Were Banks Really at the Center of the Prewar Japanese Financial System?

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For many years, the dominant view of the Japanese financial system before World War II has been that industrial bank-type banks were at the center, and research emphasizing the role played by capital markets has generally been in the minority. Recent years, however, have seen the publication of research highlighting the development of prewar stock markets, which has sparked a debate challenging the accepted theory. This paper contains a comprehensive reconsideration of the roles played by banks and stock markets from both a quantitative and a qualitative perspective. On the quantitative side, it examines the structure of assets and liabilities in the private nonfinancial sector and long-term data on fund-raising by major manufacturing and public-sector enterprises. It concludes that while the private nonfinancial sector was in general strongly dependent on bank borrowings, when the focus is narrowed to large enterprises there was a high degree of dependence on equity fund-raising. While diachronic trends can be seen in these characteristics, it is clear that they stem from differences in data coverage and not from any basic changes in systems. On the qualitative side, the paper compares the roles played by banks and stock markets in two areas: resource allocation functions (information production functions and risk-bearing functions) and corporate governance functions. While stock markets did play some role in corporate governance, the paper concludes that resource allocation functions were only exhibited within a narrow group of wealthy individuals. On the other hand, banks played a large role in resource allocation functions by supplying risk money, but the paper concludes that their corporate governance functions were insufficient.

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I. Introduction

During the high-growth period from the 1950s to mid-1970s, the Japanese financial system was an intermediary financing system led by banks. Household-sector assets were held primarily in the form of bank deposits and the corporate sector—larger enterprises as well as small and medium-sized companies—raised funds primarily through bank borrowings. The functions of the stock market were largely attenuated by cross-shareholding, while those of the bond market were dampened by government regulation. Individual investors did not bear the risks of investment; rather, banks had the role of reducing risk by diversifying their lending based on an unwritten guarantee that the state would protect deposits. The rights of shareholders were restricted by cross-shareholding arrangements, and there was limited room for the functioning of investor rights in corporate governance. On the contrary, corporate governance was achieved via internal rules on managers and the supervision of main banks. The question posed by this paper is whether the financial system before World War II was led by banks to a degree similar to that during the high-growth period or if, conversely, it was led by the equity and capital markets.

The dominant view in academic history is that the financial system was very similar to a German-style industrial bank-led system. The classic example is the "organ banking" theory advocated by Kato (1957) and others. Yamaguchi (1966, 1970, 1974) analyzes equity investments by merchants and landlords in the financial history of the textile industry and emphasizes the large role played by the flow of funds mediated by banks and supported by Bank of Japan (BOJ) credits. However, Shimura (1969) argues that after World War I stock markets played an important role in marshaling social capital, and Sugiyama (1970, 1976) and Tsurumi (1983) emphasize the importance of the initial development of capital and currency markets in the period before World War II. More recently, Hoshi and Kashyap (2001) find a "culture" of using equity markets for corporate finance and governance in the prewar period.[1]

Based on this academic history, the argument is between the position of Ishii (1997, 1999), who argues that the financial system before World War II was by nature a bank-led system of indirect finance, and the position of Okazaki (1993), Okazaki and Okuno (1993), and Okazaki, Hamao, and Hoshi (2005), who argue that it was a system led by capital markets, primarily corporate finance in the stock market. The disagreement between the two positions goes beyond comparisons of mere quantitative roles to include the qualitative capabilities and evolution of banks and securities. However, at the core of the conflict is a difference in the basic attitudes of the two sides regarding how to view the economic system before World War II. Ishii's argument begins by assuming the backwardness of Japanese capitalism, and emphasizes the lack of development of leading country-style markets and the necessity of state intervention. Conversely, Okazaki and his colleagues argue that Japanese economic development was institutionally similar to European and U.S. development and that there was a global standardization of economic systems. In other words, this

1. Teranishi (2003) contains a critical evaluation of the argument by Hoshi and Kashyap (2001).

is a form of historical view based on modernization theory that searches for historical evidence of modern market evolution.[2]

I have commented on this question in the past in Fujino and Teranishi (2000) and Teranishi (2005a). In those papers, I argued that in quantitative terms the large enterprise sector was heavily dependent on equities for its fund-raising, but, looking broadly at the macro-level, private, nonfinancial sector, the degree of financing from bank borrowings was every bit as high as after the war. The purpose of this paper is to provide as comprehensive an organization of the quantitative data on the financial system before World War II as possible to elucidate the implications of this position and, to supplement these quantitative observations, to attempt a multifaceted evaluation of the facts pertaining to the qualitative functions of banks and equity markets to arrive at a complete picture of the nature of the prewar financial system.

Section II contains comparisons from a quantitative perspective, examining in more detail the quantitative data published in Fujino and Teranishi (2000). Section III looks at the qualitative aspects of risk bearing, information production, and corporate governance. Finally, Section IV summarizes the main conclusions. The observations on capital markets in this paper are limited to equity markets only. The author intends to analyze questions regarding short-term money markets and bond markets in a separate paper. Below, the author attempts to examine the issues as factually as possible without delving into the differences in economic viewpoints and models between the backward capitalism theory and the globalization theory. Higher-order observations regarding differences in models will be left as a future topic.

II. Examination from the Quantitative Side

This section compares intermediary financing mechanisms provided by banks and others and market-based financing mechanisms provided by equities and others to arrive at a quantitative picture of the level and scope of enterprise-sector fund-raising. In the analysis below, fund-raising includes owned capital, that is, equities held by shareholders and cash retained on hand. In other words, "fund-raising" for the purposes of this section refers to the entire spectrum of fund-raising, whether from external or internal sources. The first step is a comparison of the fund-raising methods of the various sectors comprising the enterprise sector, following which is an examination of the diachronic changes in fund-raising methods across the entire period before World War II (primarily after the "Matsukata deflation" engineered by Finance Minister Masayoshi Matsukata in 1881–85).

A. Sectoral Comparisons

The sectoral analysis considers the private nonfinancial sector, the overall large enterprise sector, the large manufacturing enterprise sector, and the indigenous commercial and industrial sectors.

2. From the perspective of the former, the financial system during the high-growth period can be seen as a continuation from the period before World War II, while from the perspective of the latter, it stems from a disturbance in the path to modernization caused by the exogenous shock of the war.

We begin by considering the broadest concept of the enterprise sector, using money flow tables to examine the fund-raising of the private nonfinancial sector. Money flow tables are a system of describing the flow of funds between sectors by financial instrument, dividing macro-level economic sectors into financial, government, private nonfinancial, and foreign sectors. For the private nonfinancial sector, the BOJ has money flow tables for the postwar period that cover the corporate enterprise sector and the individual sector (household sector and individual enterprise sector, primarily agriculture and smaller enterprises), but for the period before World War II the only tables available aggregate the entire private sector. Therefore, the private nonfinancial sector data used here represent not only large incorporated entities (joint-stock companies and limited/unlimited partnerships, etc.), but also individual enterprises and family production organizations in such sectors as agriculture and indigenous commerce and industry as well as the household sector.

Table 1 contains comparisons of the outstanding liability structure for the private nonfinancial sector, and Table 2 contains leading-enterprise fund-raising structures for both all industries and the manufacturing sector only. These comparisons yield the following insight.

(1) Compared to major-enterprise fund-raising, borrowings were more prevalent and equities less common in the fund-raising of the private nonfinancial sector.

The share of borrowings in the fund-raising of the private nonfinancial sector was generally between 40 percent and around 70 percent, while for major enterprises in all industries borrowings were 2–7 percent of liabilities and bills payable 5–10 percent, for a total of only 8–17 percent. The same contrast can be seen from the ratio of

Table 1 Debt in the Private Nonfinancial Sector

Average of the composition ratio of balances in the period, percent

	Equities	Corporate bonds	Borrowings	Investments	Calls and others	Ratio of borrowings to equities and investments
1886–90	24.7	0.0	71.1	0.0	4.1	3.18
1891–95	38.4	0.0	59.2	2.4	0.0	1.55
1896–1900	35.3	5.1	57.8	1.6	0.2	1.43
1901–05	32.8	5.4	59.7	2.2	0.0	1.57
1906–10	26.8	6.6	62.1	4.4	0.0	1.86
1911–15	26.6	6.7	60.7	6.0	0.0	1.83
1916–20	31.6	5.4	57.5	4.3	1.3	1.58
1921–25	35.7	6.9	50.2	5.8	1.3	1.18
1926–30	35.2	7.5	46.6	10.1	0.6	1.09
1931–35	37.6	7.7	41.9	11.7	1.0	0.93
1936–40	42.1	5.6	40.2	11.0	1.1	0.85

Note: Percentages of equities, corporate bonds, borrowings, investments, and calls and others to the total. Percentages are the averages of the composition ratios of each year in the period. Borrowings include discount bills by banks and other financial institutions.

