VARIETIES OF CORPORATE FINANCE IN JAPANESE INDUSTRIALIZATION

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Introduction

Many economic historians have argued that corporate finance in Japan was based on bank loans. This financial practice was closely related to corporate groups called *keiretsu,* which appeared after World War II. They were organized by major companies through interlocking stockholding and strong ties among firms within groups.[1] A main bank was included in each *keiretsu*, which played a role as a major financier for group companies. The bank not only supplied funds but also provided newly emerging modern firms with managerial skills and organizational techniques. Furthermore, the bank monitored the firms; when the firms were not well managed, it interfered with management of the firms. This Japanese corporate finance system seems to fit the Gershenkron's newcomer model; Japan as a latecomer of industrialization would need bankers' support for its economic growth.

This paper shows how corporate finance in the early industrialization of Japan was different from that of post-war Japan and the Gershenkron's model, and how various corporate financial practices were carried out from industry to industry. In particular, it focuses on major industries – railroads, electric utilities, and cotton spinning. Although Japanese government had attempted to establish a modern banking system since the late nineteenth century, these three major industries relied heavily on the securities markets with indirect support from banks. On the other hand, their financial practices were not the same. Different industries developed different financial practices from each other.

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[1] J. Rogers Hollingsworth, "Continuities and Changes in Social Systems of Production: The Case of Japan, Germany, and the United States," J. Rogers Hollingsworth and Robert Boyer, eds., *Contemporary Capitalism: The Embeddedness of Institutions* (New York: Cambridge University Press, 1997), pp. 265-310.

Corporate Finance in the Railroad Industry

Although railroad construction was initiated by the government until the 1870s, private railroad companies appeared after 1880. The government took seriously that railroads were indispensable for industrial development, but was not able to finance the construction of the nation–wide railroad system by itself.[2] The only way to construct railroads all over Japan lay in the reliance on private enterprises.

The capital required for the railroad industry was huge. According to Noda, the average capital of the major railroad companies was 30 to 75 times as much as that of the other corporations.[3] Miwa and Ramseyer also show that average paid-in capital of railroad companies overwhelmed the other large industries, including electric utilities and cotton spinning.[4]

	1890	1892	1894	1896	1898
Railroads	3,253	3,711	3,034	3,383	3,665
Electric utility	168	152	120	145	141
Cotton spinning	143	---	271	379	456

Table 1: Industry Comparison – Source: Miwa and Ramseyer, "Banks and Economic growth," p. 143. Paid-in Capital Per Firm (in 1000's of yen)

Most of the capital required was long-term funds because it was mostly used to construct facilities in broad areas and to purchase rolling stocks in the railroad industry. This huge capital requirement was mainly financed by common stock.[5] From 1884 to 1898, the proportion of common

[2] Iwakura Tomomi was a politician as well as a court noble from the late Tokugawa period to the early Meiji Period. He organized the Iwakura Mission to inspect Western institutions and culture, Iwakura Tomomi, *Iwakura-ko jikki* (1968), p. 1014.

[3] Masaho Noda, *Nohon shoken shijo seiristushi* [History of the Establishment of Japan Securities Market] (Tokyo: Yuhikaku, 1980).

[4] Yoshiro Miwa and J. Mark. Ramseyer, "Banks and Economic Growth: Implications from Japanese History," *Journal of Law and Economics*, (2002): 143.

