The Rise of the Nineteenth Bank in Japanese Silk Reeling Finance:
How a Regional Bank Provided Loans to Silk Reeling Manufacturers in the Early 20th Century

Aki Kinjo

Introduction

Silk reeling manufacturing was a major industry in Japan prior to World War II. As one of Japan’s first modern factory industries, its share of the country’s exports was approximately 40 to 50%, during 1870 to 1930 (Ministry of Agriculture, 1934, pp.144-145). In fact, raw silk was the first product in which Japan was able to capture a significant share of the global market: its market share rose dramatically from 9.3% in 1859-62 to 83.1% in 1933-38 (Federico, 1994, p.200). Crucially, it was the reeling manufacturers in the Suwa district that led the development. In order to determine who provided finance to the silk reeling manufacturers in the Suwa district and how credit was extended, this article will examine the Nineteenth Bank, a regional bank in the Suwa district in Nagano prefecture, and its significant role in financing the growth of the Japanese silk reeling industry in the early 20th century.

There is widespread agreement that the Japanese wholesale merchants, i.e., the

---

The author wishes to thank Kiyoshi Kurumi (local historian), Chiyuki Takabayashi (Okaya Silk Museum), Toshijiro Komiyama and Eiichi Ushiyama (Suwa Warehouse) and many others in the Suwa district as well as participants in the Japan Society for Monetary Economics 2015 Fall Annual Meeting and seminar held at Gakushuin Women’s College for their generous support, comments and suggestions. The views expressed here are the author’s own.

1 In the Meiji era, banks were often named in accordance with the order of the banking license. The Nineteenth Bank was established in 1877 originally named the Nineteenth National Bank in Nagano prefecture. It is a private (non-governmental) bank.

2 The study of this field has been one of the cornerstones of modern Japanese financial history. Although it is almost impossible to list every accomplishment, representative works include Yamaguchi (1966), Ishii (1972) and Nakabayashi (2003), among others. This paper follows Nakabayashi (2001) for the usage of English terminology in relation to the Japanese silk reeling industry and financing.
intermediaries between the reeling manufacturers and the foreign trading companies in Yokohama, played a critical role in providing credit to the silk reeling manufacturers. Previous studies assert that wholesale merchants provided two types of finances to silk reeling manufacturers. First, they provided “original principal” (gen’shikin): unsecured loans to purchase silk cocoons, which were the raw material for producing silk. Second, these merchants provided pre-sales financing advances on documentary bills (mi’kawase tatekae kin) prior to the sale of raw silk to a foreign trading company. An elaborate network comprising of regional banks in the Suwa district, city banks in Yokohama and the Bank of Japan, the central bank of Japan, was established to efficiently extend credit (Nakabayashi, 2001; Yamaguchi, 1966 and Tsurumi, 1991).

Previous studies also claim that wholesale merchants consistently played a major role in both types of finances. Incorrectly, however, regional banks have been deemed as insignificant. Compared to the wholesale merchants, regional banks have been labeled as being inferior in terms of lending technology, industry insight and credit analysis of the borrowers. Accordingly, regional banks were deemed to play a subordinate role, passively following the lending decisions of the wholesalers without independent thinking or actively engaging with the reeling manufactures (Yamaguchi, 1966, p. 71 and 255).

It is the purpose of this study to demonstrate that the dominance of the wholesale merchants was limited to the dawning of the silk reeling industry: subsequently, the Nineteenth Bank played a significant role in financing the silk reeling manufacturers in the Suwa district. Indeed, the wholesale merchants played a critically important role in extending credit to the silk reeling manufacturers in the Meiji era, i.e., between the 1860s to around 1910, when the silk reeling industry was still in its infancy. However, after the silk reeling industry entered a phase of rapid growth, in the Taisho and early Showa eras (around 1910 to early 1940s), this paper argues that regional banks became critical in financing the industry. In fact, in 1929, regional banks provided loans in the amount of over JPY 100 million to silk reeling manufacturers, while wholesalers provided JPY 64 million (MoA, 1930, see Figure 1).

What enabled regional banks to surpass the wholesale merchants in providing

---

3 Successful wholesale merchants were able to accumulate tremendous wealth.
4 The export of raw silk reached the historical peak of JPY 910 million in 1925, which was approximately 91 times the amount in the beginning of the Meiji era in 1868.
5 The total amount of loans and bills discounted by ordinary banks (fu’tsu ginko) which includes regional and city banks was JPY 7,246 million in end of 1929 (Goto, 1970, p.86).
loans to silk reeling manufacturers? Although previous studies acknowledge the statistical evidence, they are reluctant to admit that regional banks actively paved their own way to surpass the wholesalers as financers of funds to the silk reeling manufacturers (Yamaguchi, 1966, p.31). Furthermore, prior studies have not been able to convincingly explain the technology developed by the regional banks to make this happen. To be fair, Ito (1977) indicates that the Nineteenth Bank increased its lending to silk reeling manufacturers in the Suwa district, citing the establishment of warehouses by the bank. They have not fully explained, however, the evolution and mechanism of how and why the regional bank became a major lender to the industry.

