined by expected returns, costs, and risk. Specifically, the loan equation is specified as follow.

$$(1) \quad \text{Loan Growth}_{it} = f(\text{Large Shareholder Ownership}_{it}, \text{Performance}_{it}, \text{Branch}_{it}, \\ \text{Real Estate Loans}_{it}/\text{Total Loans}_{it}, \text{GDP}_t, \text{Land Prices}_t, \\ \text{City Banks}_i, \text{Long Term Credit Banks}_i, \text{Trust Bank}_i),$$

where the subscripts  $i$  and  $t$  indicate bank  $i$  and time  $t$ , respectively.

*Loan Growth* is the percentage change in total loan outstanding. *Large Shareholder Ownership* is aggregate shareholdings by insurers, banks, and non financial companies that are among the five largest shareholders. We use the shareholdings of the top five in order to capture large shareholders' ability and monitoring incentives. We also control for the influence of the employee-investment fund by including its shareholdings in the model. Since the fund is owned by the employees, we expect that the fund would not take an active monitoring role. Our hypothesis predicts a positive sign for the coefficient on the ownership by insurers, banks, and the employee-investment fund. The relationship between the ownership by non financial companies and loan growth variable, however, is unclear a priori.

To control for the profitability effect on lending capacity, we use two performance measures for the robustness checks; the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets (*ROA*), and the ratio of ordinary income to equity (*ROE*). If profitability increases a bank's cash flow, it improves the lending capacity. The bank-specific variable, *Branch Growth*, the percentage change in the number of branches captures loan supply conditions. If the number of branches facilitates lending, we expect a positive relationship between branch and loan growth. The percentage change in the ratio of lending to the real estate industry to total loan outstanding (*Real Estate Loans/Total Loans*) captures the credit quality. The real estate industry is regarded as one of the major industries and received huge loans during the bubble periods. A substantial part of those loans turned out to be non-performing after the bubble collapsed in the 1990s. And as a result, banks end up rolling over the loans. In other words, we expect positive relationship between real estate loans and the loan growth variable.

We control for business cycle effects on a bank's risk aversion by including real annual GDP growth rate at the 1995 price (*GDP*). To control for the land price bubble effects we include the percentage changes in land price indices for city areas (*Land Prices*). Also, it has been pointed out that the lending practices of banks in Japan appear to be not project evaluation based, but to a large extent based on the assessment of land collateral. This variable captures the land collateral effect as well.

Finally, we include three dummy variables to control for the effects of the following types of banks: nationwide city banks, long-term credit banks, and trust banks. The benchmark banks, therefore, are regional banks and second tier regional banks that operate locally. These three dummies capture the size and business line effects (see Hoshi and Patrick 1999).

Following Bourke (1989) and Molyneux et al. (1995), the profitability equation is determined by expected returns and costs and specified as follows.

$$(2) \quad Performance_{it} = f(\text{Large Shareholder Ownership}_{it}, \text{Loan Growth}_{it}, \text{Real Estate Loans}_{it} / \text{Total Loans}_{it}, \text{Staff Costs}_{it}, \text{GDP}_t, \text{Land Prices}_t, \text{City Banks}_{it}, \text{Long Term Credit Banks}_{it}, \text{Trust Banks}_{it}),$$

where the subscripts *i* and *t* indicate bank *i* and time *t*, respectively.

We include the percentage change in the sum of wages and salaries over total operation expenses (*Staff Costs*) to address cost differences between banks. This variable represents major operating costs of Japanese banks. We do not include interest costs in the model because interest rates on deposit and loan were regulated in most of the periods of our study. As contended by Hoshi (2002), during the period when banks could not pursue price competition, profitability was highly related to the number of branches. By having more branches, banks were able to acquire more deposits and extend more loans. The variable, *Staff Costs*, which is highly correlated to the number of branches captures this effect. Note that we could not include the growth rate of branched in the loan equation because otherwise the two models cannot be identified.

We also include *Real Estate Loans/Total Loans* to capture the negative effects of bad loans on profitability. The GDP growth variable and the land price indices are included to account for macro economic conditions. Changes in market demand are expected to affect profitability. As in the loan equation, we also control for the types of banks.

## 5. Empirical Evidence

### 5.1 Ownership structure, lending practices, and profitability

The summary statistics of all the variables in the two equations are shown in Table 6. To account for economic conditions, we split the sample period into two distinct periods: 1980-1991 and 1992-2000, inclusive. The period 1980-1991 is characterized as a good period because the Japanese economy was booming. It is also considered as a period with substantial regulatory restrictions and when a well functioning comprehensive safety net. The period of 1992-2000 is classified as a bad time after the collapse of the bubble and with decreased regulatory constraints. The univariate tests indicate that the bank specific variables are significantly different between the two periods suggesting that time effects should be well addressed in the analysis.

We estimate equation (1) and (2) as a system of linear equations using the two-stage least square (2SLS). We also include year dummies in the models. Table 7 presents the regression results using the data for the full sample. Equations (1) and (2) use the ROA as the performance measure, and equations (3) and (4) use the ROE. The estimated coefficients on both the ROA and the ROE (equation (2) and (4)) are statistically significant at the 1% level suggesting that profitability decreases with loan growth. In other words, loan extension can be considered a bad investment.

Consistent with our hypotheses, the estimated results indicate that higher ownership by banks and insurance companies is associated with higher loan growth, but lower profits. The effect of bank ownership is strongly significant at the 1% level in all models. In equation (1), and (2), the point estimate implies that a 1% increase in bank ownership corresponds to a increase in loan growth of 0.85%, and a decrease in the ROA of 0.03%. In equation (3), and (4), the point estimate implies that a 1% increase in bank ownership corresponds to an increase in loan growth of 0.42%, and a decrease in the ROE of 0.48%.

The effect of insurer ownership is also strong when the ROA is used as the performance measure, but is a little weaker when the ROE is used as the performance measure. While the effect of insurer ownership on loan growth is significant at the 5% level (equation (3)), the effect of insurer ownership on the ROE is weakly significant at the 11% level (equation (4)). Nevertheless, the results appear to have substantial economic significance. For example, the point estimates in equations (1) and (2) indicate that a 1% increase in the ownership by insurance companies is associated with an increase in loan growth of 0.75%, and a reduction of about 0.02% of the ROA. Note that the ROA reduction of this magnitude is not considered small given that the average of the ROA of Japanese banks in our sample is 0.27%. The ROA for Japanese is unusually lower due to having huge assets when compared to the banks' ROE of 8.78% (see Table 6).