[5] Japanese firms including railroad and others rarely used preferred stock they used preferred stock mostly during financial reconstruction because the Commercial Law prohibited the use of the preferred stock at the time of promotion, Noda, *Nohon shoken shijo seiristushi,* pp. 146-155.

stock to gross assets (equity ratio) of the railroad industry was 88 to 100 percent.[6]

However, in the early years, it was not easy to invite subscriptions of railroad stock. The public was suspicious of the profitability of the business because the railroad industry was quite new and it became the country's biggest business.[7] For that reason, politicians and old feudal loads along the railroad trucks often forced local capitalists to subscribe railroad stock.[8] Also, the government needed to support railroad companies to facilitate the sale of stock. In particular, it often guaranteed dividends, offered subsidies, rented out land gratis, granted the exemption of land tax, and provided technological support.[9]

The difficulty in distributing stock to the public was not limited to the promotion period of the companies. Whenever the railroad companies exhausted the funds from the capital stock they needed to increase capitalization. Usually, new stock was allocated to existing shareholders at par value. At that time, there were not many investors who had ample funds to subscribe new issue; the existing shareholders were the only reliable investors. In order to attract them, the companies had to provide shareholders with premiums through par value issue.[10]

In the late 1880s, however, railroad stock came to be widely held by the public through a railroad stock boom. The prospects of the profitability of the railroad business and the reduction of interest rates as a result of the establishment of modern financial institutions at that time turned many middle-class people to stock speculation.[11] In fact, railroad stock was a major dealing in the Tokyo Stock Exchange; half the amount of stock trade in the late nineteenth century was railroad stock.[12]

Although the main source of funds in the railroad industry was common stock, the companies also came to rely on bond issues. The use of bonds increased rapidly after the depression of 1890. Because the decline of

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[6] Equity ratio is the percentage of stock capital to gross assets.
[7] Iwakura, *Iwakura-ko jikki,* p. 1014.
[8] Noda, *Nohon shoken shijo seiristushi,* pp. 61-62.
[9] Noda, *Nohon shoken shijo seiristushi,* p. 51.
[10] Noda, *Nohon shoken shijo seiristushi,* pp. 106-107.
[11] Noda, *Nohon shoken shijo seiristushi,* p. 69.
[12] Tokyo Kabushiki, *Torihikijo, Toyko kabushiki torihikijo gojunenshi* [The 50th Anniversary of the Tokyo Stock Exchange] (1928).

stock prices discouraged people to invest in stock at that time, the companies had to rely on bonds, which promised the payment of interest to investors.[13]

Unlike stock, however, bonds were not distributed widely to the public. Although banks sometimes contributed to invite subscriptions of bonds, a small number of institutional and individual investors held them. Because there were no collateral loans before the Railway Collateral Law and the Collateral Bond Trust Law were promulgated in 1905, many investors were not willing to buy unsecured bonds. The lack of the investors often led to the allocation of bonds to major shareholders.[14]

In spite of the huge demand for capital, railroad companies were not eager to rely on foreign capital. One of the reasons was the policy of the exclusion of foreign capital in the early Meiji period. In 1869, American A.L.C. Portman, who had been granted a license to build a railroad between Tokyo and Yokohama in the end of the Tokugawa Period, was deprived of it by the Meiji government. Since then, no foreign capital had been introduced to the industry before the Russo-Japan War of 1905.[15] As a result of Japan's victory in the war, railroad companies took an increasing interest in the introduction of foreign capital along with the industrial development and the rise of the international standing of the nation. In 1906, two railroad companies, the Hokkaido Colliery and Railway and the Kansei Railway, achieved Sterling bond issues.[16] These were the first and last foreign bond issues in the industry because major railroad companies were nationalized in that year.

In contrast to the importance of stock in railroad finance, the role of banks was indirect. Banks did not make any loans to railroad companies but made stock collateral loan (*kabushiki tanpo kin'yu*) to shareholders. That is, shareholders could borrow money from banks by depositing their stock as collateral. In turn, the collateral stock was discounted by a central bank, the Bank of Japan. Although banks did not underwrite stock, they participated in the bond underwriting business after the 1890s. For example, the Kyushu Railway, one of the biggest railway companies, issued

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[13] Noda, *Nohon shoken shijo seiristushi,* pp. 81-87.
[14] Noda, *Nohon shoken shijo seiristushi,* pp. 92-96.
[15] Noda, *Nohon shoken shijo seiristushi,* p. 174.
[16] Japan Industrial Bank, *Gaisai shoshi* [History of Foreign Bonds in Japan], pp. 46-49.