Source: Fujino and Teranishi (2000, appendix).

Table 2 Fund-Raising by Leading Enterprises

[1] All Industries

Average of the composition ratio of balances in the period, percent

	Equities	Reserves	Corporate bonds	Borrowings	Bills payable	Ratio of borrowings and bills payable to equities
1902–05	66.2	16.7	9.0	2.5	5.6	0.12
1906–10	63.8	17.9	8.5	3.0	6.8	0.15
1911–13	62.1	17.8	10.7	3.3	6.0	0.15
1914–15	56.7	16.3	12.2	6.3	8.6	0.26
1916–20	55.7	22.9	11.7	2.6	7.1	0.17
1921–25	55.9	19.1	13.4	4.5	7.1	0.21
1926–27	51.6	13.2	21.8	6.1	7.4	0.26
1928–30	51.0	11.2	20.9	6.9	10.1	0.33
1931–35	52.4	11.1	21.6	7.0	8.0	0.28
1936–40	53.9	14.1	15.8	7.0	9.0	0.30

[2] Manufacturing

Average of the composition ratio of balances in the period, percent

	Equities	Reserves	Corporate bonds	Borrowings	Bills payable	Ratio of borrowings and bills payable to equities
1902–05	59.0	10.3	6.3	7.6	16.8	0.41
1906–10	55.7	18.0	8.0	4.6	13.7	0.33
1911–13	54.4	17.6	12.8	3.7	11.6	0.28
1914–15	54.2	14.7	10.2	6.7	14.2	0.39
1916–20	50.2	24.0	11.0	2.5	12.4	0.30
1921–25	48.6	25.3	9.7	4.0	12.4	0.34
1926–27	44.3	20.3	17.8	5.2	12.5	0.40
1928–30	49.8	15.2	15.3	8.9	10.8	0.40
1931–35	54.4	17.0	13.6	7.6	7.5	0.28
1936–40	55.3	18.7	8.8	8.6	8.5	0.31

Note: Composition ratios of equities, reserves, corporate bonds, borrowings, and bills payable to the total. Composition ratios are the averages of the composition ratios of each year in the period, which are calculated based on the average of the first-half and second-half amounts in each year. Ratios are calculated based on data for 51 to 52 companies in the Osaka Stock Exchange's *Kaisha-Soran* (Annual Corporation Reports) between 1902 and 1913, and on data for 53 to 80 companies in Toyo Keizai Shimposha's *Jigyo-Gaisha Keieikoritsu no Kenkyu* (Survey on the Managerial Efficiency of Business Corporations) and *Toyo Keizai Kabushiki-Gaisha Nenkan* (Annual Survey of Joint-Stock Companies) between 1914 and 1927, as well as on aggregated data by industry in Mitsubishi Keizai Kenkyusho's *Honpo Jigyo-Seiseki Bunseki* (Business Analysis of Japanese Enterprises) for 1928 and thereafter.

Source: Fujino and Teranishi (2000).

borrowings to equities/investment finance in Table 1 and the ratio of borrowings and bills payable to equities in all industries in Table 2. The former is between 0.85 and 3.18, while the latter is only between 0.1 and just over 0.3.

It should be noted, however, that private nonfinancial sector borrowings are estimated from financial institution data and figures include both bank loans (loans

on deeds, loans on bills, etc.,) and bill discounting. On the other hand, in major enterprise data, loans from banks and others are posted as borrowings and bill issuing volumes are posted as bills payable, making it unclear to what extent banks and others discounted bills. Nonetheless, business practices at the time indicate that the majority of the bills written by enterprises were probably discounted by banks, making it reasonable to conclude that Table 1's borrowings correspond conceptually to the sum of Table 2's borrowings and bills payable. The major enterprises covered in Table 2 are all joint-stock companies, and the equity figures represent paid-in capital. However, during the period before World War II, entities other than joint-stock companies accounted for a large share of major incorporated entities, the prime example being the *zaibatsu* holding companies that existed through the 1920s. For example, in 1925 Japan had a total of 17,600 joint-stock companies, with average paid-in capital per company of ¥542,000, with another 11,500 limited partnerships and 5,200 unlimited partnerships, each with average investments per partnership of ¥64,000 and ¥171,000, respectively (Teranishi [2003, p. 24]). Table 1 includes the investment figures for these non-joint-stock entities.

(2) At least until the 1920s, equities accounted for a higher proportion and borrowings/bills for a lower proportion of fund-raising for "all industries" than for "manufacturing."

Comparing major enterprises in "all industries" and "manufacturing" in Table 2, the ratio of equities between 1902 and 1905 was 66.2 percent for the former but only 59.0 percent for the latter, a clear difference. This gap continued until the 1920s, although it did gradually decline. Conversely, the ratio of borrowings and bills payable was lower for the "all industries" category than for "manufacturing," again with the gap gradually closing but continuing until the 1920s. Differences between all industries and manufacturing can also clearly be seen in the ratio of borrowings and bills payable to equities. Until the 1920s, the ratio was between 12 percent and 26 percent for all industries, but between 30 percent and 41 percent for the manufacturing sector.

The differences between the private nonfinancial sector and major industries seen in (1) and (2) above and also the differences within leading enterprises between the all-industries statistics and the manufacturing statistics stem primarily from differences in the coverage of the data. First, ignoring the factor of external fund-raising by households, the differences between the private nonfinancial statistics and the leading enterprises statistics derives from the fact that while the leading enterprises represent large, modern companies, the private nonfinancial sector contains an overwhelming number of indigenous micro-producers—individual enterprises and family production organizations in traditional commerce, industry, and agriculture. In the economy before World War II, agriculture, forestry, and fishing accounted for 41 percent of real GDP in 1888, declining gradually to 24.7 percent in 1920 and 15.9 percent in 1938. These indigenous micro-producers raised virtually no funds in the form of equities, which meant that they were extremely dependent on borrowings, which presumably raised the ratio of borrowings to equities/investments for the private nonfinancial

sector.[3] Turning to the differences between all-industries and manufacturing statistics for leading enterprises, the following reasons are probably at work. The all-industries statistics in Table 2 include not just manufacturing but also leading enterprises in broadly defined public services such as electricity (electric power), gas, electric railways, and marine transportation. These broadly defined public services enjoyed high name recognition and quasi-public utility status, so from the onset they were able to raise the majority of their capital from the capital markets. For example, around 1897 some 92.6 percent of the funds raised by railway companies were in the form of (paid-in) equity. For other sectors, the figures were 55.1 percent for spinning, 64.6 percent for food processing, 71.1 percent for chemicals, 57.8 percent for glass and ceramics, 72.5 percent for metals, and 66.3 percent for machinery (Teranishi [1982, p. 209]). As Table 3 shows, this trend did not change after World War I. Comparisons of the fund-raising by manufacturing sectors in 1926–27 and that by broadly defined public services such as electric power, electric railways, and marine transportation during the same period clearly show the former group to have a higher ratio of borrowings and bills payable to equities, while the latter group had a higher ratio of equities. It should also be noted that corporate bonds accounted for a relatively high 17.8 percent of manufacturing fund-raising, while the figure was low for electric railways and marine transportation. Electric power, however, was a high 31.7 percent, but this figure included large amounts of foreign currency raised through bond issues.

Table 3 Fund-Raising of Leading Enterprises by Industry in 1926 and 1927

Average of the composition ratio of balances in the period, percent

	Equities	Reserves	Corporate bonds	Borrowings	Bills payable	Ratio of borrowings and bills payable to equities
Manufacturing	44.3	20.3	17.8	5.2	12.5	0.40
Cotton spinning	47.9	32.8	9.4	3.6	6.3	0.21
Shipbuilding	30.7	19.6	26.9	1.9	21.0	0.76
Chemical fertilizers	47.9	5.7	23.6	11.6	11.2	0.47
Cement	57.4	6.8	22.2	6.8	6.8	0.24
Paper	41.3	9.2	30.3	9.7	9.6	0.47
Sugar	45.4	19.1	12.4	3.8	19.4	0.42
Beer	50.4	35.6	8.6	0.9	4.5	0.11
Milling	28.1	7.5	14.3	7.3	42.9	1.81
Electric power	54.9	3.0	31.7	6.6	3.7	0.19
Electric railways	66.4	8.0	10.1	12.1	3.4	0.23
Marine transportation	55.3	37.1	8.1	1.4	1.2	0.05
All industries	51.6	13.2	21.8	6.1	7.4	0.26

Source: Fujino and Teranishi (2000).