The effect of the corporate ownership turns out to be inconclusive. When the ROA is used as the performance measure, the estimated results indicate that the ownership by non financial companies is positively related to loan growth and negatively related to the ROA. The coefficients are strongly significant at the 1% level. However, the results are significant and have the opposite sign when the ROE is used as the performance measure.

The estimated results show that the shareholdings by the employee investment fund are associated with higher loan growth and lower performance. However, the results are not robust. The estimated results are statistically significant (at the 10% level) only when the ROA is used as the performance measure.

Regarding the control variables, in the loan growth equations (1) and (3), the estimated coefficients on the proxy for profitability are positive as expected and strongly significant in both the models. This evidence suggests that profitable banks appear to have the slack to lend more in all the periods. We also find that the growth rate of the number of branches is associated with higher loan growth. The estimated coefficients on *Branch Growth* are strongly significant at the 1% level in both equation (1) and (3). The results also indicate that loan growth is negatively related to the growth rate of GDP which imply that Japanese banks did not take into account the economic condition when making lending decisions.

The results show that the growth rate of GDP is positively related to bank performance suggesting that demand factors are important in influencing Japanese bank performance. The growth rate of the land price indices turns out to be negatively related to performance and loan growth, but the estimated coefficients are significant only in the models using ROA. Performance also appears to be positively related to the growth rate of staff costs.

The estimated coefficients on *Real Estate Loans/Total Loans* have the expected signs and are significant in all equations except equation (3). The results are consistent with the view that loan growth in Japan was attributable to real estate loans, and the real estate loans were problematic that they affect profitability negatively.

The results show that compared to regional banks, city banks and long-term credit banks appear to extend more loans. Ironically, loans made by city banks, long term credit banks, and trust banks grew about 7.92%, 7.53%, and 8.33% more than regional banks, respectively. We find that city banks and long-term credit banks have significantly lower ROA compared to regional banks. The estimated results suggest that the ROA of city banks and long-term credit banks are approximately 0.25% and 0.35% lower than regional banks. The lower performance is probably due to excessive lending.

## 5.2 The effects during the boom and burst periods

Next, to investigate the effects of the economic condition and regulations, we split the period into two sub-periods, 1980-1991, and 1992-2000, and re-estimate our basic

regressions. Panel A and B present the results. Our previous findings on the full sample remain the same for the sample period 1992-2000. The results based on the sub-sample period of 1980-1991, however, show that the ownership by insurance companies and non financial companies has no significant effect on lending practices and performance. In addition, we also find inconsistent results on the effect of the ownership by banks. When the performance variables are the ROA, the ownership by banks is not significantly related to loan growth but is significant and negatively related to the ROA. However, when the performance variables are the ROE, the ownership by banks is significantly related to loan growth and profitability positively and negatively, respectively. As for the employee investment fund, we find that the ownership is significant and negatively related to performance, but significant and negatively related to loan growth only in the equation (3) when the ROE is used.

In summary, the effects of the ownership by the largest shareholders on lending practices and performance differ between the boom and burst periods. The ownership by the largest shareholders is weakly related to lending practices and performance during the period of 1980-1991. However, we find robust evidence that insurer and bank ownership are positively associated with loan growth, and negatively related to performance during the period of 1992-2000. We argue that the economic condition and business environment might be contributable to the differences in the finding. As well documented in the banking literature, the existence of government-administered bank safety nets prevalent during the 1980s eliminates the incentive for not only depositors but also shareholders to monitor bank managers (Merton 1977; Keeley 1990). Accordingly, we find a weak relation between the ownership by large shareholders and the lending variable as well as performance in our estimations.

However, the 1990s were a period when the Japanese economy was in a down turn and many banks were in financial trouble with low capital ratios. As argued by Gorton and Rosen (1995), banks managers are likely to take excessive risks during bad times. Shareholders too have the same incentive to gamble for success because they can keep the returns if the risky projects pay off, but do not have to bear the downside risk (Jensen and Meckling 1976; Marcus 1984; Keeley 1990). So, the interests of large shareholders and managers are aligned. In stead of disciplining management, large shareholders, in particular those that have business ties with banks, collude with the bank management at the expense of other stakeholders. Accordingly, we find that the ownership by banks and insurance companies is strongly related to loan growth.

### 5.3 The effects on real estate loans

In this section, we investigate further which loans are considered risky loans. As often argued in the literature, we focus on loans to the real estate industry. We re-ran the basic regressions but replaced the total loan growth with the growth rate of loans to real estate industry (*Real Estate Loan Growth*). The estimated results shown in Table 8 are similar to those presented in Table 7 and consistent with our hypotheses. We find that the growth rate of real estate loans is significant and negatively related to performance in all regressions except equation (2) in Panel B.

Panel A which shows the results for the full sample indicate the statistically and significant effects of the corporate shareholdings on real estate lending and performance. But, again the signs on the estimated coefficients are not consistent across models. The shareholdings by banks, insurance companies, and the employee investment fund are associated with an increasing in the real estate loans, and a reduction of profits. The effects are large magnitude. For example, a 1% point increases in ownership by banks corresponds to an increase in the real estate loans of 0.43%, and a drop in the ROE of 0.56%.

The results for the two sub-periods displayed in Panel B and C are also consistent with the regressions on total loan growth shown in Table 7. Panel B which shows the results for the period of 1980-1991 indicate that except the shareholdings by the employee investment fund, none of the estimated coefficients on the shareholdings by other types of large shareholders are consistently significant. In contrast, in Panel C which present the results of the period of 1992-2000, the shareholdings by banks and insurance companies are significant and positive related to real estate loan growth, but negatively related to performance. We do

not find robust results on the effect of the ownership by non financial companies and the employee investment fund.

#### 5.4 The Keiretsu effect

It is well documented that the business relationship between companies in the same keiretsu is stronger than other companies. Since companies, banks, and insurance companies always appear among the top ten largest shareholders, one might argue that these shareholders would have less incentive to monitor banks. In this section, we address whether the effects of ownership by large shareholders are contributable to the keiretsu relationship. We exclude the 13 banks that are affiliated to the six keiretsu groups from the same presidential club from the full sample and re-estimate the models. Table 9 displays the results. Our basic results remain the same indicating that the keiretsu relationship has no significant effect on our findings.