¥1,500,000 bonds in 1893. A syndicate of twenty banks underwrote this issue.

In 1906, as mentioned above, the Railway Nationalization Law was promulgated, by which all railways except the ones to serve local transportation were nationalized.[17] As railroad stocks disappeared as a result of nationalization, investors began to turn from railroads to electric utilities. Electric utility stock was suitable for investment; as a public utility, the stable growth of the business was promised by the increase in demand as the economy grew.

Corporate Finance in the Electric Utilities Industry

The electric utilities industry emerged from the early 1880s in Japan and grew rapidly. The paid-in capital in the industry was only ¥20,000 yen in 1886. It grew ¥87.7 million in 1907 after the Russo-Japan War, and ¥762.1 million after World War I. Then, it reached ¥3,180.8 million in 1930. The growing business required long-term funds because electric utility companies needed to construct facilities to generate, transform, and transmit electric power. These facilities have to be big enough to meet the demand for electricity at the peak because electricity was not a storable product.[18] In spite of the demand for huge funds, unlike railways, the government did not provide the companies with any support or protection; they were privately operated enterprises from the beginning.[19]

The huge financial needs in the industry were mainly met by stock capital before World War I. Although there are no time series data about the equity ratio in the industry, Miwa and Ramseyer show that the equity ratio in 1910 was 83 percent. Also, debt-to-equity ratio shows us the importance of stock. As Table 2 shows, from 1903 to 1914 the role of stock relative to bonds and loans in electric utilities finance gradually decreased, but stock continued to be a major financial source.

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[17] Noda, *Nohon shoken shijo seiristushi,* p. 289.

[18] Nakayama Ichirō, Watanabe Ichirō, Kotake Sokuichi, and Kawada, Nitsuo, *Denryoku hyakunenshi* [The 100 year History of Electric Power] (Tokyo: Seikeisha, 1980), p. 43.

[19] Electric utility industry was dominated by private companies until 1938 when the government established the Nihon Hassoden Co. [Nihon Electricity Generation and Transmission] to control the electric power business under a war regime.

	Paid-in Capital	Bonds and Loans	Debt-to Equity Rate
1903	24,101,894	1,806,678	7.5%
1904	35,405,006	2,054,167	5.8%
1905	43,793,077	2,516,700	5.7%
1906	63,386,268	2,636,115	4.2%
1907	87,685,443	5,681,713	6.5%
1908	104,998,339	8,924,278	8.5%
1909	120,422,539	14,886,108	12.4%
1910	169,201,354	23,993,264	14.2%
1911	243,458,276	37,536,645	15.4%
1912	286,634,539	51,985,391	18.1%
1913	397,780,115	79,388,413	20.0%
1914	460,355,240	98,697,414	21.4%

Table 2: Electric Utilities – Source: *Denki Jigyo Yoran*, p. 402,Table 52.

Despite huge amounts of stock issued in the industry, similar to railroads, stock was not widely held by the public at first. When electric utilities companies were promoted, stock was usually sold to descendants of samurai, as well as, the nobility, national banks, rich merchants, and powerful local politicians.[20] When the companies attempted to increase capitalization, most of the new stock was allocated to the existing stockholders before 1903.

After the Russo-Japanese War, stocks of the industry for the first time came to be widely distributed to the public. This transformation is in part explained by the huge idle capital brought about through nationalization of railroads in 1906, and in part by technological progress. As companies facilitated the use of hydraulic power instead of thermal power, they needed much more capital to implement hydraulic facilities. This growing financial need had them rely on the general public.[21]

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[20] Nakayama, et. al, *Denryoku hyakunenshi,* p. 89.