In essence, a division of labor in providing credit occurred between the Nineteenth Bank and the wholesale merchants in the early 20th century. While the latter continued to provide pre-sales financing, the Nineteenth Bank extended credit to the reeling manufacturers to significantly increase their purchase of silk cocoons. To bring about this advancement, the bank invented a new lending technology: using warehouses to pledge silk and thereby extend secured loans. Such a breakthrough contributed to making the Suwa district become one of the major clusters of silk reeling in the world.

The rise of the Nineteenth Bank in silk reeling finance and the usage of warehouses to secure loans should be viewed as an organic whole. One of the reasons why previous studies have failed to fully recognize the contribution of the Nineteenth Bank may derive from the lack of understanding by previous studies of this new lending method. To the best of the author’s knowledge, there is very little research

---

Figure 1   Flow of Silk Reeling Finance
about this lending technology in Japan: using warehouses to enable moveable assets, such as silk cocoons, to become collateral. We need to fill the gap.⁶

This article is organized as follows. Section I provides an overview of silk reeling and how it was funded through a value chain framework (Porter, 1985). Section II investigates the characteristics of the Nineteenth Bank and its role in the Suwa district. Section III analyzes the lending technology that the Nineteenth Bank crafted to extend secured loans to silk reeling manufacturers. To conclude, we shed light on the implications of using moveable assets as collateral: what can today’s banks learn from the Nineteenth Bank?

I. Overview of Silk Reeling Manufacturing and Financing

It took six steps to produce raw silk in the Suwa district. First, silkworms were reared to produce silk cocoons. Second, silk reeling manufacturers purchased the silk cocoons. Third, the silk cocoons were dehydrated. This process was important because if the silk cocoons were not dried quickly, moths would hatch, destroying the precious material to produce the silk. Fourth, silk cocoons were stored as raw material in warehouses. Fifth, silk was extracted and reeled by a filature. Finally, raw silk was shipped for export. The relationship between the manufacturing process and finance of silk reeling is illustrated in Figure 2 below.

The silk reeling manufacturers required two types of finances. First, the initial bulk

---

6 Incidentally, warehouses were also used to pledge silk cocoons to provide credit in Italy and France in the late 19th century. Apparently, foreign academics have acknowledged it as a major breakthrough in the development of a modern credit system to provide funds to the silk industry (Federico, 2009, pp.166-167).
The Rise of the Nineteenth Bank in Japanese Silk Reeling Finance: 
How a Regional Bank Provided Loans to Silk Reeling Manufacturers in the Early 20th Century

of capital was necessary to purchase the raw material. The price of raw materials, i.e., silk cocoons, constituted approximately 80% of the cost of manufacturing silk. It was also customary to pay such amounts in cash. Because there was only a 5-6 week window in the spring and summer/fall seasons to purchase silk cocoons, the silk reeling manufacturers had to prepare the cash in advance to purchase the raw material from the sericulturist. As such, it was critically important that cash to purchase silk cocoons was sufficiently available. Thus, the wholesale merchants primarily provided unsecured loans to the silk manufacturers in the Meiji era as “original principal” (Yamaguchi, 1966, pp.40-45).

Second, the silk reeling manufacturers had to collect money from the sales of the raw silk. The wholesale merchants provided a type of pre-sales financing: advancing money prior to the sale of the merchandise. They accomplished this finance through the following method. The silk reeling manufacturers would go to one of the regional banks in Suwa to ship their raw silk to Yokohama. At the same time, the silk reeling manufacturers would draw a documentary bill naming the wholesale merchant as the acceptor, at 70-80% of the market price of the silk. When the raw silk arrived in Yokohama it would be delivered to a bank that was a correspondent bank of the regional bank in Suwa where the documentary bill had been drawn. The correspondent bank in Yokohama would then demand payment of the bill from the wholesale merchant, who would pay the amount specified on the documentary bill before selling the raw silk to a foreign trading company.

Around the turn of the century, the Nineteenth Bank became active in providing the first type of financing, i.e., the credit to purchase silk cocoons. Such lending practice led the bank to become the leading lender for silk reeling manufacturers in Japan. However, it did not happen overnight.