3. As will be seen later in this paper, it was rare for the traditional micro-producers to borrow money directly from banks. The vast majority came via merchants and landlords in a multitiered system of financial intermediation. The borrowings in Table 1 flowed from the banks, through the merchants and landlords, to the indigenous commerce and industrial sector.

B. Chronological Comparisons

This paper has demonstrated that, in quantitative terms, the capital and equity markets played a major role in the fund-raising of large enterprises in Japan before World War II, while bank lending played an important role in financing indigenous producers. The next question to be addressed is whether there were specific periods in which market-based or intermediary financing played particularly large roles and whether there was a tendency for the quantitative share to increase over time. More specifically, Ishii (1997) argues that banks took on an extraordinarily large role during the "industrial revolution period" (1886–1907).[4] In terms of trends, Okazaki, Hamao, and Hoshi (2004) maintain that banks played a comparatively large role during the industrial revolution period but that they were gradually supplanted by the capital markets, and find that a long-term marketization of the financial system took place during the period before World War II. On the other hand, Ishii (1999) argues that the financial system before World War II was basically led by banks even though the bank-centered circulation of funds experienced a temporary "paralysis" during the financial crisis of the 1920s.

Let us begin by considering the industrial revolution period. According to Table 1, between roughly 1886 and 1910 the share of borrowings was far larger than that of equities. However, it should also be noted that in Table 1 the share of equities soared from 24.7 percent during the 1886–90 period to 38.4 percent during the 1891–95 period. The importance of equities during the initial industrial revolution period is clearly demonstrated by the flow-side perspective on private nonfinancial sector fund-raising provided in Table 4, and this was what resulted in the phenomenon seen between 1881 and 1885 in which the share of equities was actually larger than that of borrowings. (Note that "equities" here does not include equities issued by banks and other financial institutions.) This is because large enterprises were established during the first half of the industrial revolution and much use was made of equities as a means

Table 4 Debt in the Private Nonfinancial Sector

Composition ratio of flow in the period, percent

	Equities	Corporate bonds	Borrowings	Investments	Call loans and others
1887–90	41.1	0.2	58.7	0.0	0.0
1891–95	48.6	6.3	45.2	0.0	0.0
1896–1900	28.9	0.5	62.3	8.2	0.0
1901–05	22.7	6.1	65.1	6.2	0.0
1906–10	23.8	9.9	55.8	10.5	0.0
1911–15	25.7	7.4	62.8	4.1	0.0
1916–20	41.0	2.4	47.9	5.9	2.7
1921–25	23.0	15.8	51.2	8.7	1.3
1926–30	45.4	26.4	25.1	8.9	–5.7
1931–35	68.8	14.1	0.0	10.2	6.9
1936–40	42.8	11.5	46.0	–1.0	0.7

Source: Fujino and Teranishi (2000).

4. Okazaki, Hamao, and Hoshi (2005) accept this argument with the "restriction" that the role of equities can be ignored.

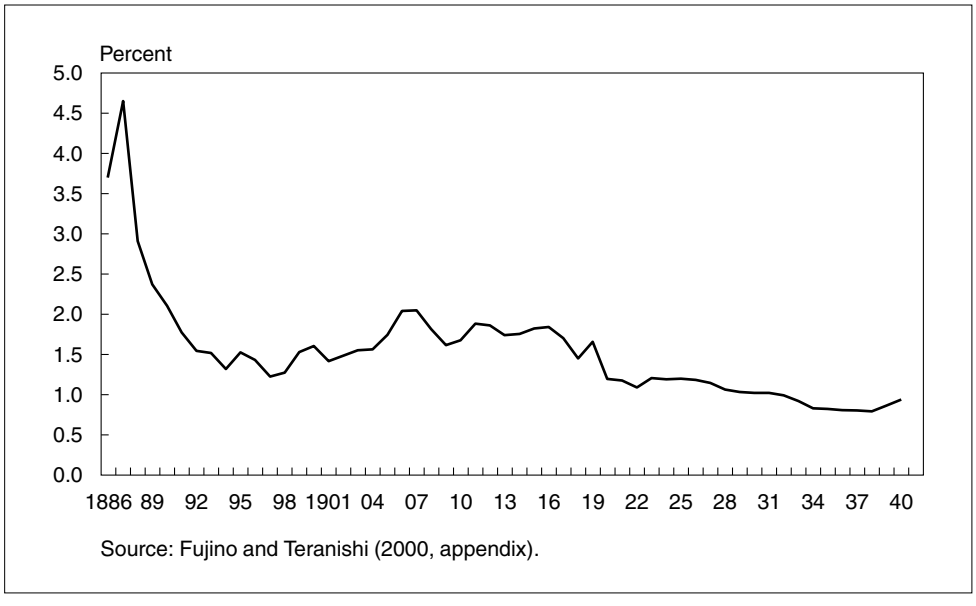
to finance them. As is well known, there was an initial boom in enterprise establishment between 1887 and 1889, followed by the recession of 1890, and then from 1893 to about 1895–96 there was a second boom. These new startups ranged from public-oriented industries such as railways and electric power to manufacturing segments such as spinning, paper, sugar, cement, shipbuilding, and steel. After establishment, these enterprises *most likely* made use of bank borrowings for their operating capital. Nonetheless, it is important to remember that their establishment itself relied primarily on equities.[5] However, economic development during this period consisted not only of the establishment of large, modern enterprises but also rapid development of indigenous commerce and industry, primarily in agriculture and allied sectors. Undoubtedly, much of the development of indigenous industries was driven by expanding demand from the newly established enterprises. However, another major factor (until 1897) was the decline in the relative value of silver against gold under the silver standard, which caused exports of indigenous products to grow. Yet another reason was the expansion of indigenous industries' domestic and international markets as Japan began to enhance its infrastructure. The development of these indigenous industries certainly would have required large amounts of operating capital in addition to capital investments, and the majority of this money was financed either directly or indirectly through bank borrowings.[6] That is why banks played such a large role during the "industrial revolution" period. Therefore, we can also say the following:

(3) Banks undoubtedly played a large role during the industrial revolution period, but this primarily reflects the funding demands of the indigenous sector and operating capital borrowings of the modern manufacturing sector and others; equity investment played a large role in supplying the initial funding for the early stage of the industrial revolution through the establishment of modern enterprises.

Let us now turn to a discussion about trends. Table 1 contains the ratio of borrowings to equities/investments, which serves as an indicator of the relative sizes of the capital markets and banks. During the initial period, the figure declined rapidly from 3.18 to 1.43, following which there was a short uptrend,[7] and then beginning in 1920 the trend again turned downward. Figure 1, which contains values for each year, confirms this observation. It seems to imply that banks played a strong role until about the 1910s, but from that point until the 1930s the role of equities became stronger. Looking next at ratios of borrowings and bills payable to equities for leading enterprises in all industries, found in Table 2, one can again observe a long-term uptrend. Figure 2, containing annual values, clearly confirms the uptrend. What this seems to imply is that while major enterprise fund-raising through banks was low overall, it did expand with time.

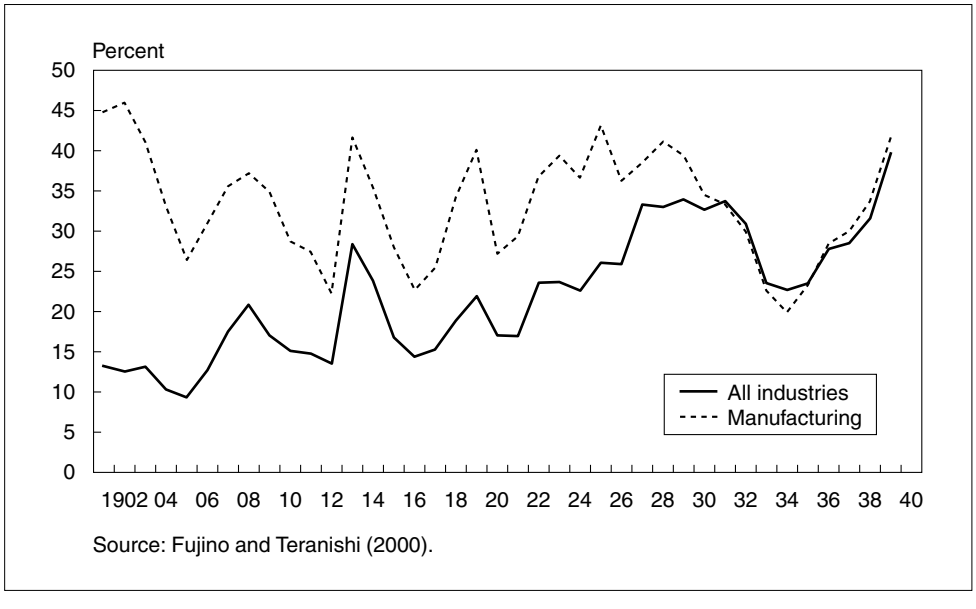
5. We will examine the issue of equity-secured financing later in this paper.
6. The majority of capital investment funding in the traditional sector is assumed to have been covered by cash on hand.
7. The decline in the ratio from 1886 to 1896 was due to the large number of modern enterprises established during this period, as discussed above.