[21] Kikkawa Takeo, *Nihon denryoku no hatten to Masunaga Yasuzaemon* [The Developemnt of Japanese Electric Industry and Yasuzaemon Matsunaga] (Nagoya: Nagoya Daigaku shuppankai, 1995), p. 4.

In contrast to stock, bonds were not important financial sources in the early twentieth century. Before the Russo-Japanese War, it accounted for only 2 percent of total assets. Even after the legal framework to issue collateral bonds were prepared through the issue of Collateral Bond Trust Law, bonds accounted for only 9 percent of the increase of capital.[22] In fact, there were no major companies to use bonds except the Ujikawa Electric Company before World War I.[23]

Bonds issued before World War I were domestic, not foreign, bonds. In fact, there were several plans to issue foreign bonds in the electric industry, but all failed. For example, the Tokyo Electric Light and the Osaka Electric Light Companies were planning to issue foreign bonds in the early twentieth century. However, foreign financiers were suspicious of the profitability of the business due to the relatively high cost of electricity to that of gas and destructive competition among many electric companies in Japan.[24]

Similar to railroad finance, the role of bank in electric utilities finance was limited before World War I. Bank loans were not an important financial source; they accounted for only 8 percent of the increase in capital from 1893 to 1903, and 13 percent from 1904 to 1914.[25] Also, stock underwriting was non-existent. In addition, because bonds were not an important financial source in the industry, the banks' role as underwriters and trustees was not active. In fact, the majority of the small amount of bonds issued in the industry was not underwritten. The activity as trustees was concentrated on a specialized bank in law, the Industrial Bank.[26]

Corporate financial practices in electric utilities companies were radically changed after World War I. In spite of the rapid increase in capital

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[22] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* pp. 22-23, table 1.

[23] The company issued debenture bonds bearing 10 years from 1912, in Japan Industrial Bank, 1969, p. 708).

[24] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* p. 39.

[25] After the Russo-Japanese War, in particular, Mitsui Bank was involved in financing Tokyo Electric Light Company, Mitsui Bank; *Mitsui Bank 80 nenshi*, p. 413.

[26] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* pp. 66-75; and Industrial Bank was established in 1900 to finance long-term funds for industries under the special law.

stock, the importance of capital stock gradually declined. The proportion of capital stock to the increase in total capital accounts for 67% from 1919 to 1924, and 41% from 1925 to 1930.[27] Instead of capital stock, the role of bonds increased rapidly in the 1920s. The proportion of bonds to the increase in paid-in capital rose to 21% from 1919 to 1924, and 35% from 1925 to 1930. Kikkawa explains the reasons that led the companies to bonds issues. First, in the 1920s, the use of bonds was more cost-effective than that of stock. While interest rates lowered to 6 to 7%, dividends were around 10% at that time. Second, it was the beginning of the 1920s that the bonds market was firmly established in Japan. Third, bond issues were suitable for meeting the exceptionally huge demand for capital of the growing industry. Finally, the stable growth of the business constantly required capital from bond markets.[28]

More importantly, the electric utilities industry turned to the use of foreign bonds in the 1920s. It began with the Sterling bond issue of the Tokyo Electric Light Company in 1923 and ended with Dollar bond issue of the Taiwan Electric Power in 1931. In total, foreign bonds were issued in the industry sixteen times, amounting to ¥523 million during the years. The issues of foreign bonds in the industry were huge. In 1929, Matsushima states, foreign corporate bonds in the industry reached 76% of all of the foreign corporate bonds in Japan, and more than 40% of the bonds issued by the electric utilities industry were foreign bonds.[29]

The use of foreign bonds was advantageous to electric utilities companies. The maturity periods of foreign bonds were usually much longer than those of domestic bonds. While maturities of domestic bonds were two to seven years, that of foreign bonds were usually more than twenty years. Also, companies sought exchange gains from yen revaluation through foreign bond issues. Because most foreign bonds were issued when the yen was devalued, the companies expected the profits from the revaluation of yen.[30] The boom of foreign bonds issued was further