#### 5.5 Banks and insurance companies “alone” as the top five shareholders

In this section, we investigate whether banks in which all the top five largest shareholders are banks and insurers which we call *entrenched banks* extend more loans and perform poorer than other types of banks. The regression results using the same models are presented in Table 10. We replace the ownership by large shareholders by a dummy variable, *Entrenched Banks*, which takes a value of one if all the top five largest shareholders are banks and insurers, and zero otherwise. The results support our previous findings suggesting that the entrenched banks extend significantly more loans. Ironically, the regression results indicate that compared to non entrenched banks, entrenched banks extended on average 2.7% more loans than non entrenched banks. The lending practices appear to have negative effects on performance. The Entrenched banks turn out to be less profitable compared to non entrenched banks. On average, the ROA (ROE) of the entrenched banks is 0.06% (2.38%) lower than that of non-entrenched banks.

We investigate further whether or not the entrenched banks extended more loans to the real estate industry. The estimated results are shown in Table 10. The estimated coefficients on the entrenched bank dummies are significant in all models. The results in the ROA equation (ROE equation) indicate that entrenched banks lent 3.01% (2.52%) more to the real estate industry compared to non entrenched banks. The loans appear to be inversely related to performance as measured by the ROA and the ROE. When performance measured is the ROA, the entrenched banks perform 0.08% poorer than non-entrenched banks. The results are consistent with our hypothesis that banks in which insurers and banks are the top five largest shareholders are entrenched.

For the robustness checks, we perform two tests. First, we run another set of regressions splitting the sample into two sub-periods: 1980-1991, and 1992-2000. Second, we use another cut-off, the top three largest shareholders. The results shown in Table 10 are qualitatively unchanged.

## 6. Summary and Conclusion

We argue that the deficiency of effective corporate governance of banks has caused inefficient management of banks in Japan for at least in the past two decades. In this study, we investigate the role of the largest shareholders in governance. Using a detailed ownership database covering the period 1980-2000, we find that banks and insurers have dominated the top five largest shareholders. We argue that even though banks and insurers are endowed with substantial power to vote against the management, they are less likely to be effective monitors for two reasons. First, they have business relations with the banks they hold shares. Second, they themselves appear to have weak corporate governance. Our empirical results show that the ownership of banks and insurance companies are associated with higher total loan growth and real estate loan growth, by negatively related to performance. We conclude that banks and insurance companies collude with the bank management.

An extension may be done by examining other restructuring including downsizing, employee layoffs, and salary cuts. In addition, it may be worthwhile to investigate whether the

financial authority has been active in monitoring bank managers.

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**Table 1. Ownership Concentration**

This table presents the percentage of shares held by the ten largest shareholders. The data is as of the end of a fiscal year (March). Data sources are the yukashoken hokokusho (Company Annual Reports), various issues.

Year	Top 1		Top 3		Top 5		Top 10		No. of Banks
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
1980	5.36	4.81	13.14	11.86	18.74	17.38	28.54	26.85	93
1981	5.31	4.85	13.06	12.28	18.74	18.01	28.69	27.08	93
1982	5.34	5.00	13.16	12.49	18.93	18.17	28.98	27.55	95
1983	5.28	5.00	13.15	12.58	18.97	17.81	29.13	27.16	100
1984	5.20	5.00	13.04	12.69	18.90	17.73	29.19	27.01	101
1985	5.15	5.00	12.91	12.65	18.77	18.03	29.08	26.89	102
1986	5.13	4.99	12.74	12.32	18.60	18.11	28.92	26.84	104
1987	5.06	4.94	12.61	12.59	18.44	18.13	28.75	26.85	110
1988	5.08	4.89	12.64	12.54	18.45	18.29	28.72	27.66	113
1989	4.97	4.79	12.50	12.25	18.29	18.16	28.54	27.41	116
1990	5.02	4.88	12.66	12.26	18.52	18.25	28.80	27.36	118
1991	5.05	4.92	12.73	12.33	18.64	18.24	29.02	27.31	117
1992	4.97	4.91	12.69	12.58	18.67	18.25	29.13	27.46	118
1993	4.95	4.92	12.69	12.59	18.67	18.25	29.19	27.74	119
1994	5.44	4.86	13.12	12.46	19.12	18.23	29.65	28.00	119
1995	5.44	4.84	13.14	12.41	19.14	18.33	29.72	28.06	118
1996	5.45	4.91	13.07	12.21	18.92	17.89	29.33	27.72	119
1997	5.85	4.92	13.54	12.57	19.40	18.21	29.73	28.10	119
1998	6.69	4.94	14.38	12.47	20.24	17.45	30.45	27.77	115
1999	6.91	4.75	14.21	11.37	19.77	16.99	29.43	26.22	114
2000	7.67	4.42	14.69	11.15	20.12	16.76	29.55	26.03	107

**Table 2. Characteristics of the Top Five Largest Shareholders**

This table presents the identity of top five largest shareholders and the mean shareholdings by each category of shareholders. Figures in parentheses are the median shareholdings by each category of shareholders.

Panel A: All banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	8.08	5.63	3.03	1.46	0.00	0.47	93
	(4.44)	(5.07)	(2.00)	(0.00)	(0.00)	(0.00)	93
1985	7.87	6.15	2.61	1.76	0.00	0.32	102
	(5.13)	(5.20)	(0.00)	(0.00)	(0.00)	(0.00)	102
1990	8.75	5.28	3.11	1.08	0.00	0.25	118
	(7.39)	(4.23)	(0.00)	(0.00)	(0.00)	(0.00)	118
1995	10.10	5.06	2.59	1.15	0.02	0.16	118
	(8.61)	(4.21)	(0.00)	(0.00)	(0.00)	(0.00)	118
2000	11.47	4.95	1.91	1.45	0.07	0.20	107
	(7.61)	(3.78)	(0.00)	(0.00)	(0.00)	(0.00)	107
Panel B: Nationwide banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	2.41	10.26	4.21	0.20	0.00	0.00	22
	(0.00)	(10.76)	(4.12)	(0.00)	(0.00)	(0.00)	22
1985	2.34	10.86	3.99	0.00	0.00	0.00	22
	(1.04)	(12.93)	(3.21)	(0.00)	(0.00)	(0.00)	22
1990	3.04	9.71	4.17	0.00	0.00	0.00	22
	(2.43)	(11.20)	(2.91)	(0.00)	(0.00)	(0.00)	22
1995	6.59	8.95	3.49	0.00	0.00	0.00	21
	(2.73)	(8.65)	(2.61)	(0.00)	(0.00)	(0.00)	21
2000	15.93	5.74	2.64	0.00	0.44	0.00	13
	(6.27)	(5.59)	(1.93)	(0.00)	(0.00)	(0.00)	13
Panel C: Regional banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	9.83	4.19	2.67	1.85	0.00	0.62	71
	(7.51)	(3.47)	(0.00)	(0.00)	(0.00)	(0.00)	71
1985	9.39	4.86	2.23	2.24	0.00	0.41	80
	(7.65)	(4.28)	(0.00)	(0.00)	(0.00)	(0.00)	80
1990	10.05	4.26	2.86	1.32	0.00	0.31	96
	(8.79)	(3.43)	(0.00)	(0.00)	(0.00)	(0.00)	96
1995	10.86	4.22	2.40	1.39	0.03	0.20	97
	(9.69)	(3.87)	(0.00)	(0.00)	(0.00)	(0.00)	97
2000	10.85	4.85	1.81	1.66	0.02	0.23	94
	(7.71)	(3.64)	(0.00)	(0.00)	(0.00)	(0.00)	94

**Table 3. Characteristics of the Top Ten Largest Shareholders**

This table presents the identity of top ten largest shareholders and the mean shareholdings by each category of shareholders. Figures in parentheses are the median shareholdings.