Figure 1 Ratio of Borrowings to Equities and Investments in the Private Nonfinancial Sector



Source: Fujino and Teranishi (2000, appendix).

Figure 2 Ratio of Borrowings and Bills Payable to Equities in Leading Enterprises



Source: Fujino and Teranishi (2000).

We cannot necessarily assume that these interpretations are correct. Let us first look at Table 5, which contains ratios of borrowings and bills payable to equities for major enterprises broken down by industrial sector. Note that overall there are no significant changes in trends for individual manufacturing sectors. To confirm this, we turn to the annual values in Figure 2 for the ratio of borrowings and bills payable to equities in manufacturing industries. While there are some cyclical movements, there

Table 5 Ratio of Borrowings and Bills Payable to Equities

Ratio of the average of the composition ratio in the period, percent

	1902–05	1906–10	1911–13	1914–15	1916–20	1921–25	1926–27	1928–30	1931–35	1936–40
Manufacturing	0.41	0.33	0.28	0.39	0.30	0.34	0.40	0.40	0.28	0.31
Cotton spinning	0.46	0.27	0.30	0.41	0.17	0.13	0.21	0.11	0.09	0.43
Shipbuilding	—	—	—	0.76	0.59	0.57	0.76	0.70	0.34	0.28
Chemical fertilizers	—	—	—	0.32	0.20	0.46	0.47	0.51	0.42	0.38
Cement	—	—	—	0.35	0.35	0.32	0.24	0.23	0.15	0.16
Paper	—	—	—	0.43	0.23	0.47	0.47	0.47	0.45	0.15
Sugar	—	—	—	0.26	0.37	0.36	0.51	0.58	0.39	0.23
Beer	—	—	—	0.11	0.12	0.09	0.11	—	0.11	0.13
Milling	—	—	—	1.09	1.47	1.91	1.81	1.70	1.63	1.55
Electric power	0.13	0.14	0.13	0.20	0.05	0.15	0.19	0.17	0.17	0.09
Electric railways	0.01	0.08	0.12	0.25	0.15	0.11	0.23	0.34	0.44	0.37
Marine transportation	0.01	0.02	0.01	0.05	0.00	0.04	0.05	0.26	0.19	0.27
All industries	0.12	0.15	0.15	0.26	0.17	0.21	0.26	0.33	0.29	0.30

Source: Fujino and Teranishi (2000).

Table 6 Check of Sample Bias

	Ratio of manufacturing to all industries in total capital in Fujino and Teranishi (2000)	Ratio of manufacturing to all industries in capital in *Business Corporate Statistics*	Ratio of manufactured products to the sum of manufactured products and transportation, telecommunications, and public utility products in current prices
1902	0.28	0.20	0.94
13	0.39	0.39	0.91
14	0.52	0.41	0.89
27	0.45	0.39	0.87
28	0.44	0.39	0.87
40	0.63	0.52	0.93

Notes: 1. Data from Fujino and Teranishi (2000) are data for the first half in each year.
2. Data from *Business Corporate Statistics* are from the BOJ's *Honpo Shuyo Keizai Tokei* (Hundred-Year Statistics of the Japanese Economy). Capital is paid-in capital up to 1914 and investments or authorized capital thereafter. "All industries" includes finance, commerce, agriculture, and so on.
3. Products in current prices are from *Choki Keizai Tokei* (Long-Term Economic Statistics) Vol. 1, tables 12 and 17.

are no significant changes in the trend. Therefore, the changes in the all-industries, major-enterprise ratio of borrowings and bills payable to equities do not presumably represent changes in the dependence of individual sectors or enterprises on capital markets but either changes in the industrial structure—the relative sizes of broadly defined public services versus manufacturing—or bias in the sample enterprises. To confirm this, we calculated the ratio of total assets (aggregate of equities, reserves, bonds, borrowings, and bills payable) for manufacturing (as discussed in Fujino and Teranishi [2000]) to total assets for all industries at the points at which the raw data change: 1902, 1913, 1914, 1927, 1928, and 1940. Table 6 compares this to the ratio of industrial capital to all-industries capital as found in corporate statistical

tables.[8] Both series move in more or less the same manner. In other words, the changes in the ratio of all-industries, major-enterprises borrowings to total borrowings and bills payable likely were not caused by sample bias. Therefore, the long-term uptrend in the all-industries borrowing/bills payable ratio in Figure 2 likely reflects the higher share occupied in the industrial structure by manufacturing, which was dependent primarily on borrowings. However, we should also note that the ratio of borrowings and bills payable to equities for the electric railway and marine transportation sectors (Table 5) rose rapidly between the late 1920s and the 1930s. The reason for this will have to be the subject of a future inquiry. Suffice it to say that this is why in the 1930s both ratios virtually overlap in Figure 2. These points lead us to argue the following:

(4) The diachronic rise in the dependence of all-industries major enterprises on borrowings and bills payable reflects the increasing share of manufacturing in the industrial structure.

Let us now consider trends in the ratio of borrowings to equities/investments in the private nonfinancial sector, as found in Table 1 and Figure 1. Although we do not have data on the dependence of indigenous micro-producers on borrowings, we consider it reasonable to assume that the level was virtually 100 percent and did not change very much over time. Meanwhile, as seen above, in the modern, large enterprise sector the ratio of borrowings and bills payable to equities increased over time reflecting the growing share of manufacturing. According to Nakamura's (1973) hypothesis, the ratio of indigenous industries to all industries was constant (equilibrium growth for indigenous and modern industries) until World War I, but entered a decline (disequilibrium growth) thereafter. This leads to the following conclusion. The dependence of the private nonfinancial sector on borrowings rose through World War I reflecting the rising share of manufacturing, which is highly dependent on borrowings, within the modern industries sector. However, dependence on borrowings in the private nonfinancial sector declined thereafter in spite of the rising share of manufacturing in the modern industries sector due to the declining share of indigenous micro-producers entirely dependent on borrowings. Therefore the changes after World War I found in Table 1 and Figure 1 do not necessarily imply that modern, large enterprises made greater use of capital markets. Okazaki, Hamao, and Hoshi (2004) use data similar to those found in Table 4 to argue that, from a long-term perspective, the capital markets replaced the functions of banks during the period before World War II, but our observations above indicate that this view may not necessarily be convincing.

We can summarize our findings to this point as follows:

(5) The decline in the dependence on debt in the private nonfinancial sector after World War I reflects changes in the industrial structure due to the waning of the indigenous sector and does not necessarily reflect a greater utilization of capital markets on the part of individual modern industrial enterprises.

8. As a reference, Table 6 also shows the ratio of manufacturing-industry production (current-year prices) to the aggregate production value for manufacturing and transportation/telecommunications/public utilities. This ratio differs substantially from the other two series, a reflection of the significant differences in capital coefficients.

III. Examination from the Qualitative Side

Now let us move to the qualitative investigation. In this section, we will examine the roles played in resource allocation and corporate governance by intermediary financing mechanisms (primarily banks) and market-based financing mechanisms (primarily equities). For resource allocation, three questions must be addressed. First, how effective were banks and equity markets in providing information on investment opportunities? Second, to what extent did the two mechanisms bear investment risks for the economy as a whole? And third, what levels of households' preferences were reflected in the resource allocations by the two mechanisms? For corporate governance, we compare banks' ability to monitor the enterprise sector with that of shareholders. We also consider the innovations made by shareholders to reduce agency costs in enterprise control. Obviously, given the current levels of research and data availability, it is impossible to arrive at satisfactory answers for all of these questions. The observations that follow attempt to delineate concepts regarding these issues and provide tentative comparisons based on current research findings.

A. Comparison of Resource Allocation Efficiency

We begin by considering the role played by banks in resource allocation. Information production is the first topic, regarding which the following point can be made:

(1) In addition to servicing part of the demand for funds among modern enterprises, primarily in manufacturing, banks supplemented money lenders and other informal means of finance and functioned, in fact, as the sole supplier of funds for indigenous micro-producers. However, it is doubtful that banks produced sufficient information in regard to the allocation of funds.