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[27] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* pp. 22-23, table 1-1.
[28] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* pp. 58-65.
[29] Harumi Matsushima, "Denryoku Gaisai no Rekishiteki Igi," *Shakai Keizaigaku* 26/6 (1961): 92.
[30] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* p. 119.

facilitated by the revision of the Commercial Laws in 1927; it increased the upper limit of bonds issue from the amount equivalent to paid-in capital to twice the amount of paid-in capital.[31]

As the role of bonds in electric utility finance increased, banks helped the companies issue bonds more than before. Major banks such as the Mitsui Bank, the Mitsubishi Bank, the Yasuda Bank, the Sumitomo Bank, the Daiichi Bank, and the Industrial Bank began to underwrite bonds from the 1920s.[32] During the financial depression of 1927, Kikkawa states, the six banks underwrote more than half the bonds issued in the industry. Despite risk and financial burden of underwriting business, these underwriters tended to avoid forming syndicates during the 1920s.[33] Their avoidance of syndicates is in part explained by the banks' intention to construct strong ties to electric companies. In fact, particular relationships between banks and the companies existed in the 1920s; the Mitsui Bank tied with the Tokyo Electric Light and the Toho Electric Power, the Mitsubishi Bank with the Daido Electric Power, the Sumitomo Bank with the Ujikawa Electric, the Yasuda Bank with the Tokyo Electric Power, the Daiichi Bank with the Kyoto Electric power, and the Industrial Bank with the Daido electric power.[34]

In addition, banks facilitated collateral bonds issues as trustees. Especially the Mitsui Bank and the Industrial Bank dealt with more than 60 percent of the entire electric utilities collateral bonds. Also, only these two banks were allowed to deal with collateral trust of foreign bonds.[35] When the Industrial Bank was established, the Meiji government decided on its policy that private companies should use the Industrial Bank as a trustee as much as possible when they would issue foreign bonds. With this policy, the government attempted to prevent private companies from tying with the foreign capital market directly, fearing that scattering importations of

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[31] Matsushima, "Denryoku Gaisai no Rekishiteki Igi": 101.

[32] Foreign bonds were underwritten not by Japanese financiers, but by foreign investment bankers, such as Guarantee Trust & Co, Dillon, Read & Co, and Lee Higginson & Co in the United States, and White Hall Trust and Razard Brothers & Co in Great Britain.

[33] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* pp. 70-71.

[34] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* p. 73.

[35] Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* p. 74.

foreign capital would harm credit in Japanese economy.[36] Meanwhile, the participation of the Mitsui Bank in trusteeship of the foreign bonds issue began after 1925. Although foreign bonds issues were in boom in the 1920s, the Mitsui Bank was the only ordinary bank that was allowed to deal with trust business due to its credit in foreign countries.[37]

When securities of electric utility companies came to be held widely in the public, those of the cotton spinning industry also gained popularity for speculation purposes. Unlike electric utilities, the securities of the cotton-spinning industry were not suitable for investment because of the price fluctuation of raw materials (raw cotton) and of the final products (cotton yarn) in the markets.[38]

Corporate Finance in the Cotton-Spinning Industry

Until the 1870s, the cotton-spinning industry was home-handcraft manufacturing in Japan. To facilitate the modernization of the based-on industry and to increase productivity under the industrial development policy (*shokusan kogyo seisaku*), the government attempted to introduce machinery production to the industry. It established the government factories as a model, sold the spinning machines imported from Britain, and made loans to newly established private spinning firms. However, in the early 1880s, the cotton-spinning industry was still small. Average firms had 2000 spindles only.[39] Because capital required in such a small firm is not big, the founder and his family members could manage to finance the business without relying on securities.[40]

Surprisingly, large-scale spinning firms appeared without government supports in the 1880s. The Osaka Spinning Company was the first to set up as many as 15,000 spindles.[41] In three years, the number of

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[36] Japanese Industrial Bank, *Shasai shoshi*, p. 18.