Panel A: All banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	11.51 (7.42)	8.98 (7.87)	5.15 (4.00)	2.16 (2.50)	0.00 (0.00)	0.66 (0.00)	93
1985	11.67 (8.57)	9.93 (8.72)	4.67 (3.26)	2.23 (2.32)	0.02 (0.00)	0.49 (0.00)	102
1990	12.53 (10.97)	8.90 (7.64)	5.05 (3.30)	1.78 (1.68)	0.01 (0.00)	0.47 (0.00)	118
1995	14.46 (12.56)	8.56 (7.93)	4.29 (2.71)	1.86 (1.85)	0.09 (0.00)	0.41 (0.00)	118
2000	15.12 (11.15)	8.32 (7.57)	3.42 (2.42)	2.02 (2.15)	0.23 (0.00)	0.38 (0.00)	107
Panel B: Nationwide banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	3.31 (1.37)	12.28 (13.05)	9.42 (9.89)	0.47 (0.00)	0.00 (0.00)	0.00 (0.00)	22
1985	3.38 (1.81)	13.10 (14.08)	8.95 (10.34)	0.16 (0.00)	0.00 (0.00)	0.00 (0.00)	22
1990	4.38 (3.00)	11.95 (13.35)	8.45 (8.63)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	22
1995	8.38 (3.99)	10.45 (13.09)	7.35 (6.88)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	21
2000	17.84 (7.90)	6.93 (7.41)	5.51 (4.62)	0.00 (0.00)	1.37 (0.00)	0.00 (0.00)	13
Panel C: Regional banks							
year	Banks	Insurers	Non financial firms	Employee investment fund	Foreign investors	Others	No. of banks
1980	14.05 (10.79)	7.95 (7.21)	3.83 (3.19)	2.68 (2.90)	0.00 (0.00)	0.86 (0.00)	71
1985	13.95 (11.42)	9.06 (7.78)	3.49 (2.57)	2.80 (3.21)	0.02 (0.00)	0.63 (0.00)	80
1990	14.40 (12.47)	8.21 (7.12)	4.27 (2.56)	2.19 (2.18)	0.01 (0.00)	0.58 (0.00)	96
1995	15.77 (13.92)	8.16 (7.86)	3.63 (2.12)	2.27 (2.34)	0.11 (0.00)	0.49 (0.00)	97
2000	14.74 (11.94)	8.52 (7.58)	3.13 (1.85)	2.30 (2.48)	0.07 (0.00)	0.43 (0.00)	94

**Table 4. The Dominant Role of Banks and Insurers as Large Shareholders**

This table shows the percentage of banks in which banks and insurance companies alone are the top three and five shareholders.

**Panel A: Top 3**

Year	All banks			Nationwide banks			Regional banks		
	Number of banks	Total	%	Number of banks	Total	%	Number of banks	Total	%
1980	39	93	41.94%	12	22	54.55%	27	71	38.03%
1985	49	102	48.04%	13	22	59.09%	36	80	45.00%
1990	65	118	55.08%	14	22	63.64%	51	96	53.13%
1995	66	118	55.93%	13	21	61.90%	53	97	54.64%
1999	57	114	50.00%	9	17	52.94%	48	97	49.48%
2000	57	107	53.27%	8	13	61.54%	49	94	52.13%

**Panel B: Top 5**

Year	All banks			Nationwide banks			Regional banks		
	Number of banks	Total	%	Number of banks	Total	%	Number of banks	Total	%
1980	19	93	20.43%	5	22	22.73%	14	71	19.72%
1985	23	102	22.55%	5	22	22.73%	18	80	22.50%
1990	41	118	34.75%	5	22	22.73%	36	96	37.50%
1995	46	118	38.98%	8	21	38.10%	38	97	39.18%
1999	35	114	30.70%	4	17	23.53%	31	97	31.96%
2000	34	107	31.78%	3	13	23.08%	31	94	32.98%

**Table 5. Stable Ownership Structure**

This table shows the percentage of banks in which the same shareholders remained as the top three and top five largest shareholders over 5, 10, and 20 years.

Period	All banks		Nationwide banks		Regional banks	
	Top 3	Top 5	Top 3	Top 5	Top 3	Top 5
<b>5-year cut-off</b>						
1980-1984	39.58	21.88	54.55	36.36	35.14	17.57
1985-1989	53.21	31.19	81.82	59.09	45.98	24.14
1990-1994	69.49	51.69	76.19	47.62	68.04	52.58
1995-1999	37.61	18.80	57.89	5.26	33.67	21.43
1995-2000	26.09	11.30	22.22	0.00	26.80	13.40
<b>10-year cut-off</b>						
1980-1989	31.07	13.59	54.55	31.82	25.00	8.75
1990-1999	28.21	11.97	45.00	5.00	24.74	13.40
1990-2000	20.69	6.90	21.05	0.00	20.62	8.25
<b>20-year cut-off</b>						
1980-1999	11.82	1.82	23.81	0.00	8.99	2.25
1980-2000	8.18	0.91	4.76	0.00	8.99	1.12

**Table 6. Summary Statistics**

This table shows the summary statistics. Mean differences between 1980-1991 and 1992-2000 are tested using the t-test. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively. Loan Growth is the percentage change in total loan outstanding. ROA is the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets. Real Estate Loans is the percentage changes in the ratio of lending to the real estate industry. Growth Rate of GDP is real annual GDP growth rate at the 1995 price. Growth Rate of Land Price is the percentage change in land price indices for city areas. Growth Rate of Branch is the percentage change in the number of branches. Growth Rate of Salary is the percentage change in the sum of wages and salaries.