First, with respect to lending to modern enterprises, there is the problem of the agency nature of the "organ bank." Banks did not so much lend money based on their own subjective decisions as respond passively to the demand for funds among affiliated nonfinancial enterprises. Obviously, banks at this period in time had very little dependence on real estate collateral compared to the period after World War II.[9] However, "lending on credit" and equity-secured lending to wealthy individuals were probably mostly "connected lending" between the banker and the individual.

We must also note that lending to indigenous micro-producers involved a two-tier or two-step structure[10] consisting of lending from the bank to a major merchant or landlord and then lending from the merchant or landlord to the micro-producer. Sectoral breakdowns of banking services clearly demonstrate this. As can be seen from Table 7, the commerce sector accounted for more than 50 percent of bank lending through the 1920s. The vast majority of lending to the commerce sector went for advances to micro-producers: loans from grain merchants or fertilizer merchants to farmers, or loans from textile merchants or thread wholesalers to weavers and silk producers. Landlords and money lenders also borrowed funds from banks and lent them to farmers, and so on.

9. However, real estate collateral was used extensively in rural areas where little other collateral property was available.
10. Teranishi (1982) refers to this mechanism as "multiple intermediary finance."

Table 7 Ratio of Bank Lending by Industry

Percent

	Commerce	Industry	Agriculture
1893	49.2	1.0	5.6
97	63.7	1.2	8.3
1926	50.4	18.6	7.6
28	71.8		7.4
38	42.1	22.4	5.8
40	19.6	42.8	1.7

Source: Teranishi (1982).

In other words, rather than building up their own information, banks used the information networks of merchants and landlords when making loans to indigenous commerce and industry. Teranishi (1991, 1994) attempts to measure the strength of the information networks of merchants, landlords, and money lenders, and by extension the limits to the information functions of banks. Both of the papers use prefectural cross-sectional data from the 1920s to estimate demand functions for loans from money lenders. The demand functions depend on the availability of alternative financing from banks and credit unions, and others, as well as interest rates and other control variables. These estimations[11] indicate that credit unions were very much in competition with money lenders, but make it clear that a long period of information accumulation was required before bank lending could compete with money lenders. To add a bit more detail, in the initial period after a bank branch was opened in a prefecture, the bank was unable to compete with money lenders, and indeed was unable to effectively lend to rural areas until 17–19 years had elapsed.

The following point can be made regarding risk bearing by banks:

(2) Little of the risk of supplying funds through banks was reduced by the banks themselves using the law of large numbers; most of the risk was borne by depositors.

In theory, banks have the ability to collect micro-funds from depositors and reduce risks by diversifying borrowers. During the period before World War II, banks' risk reduction functions were insufficient in two aspects. First there was the problem of the agency nature of the "organ bank." Most banks tended to concentrate on supplying funding to specific enterprises or regions at the sacrifice of the benefit of diversification. Second, banks themselves tended to be under-funded, in part because of the large numbers of small banks that had been established. This meant that they were unable to respond adequately to the funding demands of increasingly large, highly creditworthy borrowers, and as a result may have been unable to enjoy the benefits of diversification.[12] Table 8 compares the distribution of sizes for banks, listed companies,

11. As a specific measure of a bank's capability to produce information, the papers use the average number of years from the establishment of a bank branch in the prefecture.
12. Shimura (1969) focuses on this point and argues that their small size prevented banks from moving into equity underwriting, as a result preventing Japanese banks from following the path to investment banking that was seen

Table 8 Authorized-Capital Distribution of All Joint-Stock Companies, Listed Companies, and Ordinary Banks in 1921 and 1934

[1] 1921

	All joint-stock companies		Ordinary banks	
	Number of companies	Composition ratio of capital (percent)	Number of banks	Composition ratio of capital (percent)
–¥100,000	6,643	1.7	295	0.6
¥100,000–500,000	6,267	8.1	606	5.2
¥500,000–1 million	2,122	8.2	469	11.3
¥1–5 million	2,222	25.6	371	26.3
¥5–10 million	285	11.6	56	14.6
¥10 million–	263	45.0	38	41.9
Total	17,802	100.2	1,835	99.9

[2] 1934

	All joint-stock companies		Listed joint-stock companies		Ordinary banks	
	Number of companies	Composition ratio of capital (percent)	Number of companies	Composition ratio of capital (percent)	Number of banks	Composition ratio of capital (percent)
–¥100,000	10,113	1.8	3	0.0	0	0.0
¥100,000–500,000	7,195	6.6	44	0.2	0	0.0
¥500,000–1 million	1,851	5.4	72	0.7	132	4.0
¥1–5 million	2,106	18.7	229	7.9	277	24.3
¥5–10 million	310	9.6	116	10.0	30	10.5
¥10–50 million	402	58.0	158	33.2	38	29.0
¥50 million–			47	48.1	6	32.2
Total	21,977	100.1	669	100.1	483	100.0

Note: Composition ratio of the listed joint-stock companies is the ratio of the number of shares. Classification by firm size is not consistent among the three sources of data, and adjustment has not been carried out. For example, companies with capital of ¥1 million are included in the category of ¥1–5 million in Goto (1970) and *Nihon Choki Tokei Soran* (Historical Statistics of Japan), but in the category of ¥500,000–1 million in Masuji (1936).

Sources: Masuji (1936, p. 3), Goto (1970, p. 78), and *Nihon Choki Tokei Soran,* compiled by the Japan Statistical Association, Vol. 4, p.174.

and joint-stock companies. In 1934, the size distribution of banks was roughly the same as for all joint-stock companies. Companies with more than ¥10 million in capital represented 58.0 percent of the former and 61.2 percent of the latter. However, many of the listed companies were quite large, with those capitalized at ¥10 million or higher accounting for 81.3 percent of the total. While companies capitalized at ¥50 million or higher accounted for 32.2 percent of the banks, they accounted for 48.1 percent of the listed companies, nearly half. By contrast, only 8.8 percent of listed companies were capitalized at ¥5 million or less, while 28.3 percent of banks were. Unfortunately, there are no usable data available on listed-company size distribution in 1921. However, we can infer that the gaps in the size distribution between banks and

in the United States. However, large banks such as Yasuda and Mitsui moved aggressively into bond underwriting, so there is room to reconsider Shimura's hypothesis.

listed companies were even larger during the period prior to the bank concentration policy after the enactment of the Banking Law in 1928.

Because of this, during the period before World War II banks had little ability to reduce risk by diversifying borrowers. There were extremely large risks inherent in the banking sector's lending, and most of them were presumably borne by depositors. The many financial crises that occurred during the prewar period demonstrate the high risks to which banks were exposed.[13] Bank information disclosure was extremely inadequate prior to the enactment of the Banking Law. Looking back, it seems that prewar depositors must have been fully aware of the risks to which banks were exposed when they chose to hold their money as bank deposits. Tables 9 and 10 contain asset structures for the private nonfinancial sector and illustrate the importance of risk-taking by depositors in the prewar period. In Table 9, the ratio of bank and postal deposits to total private nonfinancial sector assets rises from 18.6 percent in 1886–90 to 43.3 percent in 1916–20 and remains at high levels thereafter.[14] Virtually the same trends can be observed in Table 10's flow-side values. The ratio is even larger when fund-raising using financial-sector equities is added to the deployment of funds by banks. In Table 9, the share of deposits and financial-sector equities reaches 46.0 percent between 1901 and 1905. In flow terms, the maximum level was 57.0 percent between 1896 and 1900.

Table 9 Assets in the Private Nonfinancial Sector (Composition Ratio)

Average of the composition ratio of balances in the period, percent

	Cash	Bank and postal deposits	Insurance and trusts	Domestic government bonds and local bonds	Equities			Corporate bonds	Investments
					Total	Financial sector	Nonfinancial sector		
1886–90	21.6	18.6	0.1	29.2	28.3	17.0	11.3	0.0	0.0
1891–95	21.4	20.9	0.2	19.2	31.7	13.4	18.3	1.0	0.0
1896–1900	16.4	26.2	0.5	13.7	36.1	15.1	21.0	1.3	4.3
1901–05	11.2	31.0	0.9	12.5	34.4	15.0	19.4	1.7	4.5
1906–10	8.4	34.8	1.2	17.5	25.3	10.5	14.8	1.8	4.8
1911–15	6.4	34.6	1.9	14.6	26.0	9.5	16.5	3.5	5.2
1916–20	5.0	43.3	1.9	8.3	28.2	7.2	21.0	3.1	4.3
1921–25	3.7	37.9	2.8	6.7	32.3	7.4	24.9	4.2	5.7
1926–30	2.5	37.9	7.6	6.1	28.3	5.9	22.4	4.0	6.3
1931–35	2.2	37.1	11.1	5.8	29.2	4.5	24.7	3.2	6.2
1936–40	2.9	41.6	12.2	5.4	27.6	2.6	25.0	2.4	4.2

Note: Stocks of the BOJ are included in the nonfinancial sector. The total for each period adds up to 100 percent.