[37] Mistui Ginko, *Mitsui Ginko Hachijunenshi* (Tokyo: Mitsui Ginko, 1957), p. 221.

[38] Noda, *Nohon shoken shijo seiristushi,* pp. 321-2; and Kikkawa, *Nihon denryoku no hatten to Masunaga Yasuzaemon,* p. 22, table 1-1.

[39] Takamura, Naosuke, *Nihon bosekigyo shi* [History of Japan Cotton Spinning Industry] (Tokyo: Hanawa shobo, 1971), pp. 39-45.

[40] Yamaguchi Kazuo, *Nihon kin'yushi kenkyū: orimono kin'yu hen* [History of Japanese Finance: Textile Finance] (1974), pp. 3-6.

[41] Takamura, *Nihon bosekigyo shi,* pp. 63-65.

the firms with 10,000 spindles or more increased to ten. The spindles of these companies accounted for 74 % of all the spindles in the industry.[42] As the size of the firms grew, financing long-term capital was a critical issue in the industry.

The increasing fixed capital in the industry was financed mainly by stock instead of funds from the founder and his family. The equity ratio in the cotton-spinning industry was much lower than those of railroad and electric utilities companies; it accounts for 50 to 60 % (Table 3). This is explained by the difference of the financial structures between industries. Unlike the other two industries, cotton-spinning firms required huge amounts of working capital to purchase raw materials.

	1890	1893	1894	1898
Number of companies	10	24	26	62
gross assets	7,505,000	16,555,000	21,654,000	53,114,000
paid-in capital	4,761,000	9,137,000	11,212,000	29,271,000
fixed assets	4,578,000	10,289,000	13,427,000	37,132,000
fixed/gross Assets	61.0%	62.2%	62.0%	69.9%
Equity Ratio	63.4%	55.2%	51.8%	55.1%

Table 3: Cotton Spinning I – Source: Takamura, *Nihon Boseki Shi*, vol. 2 p. 17.

Stock of cotton-spinning companies was not widely distributed before 1906. When companies were promoted, it was sold to rich local merchants, landlords, and politicians without using markets, similar to the process for railroads and electric utilities companies.[43] When they needed to increase capitalization, most of the stock was allocated to the existing shareholders through the efforts of promoters; it was not easy to sell stock due to the riskiness of the business. Therefore, financial power and social status of the promoters played a very important role for the sale of stock. In other words, promoters' wealth determined the amount of stock they would subscribe by themselves, and their social status affected the reputation of the stock.[44]

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[42] Takamura, *Nihon bosekigyo shi,* p. 111.

[43] Yamagichi, *Nihon kin'yushi kenkyū,* pp. 3-6.

[44] Masaki Hisashi, *Nihon no kabushikikaisha kin'yu* (Tokyo: Mineruva shobo, 1973), p. 25; Yamaguchi, *Nihon kin'yushi kenkyū,* p. 69; and Miwa

After the nationalization of the railroads, the stock of spinning companies was widely distributed to the public. Similar to electric utilities, part of the idle funds brought about by the nationalization of the railroads was directed to speculation of cotton-spinning stock. According to Yamaguchi, in 1914 fifteen industrial firms were listed in the Tokyo and Osaka Stock Exchanges, of which twelve were cotton-spinning companies.[45]

Bonds were much less important than stock in cotton-spinning finance before 1907. Bonds were used only when companies were unable to increase capitalization. These bonds were not discounted by the Bank of Japan and were rarely listed on markets. They were mostly allocated to existing shareholders.[46]

After the Russo-Japanese War, however, huge amounts of cotton spinning bonds came to be issued, which were used for the expansion of facilities. The newly issued bonds were often distributed to new investors through public offerings by banks. The reason for this bond boom is explained by three factors. First, the Collateral Trust Bond Law of 1905 alleviated the risk of bonds. Second, as the scale of the business increased, firms required more funds than before. Finally, the risk of bonds was reduced by establishing syndicates consisting of bankers and stockbrokers.[47]