	Mean			Median		
	1980-2000	1980-1991	1992-2000	1980-2000	1980-1991	1992-2000
<i>Loan Growth</i>	5.970	9.946***	1.604	4.836	9.248	1.161
<i>ROA (%)</i>	0.271	0.513***	0.006	0.384	0.495	0.213
<i>ROE (%)</i>	8.778	17.308***	-0.586	11.332	16.610	5.138
<i>Real estate Loans/total loans</i>	9.593	8.928***	10.321	8.416	7.540	9.316
<i>Real Estate Loans</i>	9.492	14.583***	3.935	7.368	12.713	2.981
<i>Growth Rate of GDP</i>	2.758	4.074***	1.314	3.100	4.100	0.900
<i>Growth Rate of Land Price</i>	1.735	7.171***	-4.226	2.710	7.140	-4.360
<i>Staff Costs</i>	6.731	13.327***	-0.517	2.168	3.813	-0.385
<i>Growth Rate of Branch</i>	1.743	3.087***	0.268	1.220	2.521	0.000

**Table 7. Large Shareholders Influences on Lending and Performance**

This table presents 2SLS estimates where loans and performance are endogenously determined. Banks, insurers, non financial companies, and employee investment fund are the aggregate ownership by banks, insurers, non financial companies, and employee investment fund who are the top five shareholders. ROA is the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets. Real Estate Loans is the percentage changes in the ratio of lending to the real estate industry to total loan outstanding. GDP is real annual GDP growth rate at the 1995 price. Land Prices is the percentage change in land price indices. City Banks, Long Term Credit Banks, and Trust Banks are dummy variables indicating city banks, long term credit banks, and trust banks, respectively. Figures in the parentheses are standard deviations. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

Explanatory Variables	(1)	(2)	(3)	(4)
	Loan Growth	ROA	Loan Growth	ROE
Banks	0.854*** (0.200)	-0.028*** (0.002)	0.419*** (0.161)	-0.477*** (0.104)
Insurers	0.748*** (0.183)	-0.019*** (0.004)	0.445** (0.196)	-0.318 (0.194)
Non financial companies	0.548*** (0.149)	-0.019*** (0.004)	-0.530** (0.249)	0.907*** (0.184)
Employee investment fund	0.433* (0.240)	-0.015* (0.008)	0.307 (0.346)	-0.321 (0.414)
Loan Growth		-0.008** (0.004)		-0.345* (0.201)
ROA	33.429*** (7.759)			
ROE			0.906*** (0.315)	
Real estate Loans/total loans	0.275** (0.128)	-0.009** (0.003)	0.243 (0.184)	-0.389** (0.179)
Growth Rate of Branch	0.662*** (0.047)		0.701*** (0.069)	
Growth Rate of Salary		0.009*** (0.003)		0.368*** (0.141)
Growth Rate of GDP	-5.248*** (1.552)	0.145*** (0.020)	-2.465* (1.467)	2.179** (1.106)
Growth Rate of Land Price	-0.560* (0.302)	-0.035* (0.019)	-0.586 (0.461)	-1.571 (1.073)
City Banks	7.924*** (2.203)	-0.248*** (0.059)	1.178 (2.174)	-1.075 (2.916)
Long Term Credit Banks	7.526** (3.484)	-0.346*** (0.108)	1.875 (4.330)	-5.000 (5.431)
Trust Banks	8.328*** (1.903)	-0.074 (0.073)	7.560*** (2.757)	-2.634 (3.649)
Constant	-2.235 (2.193)	-0.068 (0.090)	1.237 (2.950)	-8.263* (4.861)
Adjusted R-squared	0.180	0.361	0.084	0.145
No. of observations	2151	2151	2151	2151
No. of banks	126	126	126	126

**Panel A: Period of 1980-1991**

Explanatory Variables	(1)	(2)	(3)	(4)
	Loan Growth	ROA	Loan Growth	ROE
Banks	1.345 (1.039)	-0.009*** (0.002)	-0.438** (0.205)	0.085* (0.047)
Insurers	0.193 (0.366)	-0.004 (0.003)	-0.166 (0.187)	0.069 (0.073)
Non financial companies	0.539 (0.479)	-0.004* (0.002)	-0.274 (0.202)	0.101 (0.064)
Employee investment fund	-1.274 (1.253)	0.009** (0.004)	-1.426** (0.652)	0.456*** (0.124)
Loan Growth		-0.001 (0.001)		-0.105** (0.050)
ROA	247.155 (189.732)			
ROE			3.628*** (1.344)	
Real estate Loans/total loans	0.137 (0.313)	0.006*** (0.002)	-0.254 (0.167)	0.149*** (0.054)
Growth Rate of Branch	0.368 (0.272)		0.701*** (0.105)	
Growth Rate of Salary		0.000** (0.000)		0.021*** (0.006)
Growth Rate of GDP	-8.758 (7.612)	0.038*** (0.004)	-3.647** (1.811)	1.537*** (0.148)
Growth Rate of Land Price	4.351 (3.663)	-0.020*** (0.001)	3.083** (1.300)	-1.041*** (0.054)
City Banks	26.934 (19.262)	-0.099** (0.039)	-19.757** (8.530)	5.956*** (0.994)
Long Term Credit Banks	31.586 (25.931)	-0.172** (0.068)	-6.111 (4.758)	0.825 (1.774)
Trust Banks	-36.273 (33.202)	0.121*** (0.047)	-20.309** (10.241)	6.744*** (1.230)
Constant	-128.311 (102.606)	0.548*** (0.039)	-48.787** (20.191)	14.696*** (1.182)
Adjusted R-squared	0.029	0.238	0.085	0.354
No. of observations	1124	1124	1124	1124
No. of banks	119	119	119	119

**Panel B: Period of 1992-2000**

Explanatory Variables	(1)	(2)	(3)	(4)
	Loan Growth	ROA	Loan Growth	ROE
Banks	0.695*** (0.146)	-0.033*** (0.003)	0.516** (0.219)	-0.656*** (0.174)
Insurers	0.749*** (0.175)	-0.030*** (0.007)	0.669** (0.339)	-0.683** (0.342)
Non financial companies	0.418*** (0.139)	-0.020*** (0.006)	-1.975*** (0.681)	1.656*** (0.334)
Employee investment fund	0.619** (0.304)	-0.028* (0.015)	0.744 (0.780)	-1.077 (0.793)
Loan Growth		-0.017*** (0.006)		-0.572* (0.310)
ROA	20.119*** (4.033)			
ROE			0.610*** (0.199)	
Real estate Loans/total loans	0.456*** (0.177)	-0.029*** (0.007)	0.581 (0.417)	-1.171*** (0.347)
Growth Rate of Branch	0.722*** (0.048)		0.710*** (0.076)	
Growth Rate of Salary		0.021*** (0.005)		0.648*** (0.245)
Growth Rate of GDP	-0.525 (0.441)	0.070*** (0.018)	-0.308 (0.646)	1.860** (0.948)
Growth Rate of Land Price	0.531 (0.444)	-0.003 (0.022)	0.301 (0.681)	0.686 (1.167)
City Banks	4.721** (2.277)	-0.292*** (0.111)	1.661 (5.968)	-5.222 (5.725)
Long Term Credit Banks	1.763 (3.736)	-0.300 (0.198)	-1.939 (10.296)	-5.591 (10.283)
Trust Banks	8.567*** (2.485)	-0.210* (0.126)	11.993 (7.345)	-7.070 (6.525)
Constant	-14.125*** (4.217)	0.854*** (0.129)	-8.374 (6.672)	21.557*** (6.756)
Adjusted R-squared	0.212	0.182	0.076	0.073
No. of observations	1027	1027	1027	1027
No. of banks	123	123	123	123