Source: Fujino and Teranishi (2000, appendix).

13. Such financial crises include the following: (1) during the financial crisis of 1900–01, a total of 59 banks closed or suspended operations; (2) during the postwar depression of 1920, a total of 21 banks suspended operations; (3) during the financial crisis of 1922, a total of 11 banks suspended operations; and (4) during the financial depression of 1927, a total of 42 banks suspended operations, including the No. 15 Bank and the Bank of Taiwan.
14. On this point, it is worth looking at Ishii's (1997) contention that banks played a major role. However, the problem remains that, by nature, the industrial revolution period was a time in which many new enterprises were established and, as we have already seen, the role played by banks was mostly that of a supporting actor, supplying supplemental operating capital and financing indigenous industries. During the 1920s, banks are said to have been "paralyzed" (Ishii [1999]), but this period also saw the rapid growth of the trust banking and insurance sectors, and

Table 10 Assets in the Private Nonfinancial Sector (Flow)

Composition ratio of flow in the period, percent

	Cash	Bank and postal deposits	Insurance and trusts	Domestic government bonds and local bonds	Equities			Corporate bonds	Investments
					Total	Financial sector	Nonfinancial sector		
1887–90	22.0	17.8	0.2	–4.6	42.2	5.7	36.5	0.2	0.0
1891–95	16.8	33.6	0.8	5.6	32.9	5.8	27.1	3.7	0.0
1896–1900	5.2	35.3	1.2	3.5	43.1	21.7	21.4	1.7	9.8
1901–05	5.3	25.9	1.4	32.4	13.4	3.5	9.9	2.0	3.3
1906–10	2.5	38.4	2.0	11.8	20.3	5.9	14.4	3.4	7.0
1911–15	–1.7	44.5	5.3	1.9	31.2	9.3	21.9	10.0	4.9
1916–20	3.9	41.8	1.5	3.7	36.0	7.0	29.0	2.2	4.7
1921–25	1.6	29.7	10.3	7.9	22.6	5.0	17.6	9.0	8.9
1926–30	–4.1	40.3	30.7	–0.1	26.0	–2.1	28.1	0.2	8.0
1931–35	4.7	32.6	25.7	9.8	25.9	–1.6	27.5	–1.3	4.7
1936–40	3.6	57.8	10.4	4.0	21.2	–0.2	21.4	1.1	–0.4

Note: Stocks of the BOJ are included in the nonfinancial sector. The total for each period adds up to 100 percent.

Source: Fujino and Teranishi (2000, appendix).

Now let us consider the role of the equity markets in resource allocation. Again, information production is the first topic, about which the following point can be made:

(3) It is questionable whether the equity markets before World War II had sufficient information on investment opportunities in the economy and were able to reflect that information in share price formation.

During the period before World War II, the equity issuing market was underdeveloped—indeed, only the secondary market was active (Shimura [1969])—and the functioning of this secondary market was not necessarily adequate due to several inherent characteristics. First, trading consisted of two different forms: spot trading and "fixed-term trading," a kind of futures trading that was settled by payment of differences. The majority of equity market trading was done on margin,[15] but unlike current-day margin trading, was not backed up by underlying actual deliveries in any form, making it extremely speculative. Because of this, when the market was cornered, the number of shares purchased in the cornering operation could, in extreme cases, exceed the number of shares actually issued. Second, the actual movement of shares through the exchange—that is, the volume of spot trades and delivery settlements for fixed-term trades—was less than 10 percent of total trading in Osaka and about 30 percent of total trading in Tokyo. Spot deliveries were made almost exclusively off the exchange. Third, the only shares traded on the exchanges were from large enterprises such as the railways and marine transportation companies. Most other shares were

given the funds intermediation function performed by these sectors in the form of contractual savings, it may not be correct to argue that intermediary financing as a whole was "paralyzed."

15. During the Meiji Period, at its peak spot trading accounted for about one-fourth of total trading on the Tokyo Stock Exchange and less than 5 percent of total trading on the Osaka Stock Exchange.

only traded off-exchange. In other words, the role of the exchanges in share price formation was extremely limited when viewed in terms of the entire equity market.

What these characteristics indicate is that share prices were formed randomly through speculative fixed-term trading, and to that extent the equity market may have been efficient. However, these prices did little to reflect the future earnings potential of enterprises; prices were presumably formed based on information about individual enterprises obtained personally by spot traders and investors. Kataoka, Maru, and Teranishi (2004a, b) investigate the efficiency of share price formation using daily price data for 29 spinning company stocks and 28 railway company stocks from January 5 to December 29, 1900 and monthly share price data from January 1898 to December 1903. Their work first considers whether there was autocorrelation in daily share price rates of change (rates of return), and finds that the efficiency criterion was achieved during these periods just as it was during the postwar period—in other words, there was limited scope to use correlation to achieve excess returns. Second, their work finds that these periods do display different characteristics from analytical results achieved for the postwar period, in that announced changes in the official discount rate were not necessarily immediately reflected in the rates of return on equities and corporate net profits only began to slowly influence the average cumulative residual for equity rates of return after their disclosure. In other words, during the late Meiji Period, share prices did not necessarily have enough elasticity to reflect the surprise effect from the official discount rate, nor did they reflect discount corporate earnings forecasts prior to the disclosure of information.

The following point can be made regarding risk bearing by equity markets:

(4) Other than speculators engaging in fixed-term trading on secondary markets, the investors in equity markets were merchants and landlords of substantial personal wealth. They took sufficient risks when making their investments. However, they took a negative view of participation by ordinary investors and tended to share returns and risks only among a select group of existing shareholders.

The classic example is the *zaibatsu*. *Zaibatsu* families owned holding companies as unlimited partners, and the holding companies kept the subsidiaries they owned closed and non-public. The assets were managed by the *zaibatsu* families.[16] The investment activities of subsidiaries were closely monitored by the holding company and, until the 1920s, investments were made in principle only with funds that had been accumulated within the *zaibatsu*. There were particularly strict head office controls on the introduction of borrowings from outside (Miyajima [2003]). Opinions differ on the extent to which *zaibatsu* families were involved in investment activities as part of the management of the *zaibatsu*,[17] but given their unlimited-liability status, it is certain that the individual *zaibatsu* families were fully cognizant of the investment risks.[18]

16. It was only in 1937 that the first *zaibatsu* head offices were partially converted into joint-stock companies and partners achieved limited-liability status.
17. Yasuoka (1998) emphasizes the family control structure, while Morikawa (1980) emphasizes the discretion afforded to professional managers; Asajima (1983) and Okazaki (1999) highlight holding companies' monitoring of subsidiaries.
18. Takeda (1995) and Miyajima (2003) argue that the unique *soyu-sei* (total ownership system) of the time increased families' awareness of risk—because they were unlimited partners—and also strengthened their voice in management.

Although not to the same extent as the *zaibatsu* and other non-public enterprises, even the publicly traded large enterprises had a strong tendency toward control by a small group of existing shareholders. This is perhaps best illustrated by the mechanisms used for capital increases at publicly traded enterprises. As Shimura (1969) makes clear, capital increases during the period before World War II were almost exclusively in the form of allocations of new shares at par to existing shareholders. The reason for choosing allocation at par was in most cases to achieve founders' profits, but what is more important is that the allocation was made to existing shareholders rather than publicly placed. As can be seen in Table 11, the ratio of publicly placed capital increases was extremely low throughout the entire period from 1914 up to World War II. The vast majority of capital increases were allocated to existing shareholders.[19] In the 1920s, capital increases due to merger accounted for a high share, but by nature this was the same as an allocation to existing shareholders because all it meant was a conversion of existing shares to shares in the merged company. This structure of dominance by a small group of existing shareholders also manifested itself in the methods used to raise capital for newly established enterprises. Table 12 illustrates that most capital for new enterprises was raised by private placement.[20]

Obviously, there were some public placements of new shares, and existing shares were actively traded (mostly off-exchange), so there was an increase in the number of shareholders. Table 13 shows that between 1920 and 1934 the number of postal saving accounts grew by 1.8 times and the number of bank accounts by 1.3 times, but the number of shareholders in large companies grew by 3.4 times. However, despite this expansion in the number of shareholders, the original shareholders were able to continue to hold the reins of most companies, particularly controlling shareholders and their associates.