These bonds were domestic bonds; no foreign bonds were issued in the cotton-spinning industry before and after World War I. Foreign investors were not willing to take the risk of industrial securities. In fact, business was not stable due to fluctuating market prices of raw materials and final products, and it did not have properties suitable to put in pledge, unlike the railroads and electric utilities.[48]

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and Ramseyer, "Banks and Economic Growth: Implications from Japanese History," p. 141

[45] Yamaguchi, *Nihon kin'yushi kenkyū,* p. 55.

[46] Yamaguchi, *Nihon kin'yushi kenkyū,* pp. 116-117.

[47] Yamaguchi, *Nihon kin'yushi kenkyū,* p. 118.

[48] However, foreign capital was not absent, for example, in 1907 Kanebuchi Boseki succeeded in lending ¥2,000,000 with interest of 7.5 percent from the French Commerce and Industrial Bank without any pledge. This was not a bond issue, but note discounts, *Kanebo hyakunenshi* [History of Kanebo], pp. 116-117.

As the business came to be profitable, the companies accumulated reserves, which were used to finance part of fixed assets from time to time. Table 4 shows that while the proportion of stock to total long-term capital decreased from 88.2 % in 1902 to 57 % in 1914, reserves increased from 11.8 % in 1902 to 24.8 % in 1914. To a lesser extent, bonds also increased; it was not used in the early years, but now accounted for 18 % of long-term capital in the industry. In other words, the decline of the role of stock was compensated mainly for the increase in reserves. This trend was further accelerated after 1914.

	Paid-in capital/fixed capital	Bonds and loans/ fixed capital	Reserves/fixed capital
1902	88.2	0	11.8
1904	84.1	0	15.9
1906	64.4	7.0	28.6
1908	62	12.5	25.5
1910	57.5	19.1	23.4
1912	58.8	17.3	23.9
1914	57.0	18.2	24.8

Table 4: Cotton Spinning II – Source: Takamura, *Nihon boseki shi*, vol. 2, p. 120.

While railroads and electric utilities companies used only a small amount of working capital, spinning companies needed it more in order to purchase raw materials. At first, cotton-spinning companies relied on bank loans to finance a huge amount of working capital because they could not use credit for the purchase of raw cotton. For example, The Osaka Spinning Company usually borrowed from the Dai-Ichi Bank, the Sanjyu-Ni Bank, the Gojyu-hachi Bank, and the Hyaku Yonju-hachi Bank. The Kanebuchi Spinning Company, on the other hand relied on the Mitsui Bank.[49]

After the depression of 1897, instead of bank loans, cotton-spinning firms came to obtain credit from trading companies under special

[49] Takamura, *Nihon bosekigyo shi,* p. 99; and Yamaguchi, *Nihon kin'yushi kenkyū,* p. 21. The president of the Dai-Ichi Bank was Eiichi Shibusawa, who was one of the promoters of Osaka Boseki. Also, the House of Mitsui had interests in Kanebuchi Boseki.

contracts called *Tokuyaku*. At that time, the firms faced difficulty in receiving loans from banks because the Bank of Japan decreased liquidity by reducing loans and bills discounted. Under the contract, the firms were allowed to pay with promissory notes for raw cotton to the trading companies they contracted. Instead, they had to buy raw cotton from the trading companies exclusively. The adoption of special contracts was advantageous to both parties. While the trading companies secured the markets of raw cotton, the firms were relieved from financial burdens.[50]

After the Russo-Japanese War, however, the issue of promissory notes diminished. As retained earnings were accumulated, the funds used for working capital increased. Now, promissory notes were more likely to be used as an effective financial tool rather than a necessary means. For example, in 1914, the issue of notes increased temporarily because the discount rate was lower than the interest rate.[51]