**Table 8. Large Shareholders Influences on Real Estate Loans**

This table presents 2SLS estimates where loans and performance are endogenously determined. Banks, insurers, non financial companies, and employee investment fund are the aggregate ownership by banks, insurers, non financial companies, and employee investment fund who are the top five shareholders. ROA is the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets. Real Estate Loans is the percentage changes in the ratio of lending to the real estate industry to total loan outstanding. GDP is real annual GDP growth rate at the 1995 price. Land Prices is the percentage change in land price indices. City Banks, Long Term Credit Banks, and Trust Banks are dummy variables indicating city banks, long term credit banks, and trust banks, respectively. Figures in the parentheses are standard deviations. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

Explanatory Variables	(1) Growth Rate of Real Estate Loan	(2) ROA	(3) Growth Rate of Real Estate Loan	(4) ROE
Banks	0.858*** (0.237)	-0.029*** (0.002)	0.427** (0.179)	-0.563*** (0.112)
Insurers	0.853*** (0.208)	-0.018*** (0.004)	0.555*** (0.204)	-0.191 (0.224)
Non financial companies	0.632*** (0.182)	-0.020*** (0.004)	-0.434* (0.238)	1.129*** (0.207)
Employee investment fund	0.550** (0.270)	-0.012 (0.008)	0.432 (0.357)	-0.170 (0.456)
Growth Rate of Real Estate Loan		-0.009** (0.004)		-0.368* (0.218)
ROA	32.836*** (8.698)			
ROE			0.892*** (0.323)	
Growth Rate of Branch	0.634*** (0.055)		0.672*** (0.072)	
Growth Rate of Salary		0.009*** (0.003)		0.377*** (0.146)
Growth Rate of GDP	-5.604*** (1.762)	0.142*** (0.021)	-2.872* (1.534)	2.120* (1.156)
Growth Rate of Land Price	-0.340 (0.361)	-0.032* (0.019)	-0.360 (0.500)	-1.472 (1.055)
City Banks	11.076*** (2.678)	-0.253*** (0.062)	4.373* (2.296)	-2.114 (3.455)
Long Term Credit Banks	10.122** (4.478)	-0.415*** (0.112)	4.303 (4.858)	-8.074 (6.235)
Trust Banks	2.154 (2.414)	-0.197*** (0.072)	1.193 (3.094)	-9.432** (4.040)
Constant	1.078 (2.163)	-0.127 (0.086)	4.271 (2.963)	-11.438** (4.761)
Adjusted R-squared	0.116	0.343	0.067	0.125
No. of observations	2149	2149	2149	2149
No. of banks	126	126	126	126

**Panel A: Period of 1980-1991**

Explanatory Variables	(1) Growth Rate of Real Estate Loan	(2) ROA	(3) Growth Rate of Real Estate Loan	(4) ROE
Banks	1.557 (1.143)	-0.011*** (0.002)	-0.478 (0.304)	0.104** (0.049)
Insurers	0.479 (0.410)	-0.007** (0.003)	0.053 (0.249)	0.069 (0.077)
Non financial companies	0.659 (0.539)	-0.007** (0.003)	-0.321 (0.285)	0.110 (0.067)
Employee investment fund	-1.182 (1.363)	0.007* (0.004)	-1.449* (0.876)	0.426*** (0.127)
Growth Rate of Real Estate Loan		-0.001 (0.001)		-0.068* (0.035)
ROA	260.977 (203.600)			
ROE			4.249** (1.890)	
Growth Rate of Branch	0.574* (0.297)		0.930*** (0.138)	
Growth Rate of Salary		0.000 (0.000)		0.017*** (0.006)
Growth Rate of GDP	-8.522 (8.080)	0.041*** (0.004)	-3.958046 (2.607)	1.596*** (0.150)
Growth Rate of Land Price	3.848 (3.947)	-0.019*** (0.002)	2.893 (1.828)	-1.066*** (0.067)
City Banks	31.882 (20.848)	-0.076 (0.056)	-20.788* (12.197)	6.391*** (1.072)
Long Term Credit Banks	33.048 (28.447)	-0.144 (0.100)	-11.038 (7.054)	1.757 (1.890)
Trust Banks	-46.379 (34.641)	0.169** (0.067)	-36.041** (15.231)	7.103*** (1.217)
Constant	-131.388 (110.022)	0.634 (0.047)	-54.798* (28.808)	15.720*** (1.253)
Adjusted R-squared	0.010	0.239	0.055	0.348
No. of observations	1122	1122	1122	1122
No. of banks	119	119	119	119

**Panel B: Period of 1992-2000**

Explanatory Variables	(1)	(2)	(3)	(4)
	Growth Rate of Real Estate Loan	ROA	Growth Rate of Real Estate Loan	ROE
Banks	0.553*** (0.150)	-0.039*** (0.004)	0.341* (0.198)	-0.859*** (0.189)
Insurers	0.659*** (0.175)	-0.026*** (0.009)	1.060*** (0.362)	-0.642* (0.378)
Non financial companies	0.519*** (0.154)	-0.029*** (0.008)	-2.335*** (0.742)	1.678*** (0.361)
Employee investment fund	0.526* (0.304)	-0.023 (0.020)	0.553 (0.855)	-0.736 (0.878)
Growth Rate of Real Estate Loan		-0.024*** (0.008)		-0.835* (0.431)
ROA	18.114*** (3.784)			
ROE			0.514*** (0.151)	
Growth Rate of Branch	0.582*** (0.050)		0.526*** (0.070)	
Growth Rate of Salary		0.023*** (0.005)		0.792*** (0.280)
Growth Rate of GDP	-0.784* (0.445)	0.065*** (0.018)	-0.575 (0.554)	1.687* (0.955)
Growth Rate of Land Price	0.505 (0.465)	0.006 (0.023)	0.400 (0.599)	0.866 (1.196)
City Banks	5.954** (2.522)	-0.448*** (0.152)	-1.525 (8.592)	-10.247 (6.284)
Long Term Credit Banks	6.951* (4.085)	-0.546** (0.260)	1.953 (15.087)	-14.213 (10.941)
Trust Banks	4.331 (2.814)	-0.508*** (0.171)	10.754 (10.809)	-19.595*** (7.043)
Constant	-5.000 (3.309)	0.760*** (0.141)	1.893 (4.719)	15.672** (6.932)
Adjusted R-squared	0.111	0.111	0.039	0.037
No. of observations	1027	1027	1027	1027
No. of banks	123	123	123	123