Table 11 Types of Additional Shares Issued by Leading Enterprises (402 Companies)

	1914–17	1918–22	1923–27	1928–32	1933–37
Additional shares issued (authorized capital, ¥ millions)	387	2,497	1,459	967	3,928
Composition ratio by type of additional shares issued (percent)					
Mergers	1.9	15.3	34.1	37.9	9.0
Assignments to existing shareholders	72.7	67.8	52.5	54.8	68.9
Awards	0.2	1.4	2.8	1.1	1.4
Other assignments	4.7	2.9	2.4	1.3	9.5
Public issues	12.8	5.6	4.9	2.9	5.9
Unclassified	7.8	7.1	3.3	2.0	5.1

Note: Survey utilizing magazines, company histories, and other materials. Number of companies, amounts of additional shares issued, and percentages of types are given in Shimura (1969). Composition ratios for the periods are calculated using the estimated amount of each type based on the percentage each year.

Source: Shimura (1969, p. 222).

19. What is more, the enterprises themselves issued the new shares because banks and other financial institutions did not offer underwriting services.
20. During the 1930s, companies accounted for a large proportion, but this reflects the rapid rise in the proportion of corporate shareholders in large enterprises.

Table 12 Composition of Capital-Raising Methods of Newly Established Enterprises

Percent

	1912–14	1915–19	1933–37
Founders, assentors, private subscription	64.0	78.2	19.9
Companies	13.6	14.8	48.9
Public subscription	7.0	4.4	3.8
Government	—	—	20.3
Other	15.4	2.7	7.1

Note: Composition ratio of capital-raising methods with regard to authorized capital. Investigation was carried out using magazines, company histories, and other materials. Samples were 70 enterprises (capital ¥71 million) out of all newly established 1,019 enterprises (capital ¥634 million) for 1912–14; 100 enterprises (capital ¥631 million) out of 6,309 enterprises (capital ¥4,543 million) for 1915–19; and 302 enterprises (capital ¥2,466 million) out of 6,652 enterprises (capital ¥11,644 million) for 1933–37.

Source: Shimura (1969).

Table 13 Change in Number of Deposit Accounts and Shareholders

	1920	1934
Number of postal saving accounts	24,102	43,618
Number of accounts in ordinary banks (thousands)	6,812	8,831
Number of shareholders in 10 major enterprises (thousands)	104	349

Note: Savings and installment deposit accounts are not included in the number of accounts in ordinary banks. The 10 major enterprises consist of Tokyo Electricity, Daido Electricity, Nihon Hypothec Bank, Osaka Merchant Marine, Toho Electricity, Nihon Oil, Nihon Yusen, Kawasaki Shipbuilding, Nihon Electricity, and Minami-Manshu Railways.

Sources: Goto (1970), Masuji (1936), and *Yusei Hyakunen-Shi Shiryo* (Materials for a Hundred-Year History of Postal Services) compiled by the Ministry of Posts and Telecommunications, Vol. 30.

Two supplemental points should be made regarding these observations. The first concerns the welfare implications of the funds flowing through equity markets. In theory, a well-developed equity market should allocate funds to reflect the current and future consumption preferences of the consumers (asset holders) in the economy. In light of this, equity markets before World War II allocated funds to major enterprises in a way that reflected the preferences of a limited number of wealthy individuals, and this determined the pattern of development for modern industries. Non-wealthy individuals (consumers) held bank deposits and banks participated in investment activities within the economy by actively taking on risk, but their preferences were primarily reflected in the allocation of resources to indigenous production activities. The second point concerns the function of equity-secured finance. Shares in the period before World War II had high par values of ¥50 and ¥100, and common practice was to pay capital in installments, with funds for such payment raised in the form of bank loans secured with the shares. Ishii (1999) concludes from this that the fund-raising of large enterprises on the equity markets was supported by bank borrowings through the mechanism of equity-secured finance, which implies that the focal point of the financial system before World War II was the flow of funds through banks. However, what is important concerning this point is that banks were unconcerned whether the funds loaned against equities were used to pay for the equities or for other purposes.

What this means is that, however it was financed, the allocation of investments to equities was a decision made by investors (households). Banks did not bear the risk of equity investments, but merely the risk of lending to investors. In that sense, the argument that widespread equity-secured finance is grounds to discount the role played by equity markets is not necessarily supportable.[21]

Still, it is extremely important that banks took the risk of lending to investors. Funding for these loans came from micro-deposits, and depositors supplied funding to large enterprises in the form of bank loans to investors. The risks borne by depositors were only the risks associated with the bank. Nonetheless, the flow of funds took this route from micro-depositors to large enterprises. It is possible, therefore, that the bulk of the loans from banks to merchants actually flowed into the large enterprise sector in the form of equity investments.[22] In other words, this flow of funds implies that Ishii's (1999) argument regarding the importance of the bank-mediated circulation of funds is justified. However, the argument invites confusion, because it focuses only on the portion of the funds secured with equities.

B. Comparison of Roles in Corporate Governance

The next question to be considered is the role played by equity markets, banks, and other financial institutions in governance mechanisms for major large enterprises in the modern sector. The first point to be emphasized is as follows:

(5) Shareholders fundamentally played the lead role in the governance of large enterprises.

As discussed above, the governance of the *zaibatsu* involved strong control by the owner family. The holding company's professional managers exerted strong leadership over investment proposals, including the investment plans of subsidiaries, but the intentions of the family were presumably given great weight in the approval of final investment plans.

The same held true for major enterprises in light industrial sectors such as spinning, papermaking, cement, and brewing (Miyajima [2003]). Most of these enterprises were owned in the form of joint-investment companies by the merchants and manufacturers involved in the relevant businesses, and decision-making was by agreement of the major shareholders jointly invested in the company. The number of shareholders was limited, and the general meeting of shareholders is known to have functioned effectively as a forum for creating consensus (Kataoka [1988]).

As we have observed, capital increases by these large enterprises generally took the form of allocations of new shares to existing shareholders. What is more, equity underwriting functions were undeveloped in Japan before World War II,[23] requiring issuing enterprises to manage the entire process of new share issues, allocations, and subsequent payments (Shimura [1969]). In part, this reflects the slowness of financial institutions to take on investment banking functions, but much is also due to the strong

21. This point owes much to comments provided by Shin'ichi Fukuda. See also Teranishi (1982, pp. 204–207).
22. It must also be remembered that a considerable portion of bank loans to merchants was re-lent to micro-producers.
23. Corporate and public bonds were actively underwritten by major banks and securities companies.

desire of existing shareholders to retain control over the enterprise by maintaining their ownership ratios.

Now let us consider monitoring by banks:

(6) Banks are assumed to have had limited ability, as creditors, to provide monitoring in the governance of large enterprises.

The largest factor in this was that banks' position as "organ banks" ranked lower on the hierarchy than the enterprises or enterprise groups they served. "Organ banks" were established as conduits to raise funds for industry and enterprises by collecting deposits from the general population. It has often been pointed out since Kato (1957) that most banks during the period before World War II were of this nature. Under this banking system, it was common for enterprises and banks to have not only interlocking shareholders, but also interlocking directors and managers. Connected lending to shareholders and directors was rampant, and bank behavior was often contrary to the interests of depositors and outside (non-controlling) shareholders. Miyajima (2003) examines Japanese enterprises during the period before World War II from the perspective of major shareholder ownership ratios and manager ownership ratios, categorizing them into three types: the three large *zaibatsu* (Mitsui, Mitsubishi, and Sumitomo), publicly traded companies in light industries formed by joint investment, and entrepreneurial enterprises. He argues that the financing for entrepreneurial enterprises was closely related to "organ banking."[24] His entrepreneurial enterprises consist primarily of the enterprises more commonly known as the "Taisho *zaibatsu*" or the "new *zaibatsu*." These enterprises had little separation of management and ownership. Entrepreneurial managers instead used funding from agency banks to engage in aggressive business activities. For these enterprises, banks were just one member of the corporate group,[25] and their ability to monitor the enterprise was probably quite limited.