During World War I, an oligopolistic industrial structure appeared in the industry. The three biggest companies were the Toyo Spinning Company formed through the merger of the Mie Spinning Company and the Osaka Spinning Company in 1914, the Dai-Nihon Spinning Company through the merger of the Amagasaki Spinning Company and the Settsu Spinning Company, as well as, the Kenebuchi Spinning Company, which had expanded through mergers and acquisitions since the 1890s.[52] In 1918, the three companies produced 51.1 % of cotton yarn production.[53]

Making high profits, these big cotton-spinning companies were directed to self-finance. By the end of 1918, their reserves accounted for 56.9 % of all the reserves in the industry. Using three-quarters of their reserves, they could have paid off all borrowed capital.[54] Thus, along with the emergence of oligopoly, the major cotton-spinning firms achieved financial independence.

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[50] Yamaguchi, *Nihon kin'yushi kenkyū,* p. 35; and Takamura, *Nihon bosekigyo shi,* pp. 69-73.
[51] Yamaguchi, *Nihon kin'yushi kenkyū,* pp. 59-65.
[52] *Kanebo hyakunenshi,* p. 92, 164.
[53] *Kanebo hyakunenshi,* p. 164.
[54] *Kanebo hyakunenshi,* p. 164.

Again, the role of banks was not direct. For long-term finance, they made stock collateral loans to individuals.[55] After 1907, banks began to underwrite cotton-spinning bonds, but the amount of bonds issued was still small. The Kanebuchi Spinning Company was an exception that created close ties with a bank. Takayasu Mitsui, the president of the Mitsui Bank, grasped control over the company by owning more than half the stock issued in 1889. During the recession of 1890, the Mitsui Bank also made loans of ¥600,000 to ¥700,000. However, this close tie between the Mitsui Bank and the Kanebuchi Spinning Company was loosened in the 1920s when banks came to create syndicates to finance the industry. On the other hand, banks lent short-term funds to cotton-spinning firms in the early years, but this was temporary. As explained above, their financial activity was replaced by trading companies that could provide them with credit, and later major spinning firms were able to rely on self-finance.

Conclusion

Unlike the postwar main banking system as well as the Gershenkron theory, the three major Japanese industries in early industrialization relied heavily on stock finance. In all three industries, the ownership of common stock was widely distributed to the public. On the other hand, the role of banks was indirect; they made stock collateral loans to facilitate stock sales and support bond issues as underwriters and trustees.

In spite of the similarities among the three industries, each industry had its own corporate financial practices. The railroad industry could issue domestic and foreign bonds from the early years due to their credit and government support. It was the predecessor of modern corporate finance. On the other hand, electric utilities companies increased bond issues after 1905. Their reliance on foreign bonds in the 1920s was noteworthy. They created ties with banks, but the main role of banks was to support bond issues. Meanwhile, the cotton-spinning industry required consideration of short-term as well as long-term finance. While the industry relied on stocks and bonds for long-term capital, it used bank loans and then credit from

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[55] Yoshiro Miwa and Mark J. Ramseyer, "Corporate Governance in Transitional Economies: Lessons from the Prewar Japanese Cotton Textile Industry," *Journal of Legal Studies* 39 (2000): 181-182.

trading companies for short-term capital. However, as the industry formed an oligopolistic structure, major firms were directed to self-finance.

Scholars have argued that economic systems are different from nation to nation. This persistence of national patterns has been attributed to the notion of path dependency, that is, to the national history and culture embedded in society. This theory seems true when we look at post-war Japan when the economic system reflected group-oriented culture. However, this national pattern is not unitary and unchanging. As this paper shows, the companies in the three major industries did not belong to corporate groups; the role of the main banks was usually nonexistent, and the role of banks as financiers was limited. Although the modern banking system had been established in late nineteenth-century Japan, the reactions of firms to financial institutions and opportunities were diverse and did not always conform to the notion of a singular Japanese culture.