**Table 9. Regression Results Excluding the Keiretsu Banks**

This table presents 2SLS estimates where loans and performance are endogenously determined. Banks, insurers, non financial companies, and employee investment fund are the aggregate ownership by banks, insurers, non financial companies, and employee investment fund who are the top five shareholders. ROA is the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets. Real Estate Loans is the percentage changes in the ratio of lending to the real estate industry to total loan outstanding. GDP is real annual GDP growth rate at the 1995 price. Land Prices is the percentage change in land price indices. City Banks, Long Term Credit Banks, and Trust Banks are dummy variables indicating city banks, long term credit banks, and trust banks, respectively. Figures in the parentheses are standard deviations. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

**Panel A: Lending**

Explanatory Variables	(1)	(2)	(3)	(4)
	Loan Growth	ROA	Loan Growth	ROE
Banks	0.453*** (0.111)	-0.028*** (0.002)	0.254*** (0.075)	-0.504*** (0.124)
Insurers	0.415*** (0.081)	-0.017*** (0.004)	0.284*** (0.081)	-0.342 (0.224)
Non financial companies	0.449*** (0.116)	-0.023*** (0.004)	-0.253 (0.161)	0.974*** (0.202)
Employee investment fund	0.309** (0.125)	-0.013 (0.008)	0.215 (0.147)	-0.260 (0.445)
Loan Growth		-0.006* (0.003)		-0.282 (0.185)
ROA	11.110*** (3.392)			
ROE			0.269** (0.110)	
Real estate Loans/total loans	-0.112** (0.053)	-0.005 (0.004)	-0.03 (0.076)	-0.340* (0.196)
Growth Rate of Branch	0.738*** (0.020)		0.741*** (0.027)	
Growth Rate of Salary		0.008*** (0.002)		0.339*** (0.131)
Growth Rate of GDP	-1.391** (0.566)	0.112*** (0.021)	-0.429 (0.427)	1.052 (1.208)
Growth Rate of Land Price	0.102 (0.140)	-0.027 (0.018)	0.201 (0.155)	-1.385 (1.031)
City Banks	4.769** (1.906)	-0.296*** (0.091)	0.568 (1.701)	2.229 (4.837)
Long Term Credit Banks	3.210 (2.197)	-0.377*** (0.109)	-0.162 (2.089)	-5.188 (5.789)
Trust Banks	6.689** (3.334)	-0.489*** (0.180)	0.708 (3.402)	0.360 (9.342)
Constant	-1.178 (1.281)	0.002 (0.091)	0.714 (1.318)	-5.249 (5.160)
Adjusted R-squared	0.538	0.345	0.378	0.123
No. of observations	1886	1886	1886	1886
No. of banks	112	112	112	112

## Panel B: Real estate loans

Explanatory Variables	(1) Growth Rate of Real Estate Loan	(2) ROA	(3) Growth Rate of Real Estate Loan	(4) ROE
Banks	0.249* (0.145)	-0.030*** (0.002)	0.137 (0.085)	-0.596*** (0.132)
Insurers	0.377*** (0.122)	-0.016*** (0.004)	0.314*** (0.101)	-0.234 (0.256)
Non financial companies	0.295** (0.126)	-0.025*** (0.004)	-0.016 (0.115)	1.251*** (0.230)
Employee investment fund	0.374** (0.163)	-0.011 (0.008)	0.338** (0.166)	-0.119 (0.491)
Growth Rate of Real Estate Loan		-0.006* (0.003)		-0.297 (0.192)
ROA	8.789 (5.498)			
ROE			0.222 (0.150)	
Growth Rate of Branch	0.704*** (0.038)		0.714*** (0.040)	
Growth Rate of Salary		0.008*** (0.002)		0.341*** (0.130)
Growth Rate of GDP	-1.261 (0.938)	0.112*** (0.021)	-0.518 (0.595)	1.074 (1.221)
Growth Rate of Land Price	0.591*** (0.229)	-0.023 (0.017)	0.611*** (0.234)	-1.233 (0.975)
City Banks	9.030*** (2.203)	-0.283*** (0.100)	6.318*** (1.684)	2.645 (5.805)
Long Term Credit Banks	1.563 (2.795)	-0.425*** (0.115)	-0.124 (2.232)	-7.873 (6.705)
Trust Banks	-1.537 (4.430)	-0.584*** (0.190)	-5.687* (3.099)	-4.622 (11.043)
Constant	2.138 (1.482)	-0.011 (0.084)	2.902** (1.447)	-7.865 (4.893)
Adjusted R-squared	0.337	0.332	0.277	0.106
No. of observations	1884	1884	1884	1884
No. of banks	112	112	112	112

**Table 10. The Influences of Banks and Insurance Companies**

This table presents 2SLS estimates where loans and performance are endogenously determined. Entrenched Banks is a dummy variable indicating banks in which all the top three shareholders are only insurers and banks. ROA is the ratio of ordinary income (income before tax and before extraordinary gains and losses) to total assets. Real Estate Loans is the percentage changes in the ratio of lending to the real estate industry to total loan outstanding. GDP is real annual GDP growth rate at the 1995 price. Land Prices is the percentage change in land price indices. City Banks, Long Term Credit Banks, and Trust Banks are dummy variables indicating city banks, long term credit banks, and trust banks, respectively. Figures in the parentheses are standard deviations. \*\*\*, \*\*, and \* denote significance at the 1, 5, and 10 percent levels, respectively.