On the other hand, cotton spinning and other light industries were the leading Japanese industries at the time and had a high ability to raise funds, including short-term financing raised on the bill trading market. The same holds true of electric power and other public service enterprises, which had the ability to raise funds on overseas markets with the issue of foreign currency-denominated bonds and therefore had generally weak relationships with banks. Even within the *zaibatsu*, banks were not necessarily central, because funding could be raised from the accumulations within the group. If anything, banks served as the "external arm" of the *zaibatsu* (Shibagaki (1965]). The conclusion from the above is that banks had only limited ability to monitor the large enterprises to which they lent during the period before World War II.

This governance mechanism raises the question of the relationship between managers, other employees, and shareholders in large enterprises during the period before World War II. Did the controlling shareholder (owner) exercise dominant control, or were there sharp conflicts between managers and owners, as appeared during the same

24. Teranishi (2005b) provides a critical examination of Miyajima's (2003) three-type hypothesis.
25. This is only a generalization. For example, the Bank of Taiwan was the "organ bank" for Suzuki Trading, one of the most prominent of the new *zaibatsu*, but it cannot be considered a group subsidiary.

period in the United States and which raised agency costs? In point of fact, the circumstances in Japan before World War II were different (Teranishi [2006]).

(7) Shareholders had final control in the large-enterprise governance structure, but rights to residual income and corporate control were gradually ceded to professional managers and middle management.

Takahashi (1977) and Morikawa (1980) discuss the process by which the *zaibatsu* ceded rights to residual income and corporate control to professional managers. Of particular note is the *zaibatsu* recruitment of senior government officials and the BOJ elite who had received higher education. The *zaibatsu* gave these professional managers a great deal of discretion (although the family retained the ultimate decision-making rights) and promised them large bonuses. One example is Hikojiro Nakamigawa, who was educated in England and served in the Ministry of Industry and Ministry of Finance before becoming president of the Sanyo railway company and then moving to Mitsui. As managing director of Mitsui Bank, he demanded 10 percent of the bank's profits as a bonus.[26] The payment of large bonuses represents the ceding of rights to residual income, and the drastic reforms undertaken by Nakamigawa at Mitsui Bank hint that rights to residual control were indeed granted to him.

Rights to residual income and corporate control were also ceded to professional managers at non-*zaibatsu* enterprises. For example, at cotton spinning enterprises, it was initially common for major shareholders with management abilities to undertake management of the enterprise, but there emerged a growing tendency to recruit professional managers from outside. In addition, these enterprises integrated boards of directors and management teams to reduce the agency costs incurred by separating ownership from management. For example, at Kanegafuchi Spinning (Kanebo), the leading firm in cotton spinning, Sanji Muto, who was educated in the United States and served as managing director and then president of Kanebo, revised the articles of incorporation at the 1927 general meeting of shareholders to restrict the positions of president and executive director to persons with at least five years of work history at Kanebo and to require these directors to be employed at the positions full-time. Similar reforms subsequently took place at other leading companies, including Toyo Spinning, Kurashiki Spinning, Fuji Gas Spinning, and Nisshin Spinning (Yui [1995]). It must be noted, however, that these organizational reforms were made at general meetings of shareholders with the consent of shareholders.[27]

In the 1920s, more white-collar, university-educated employees were hired and rights to residual income and control were gradually ceded to them. These university-educated employees were given a lifetime employment agreement and seniority wage system, and, as middle managers, they were allowed a great deal of discretion. In manufacturing, factories had accounting, sales, and personnel sections similar to those in the head office and a large amount of autonomy in their product development,

26. Tentative calculations by the author indicate that, when disposing of current profits, *zaibatsu* paid out more in director bonuses and less in dividends than non-*zaibatsu*.
27. Note also that Managing Director Toyoji Wada of Fuji Gas Spinning received a bonus of ¥300,000 in 1905, compared to the company's net profit of ¥3 million for the year.

Table 14 Progression toward the Period of Professional Managers

	1905	1915	1930
(1) Number of professional managers			
Fewer than two persons	69	86	42
Two or more persons	5	29	113
Total number of enterprises	75	115	158
(2) Ratio of professional managers in directors			
Less than one-third	—	50	20
One-third or more	—	19	45
Total number of enterprises	—	69	65
(3) Career path of professional managers			
Internal promotion	8	—	247
Intermediate recruitment or other	28	—	223
Total number of managers	36	—	470

Notes: 1. The table in Takeda (1995, p.141) based on Morikawa (1981, 1991) has been rearranged.
2. Total number of enterprises in (1) includes unclassified samples. Intermediate recruitment or other in (3) includes temporary directors and unclassified samples.

process improvement, and materials sourcing. Becoming a section chief at a large factory was tantamount to *being put on the executive track* and the first step to future membership in the management team.

Table 14 provides an illustration of the emergence of professional managers, integration of management teams and boards, and development of mechanisms for internal promotion. As can be seen in panel (1), out of 75 companies in 1905, only five had two or more professional managers, but by 1930, that number had risen to 113 out of 158. Panel (2) illustrates the integration of management teams and boards of directors. Panel (3) shows the increase in the percentage of professional managers gaining their position by means of internal promotion.

Teranishi (2006) notes that changes in the industrial structure and growing international competition raised the necessity of introducing new technologies and that these organizational reforms, in which the shareholders (enterprise owners) ceded residual control rights to employees and managers, enabled enterprises to avoid "holdup problems" and provided incentives for them to develop firm-specific skills.[28]

IV. Conclusions

Were banks really at the center of the Japanese financial system before World War II? Our observations on this question are formulated in the five propositions of Section II (quantitative aspects) and the seven propositions of Section III (qualitative aspects). These 12 propositions can be summed up as follows.

First, the quantitative aspects. The capital markets, primarily the equity market, played a major role in fund-raising for large enterprises. However, there is no indication that their role grew in size and significance over time as posited in modernization

28. Also refer to comments by Morck (2006).

theory. The declining share of bank borrowings in private nonfinancial sector fund-raising after World War I represents the waning of indigenous industries, which were highly dependent on borrowings, in the macro-level industrial structure. On the other hand, the mediated financial system of banks and others played a significant role in fund-raising at indigenous micro-producers and also in raising operating capital for large enterprises, primarily in manufacturing. Nonetheless, the role of banks did not increase over time in a manner that has continuity with the postwar period. The large-enterprise sector as a whole did see an increase in its dependence on borrowings over time, but this is due to superficial reasons: manufacturing sectors, which were highly dependent on borrowings from the beginning, began to account for a greater share of the industrial structure than broadly defined public services, which relied more on equities.

Next, the qualitative aspects. Shareholders and personal investors played a major role in supplying risk money in the economy before World War II. However, wealthy individuals were the primary personal investors and tended to take risks based on information that was close at hand and that came from close associates, resulting in little movement toward public companies of the kinds seen in Europe and the United States. Shareholders had ultimate control over large enterprises, but day-to-day managerial control was gradually ceded to professional and middle managers. At the same time, banks' qualitative capacities were extremely limited in the areas of enterprise information accumulation, processing, and monitoring. Nonetheless, depositors supplied banks with what on the macro level were large amounts of funds, fully aware of the risks inherent in banks as business entities. A portion of the deposits gathered by banks was directly lent as operating capital to indigenous industries and enterprises, while part was lent to merchants and investors and used to finance the capital investments of large enterprises in the form of equity funding. In this sense, bank deposits likely played a significant role in supplying risk money for economic development before World War II.

Finally, we should comment on the remaining questions directly related to these observations. The first question is the extent of the impact of the savings of micro-producers and medium-level producers (most of which were presumably in the form of deposits) in financing economic development before World War II. It is almost certain that the funds accumulated by landlords and merchants played a significant role in funding the initial stages of Japanese economic development, but it is extremely important to consider the role played by the savings of other groups when discussing the evolving patterns of capitalism. Ishii (1997, 1999) argues that savings accumulated in the form of bank deposits supported the production of capital by major shareholders and large enterprises, and that the key mechanism in this was equity-secured finance. On the other hand, Teranishi (1989), Okazaki, Sawada, and Yokoyama (2005), and other studies argue that the increase in savings held by the middle class during the interwar period weakened bank monitoring and impaired the functioning of the bank-centered financial system. The second issue to be raised is the constant change undergone by systems, whether securities or banking. For simplicity's sake, this paper did not touch on this topic to a significant degree in the discussion of qualitative aspects, but this is an important remaining issue. It is worth noting that

Okazaki, Hamao, and Hoshi (2005) argue that there was a significant improvement in the functioning of equity markets during and after the interwar period, particularly in the listing system and exchange trading. On the other hand, Teranishi (1989), Okazaki, Sawada, and Yokoyama (2005), and others argue that the elimination of "organ banking" resulted in significant functional gains for the banking system. These institutional evolutions need to be considered in more detail.

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