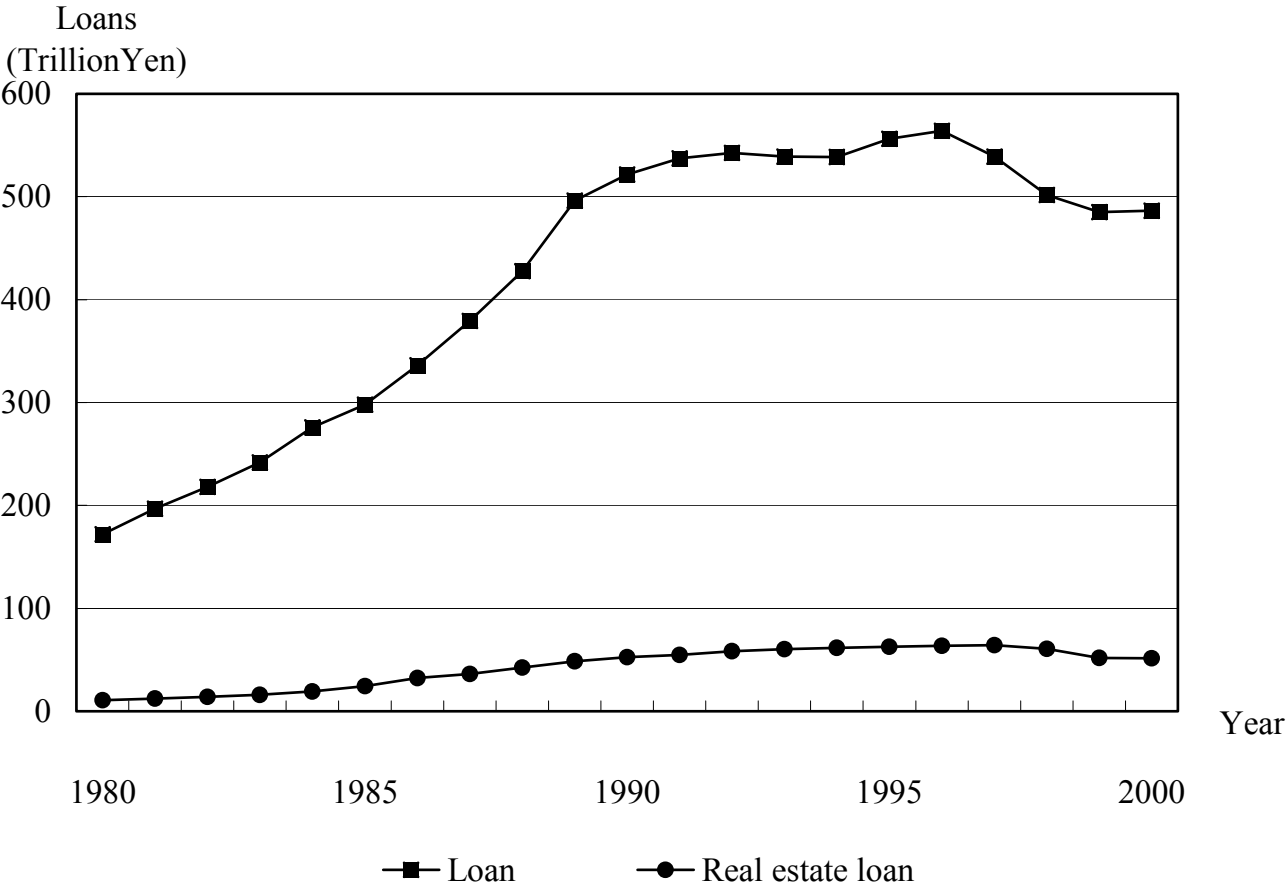
**Panel A: Lending**

Explanatory Variables	(1)	(2)	(3)	(4)
	Loan Growth	ROA	Loan Growth	ROE
Entrenched Banks	2.652** (1.050)	-0.059* (0.031)	2.666* (1.551)	-2.376 (1.500)
Loan Growth		-0.008** (0.004)		-0.330 (0.204)
ROA	33.589*** (8.197)			
ROE			0.927*** (0.334)	
Real estate Loans/total loans	0.541*** (0.183)	-0.014*** (0.004)	0.206 (0.178)	-0.327* (0.174)
Growth Rate of Branch	0.664*** (0.050)		0.697*** (0.071)	
Growth Rate of Salary		0.009** (0.003)		0.359** (0.144)
Growth Rate of GDP	-5.244*** (1.631)	0.143*** (0.021)	-2.458 (1.515)	2.084* (1.125)
Growth Rate of Land Price	-0.588* (0.324)	-0.034* (0.020)	-0.707 (0.515)	-1.360 (1.090)
City Banks	5.658*** (1.682)	-0.136** (0.055)	0.618 (1.911)	1.087 (2.429)
Long Term Credit Banks	0.915 (2.928)	-0.152 (0.115)	0.784 (4.308)	-3.845 (5.223)
Trust Banks	9.409*** (2.090)	-0.133* (0.079)	6.422** (2.723)	0.054 (3.550)
Constant	9.374*** (2.303)	-0.471*** (0.081)	6.673** (2.809)	-12.859*** (4.274)
Adjusted R-squared	0.162	0.301	0.079	0.121
No. of observations	2151	2151	2151	2151
No. of banks	126	126	126	126

## Panel B: Real estate loans

Explanatory Variables	(1) Growth Rate of Real Estate Loan	(2) ROA	(3) Growth Rate of Real Estate Loan	(4) ROE
Entrenched Banks	3.014** (1.339)	-0.081** (0.032)	2.521 (1.723)	-2.945* (1.627)
Growth Rate of Real Estate Loan		-0.008** (0.004)		-0.350 (0.222)
ROA	32.440*** (8.754)			
ROE			0.920*** (0.343)	
Growth Rate of Branch	0.639*** (0.056)		0.669*** (0.075)	
Growth Rate of Salary		0.010*** (0.003)		0.366** (0.150)
Growth Rate of GDP	-5.547*** (1.781)	0.140*** (0.022)	-2.896* (1.585)	1.997* (1.182)
Growth Rate of Land Price	-0.403 (0.385)	-0.031 (0.020)	-0.474 (0.555)	-1.220 (1.076)
City Banks	9.880*** (2.045)	-0.130** (0.064)	4.428** (1.983)	1.716 (3.014)
Long Term Credit Banks	5.076 (3.696)	-0.244* (0.126)	2.879 (4.746)	-6.105 (5.957)
Trust Banks	5.463* (3.090)	-0.312*** (0.081)	-0.028 (2.894)	-5.486 (3.762)
Constant	15.602*** (3.470)	-0.573*** (0.073)	10.542*** (3.255)	-14.872*** (3.898)
Adjusted R-squared	0.108	0.273	0.062	0.104
No. of observations	2149	2149	2149	2149
No. of banks	126	126	126	126

Figure 1. Total loans and real estate loans



**Figure 2. The ownership pattern of the banking industry**