II. The Characteristics of the Nineteenth Bank

Prior to the Second World War, Nagano prefecture was the epicenter of raw silk manufacturing in Japan. In 1930, it produced 25.2% of raw silk in Japan, surpassing Aichi prefecture, which was the second in line producing only 8.4% (MoA, 1930, appendix, p.10). Banks in Nagano also provided the largest amount of loans to silk

---

7 A correspondent bank is a bank that has agreed to provide services on behalf of another in a different location.
8 See Nakabayashi (2001) for detailed explanation on advances of documentary bills by wholesale merchants.
reeling manufacturers, commanding a share of 33.3%, 4.7 times the amount of Gunma prefecture, which was number two (MoA, 1930, pp 8-9). The Nineteenth Bank was the leader in Nagano’s silk reeling finance (see Table 1). While the bank’s total lending amount was 30% of all loans outstanding in the Nagano prefecture, it had 42% of the entire silk reeling finance market. In fact, 80% of loans through the bank were made to this particular industry. The Nineteenth Bank was undoubtedly the “institutional bank” for the silk manufacturers in the Suwa district (Bank of Japan Matsumoto Branch, 1924, p.671).

<table>
<thead>
<tr>
<th>Year: 1923 End of September</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
</tr>
<tr>
<td>Nineteenth</td>
</tr>
<tr>
<td>Sixty Third</td>
</tr>
<tr>
<td>Shinano</td>
</tr>
<tr>
<td>Chushin</td>
</tr>
<tr>
<td>Nagano Jitsugyo</td>
</tr>
<tr>
<td>その他8行</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Source: BoJ Matsumoto Branch (1924)

The Nineteenth Bank was established in 1877 as the Nineteenth National Bank in Nagano prefecture. In its early days, the bank lacked the funding and the technology to execute silk reeling finance. At that time, silk reeling was widely considered to be a difficult and dangerous business to provide credit. The value added was very low, and it needed remarkable manual skill and serious technical attention while the scale and scope of economies were negligible. These characteristics created an industry that was highly competitive, very risky and populated by very small firms (Federico, 1994, pp.19-21). As such, the Nineteenth Bank relied on the wholesale merchants to manage the risk. The bank solely focused on issuing documentary bills to facilitate trade between the wholesale merchants and silk reeling manufacturers. Gradually, the bank started taking risks by providing loans directly to silk reeling manufacturers on the condition that a documentary bill

---

9. Due to legislative changes, the bank was renamed the Nineteenth Bank in 1897. Merging with the Sixty Ninth Bank in 1931, it became and remains to be The Hachijuni Bank, Ltd.
would be drawn for a reliable wholesale merchant designated by the bank (Hachijuni Bank, 1968, p.188; Yamaguchi 1966, pp.92-93, 103, 131 and 254).

The Nineteenth Bank did have a comparative advantage over the wholesale merchants. First, being deeply rooted in the Suwa district, the bank was able to collect and synthesize hard and soft information about the borrowers. For example, the bank insisted on accurate bookkeeping and full disclosure of the borrower’s book records (The Nineteenth Bank, 1906, pp.27-29). Second, the bank had hands-on knowledge about silk reeling. In fact, the founders and key executives of the bank came from families that were in the sericulture or silk reeling businesses.

The Nineteenth Bank was also heavily involved in the warehouse business. In 1894 the bank had established the Ueda Warehouse then followed by the Suwa Warehouse in 1909.10 These were independent companies, but they had deep ties with the bank as the Nineteenth Bank was a major shareholder and sent key board members to align these firms with the bank’s business strategy. Not surprisingly, the warehouse business proved to be successful. In 1918, Suwa Warehouse became the largest warehouse facility in Asia, with a ground area of approximately 100,000 square meters (over twice the size of Tokyo Dome) with 55 warehouses (Kurosawa, 1919). Counterintuitively as it may sound, warehousing and banking were inseparable in the early days of commercial banking in Japan. Dating back to the Edo period, banks started their lending business by using warehouses to treat moveable goods as pawn items. The established banks of today, including the likes of Mitsubishi and Sumitomo, all had warehousing departments within their corporate structure. It was only in 1928 that banks became legally prohibited from warehousing (Japan Warehousing Association, 2005, pp. 6-43).

Why was the Nineteenth Bank so heavily involved in establishing and operating a serious warehousing business? Due to the bank’s strong relationship with the silk reeling manufacturers, we can assume that they believed that a reliable warehouse was necessary for the following reasons. First of all, properly drying the silk cocoons was critical for producing high quality silk. However, the bank was concerned that the method and process of drying the silk cocoons was being dealt with by the individual silk reeling manufacturers in an undisciplined and unscientific manner (The Nineteenth Bank, 1906, p.31). Such practice led to poor quality of the final product as well as increased cost for production, lacking economy of scale. Furthermore, properly

10 Ueda Warehouse merged with Suwa Warehouse in 1910. The company still exists today.
drying the silk cocoons enabled long term storage. As a result, silk can be produced throughout the year. As such, the Nineteenth Bank worked hand in hand with Suwa Warehouse to develop a scientific method in drying the silk cocoons. These advancements eventually received an industrial patent (Suwa method of dehydration) in 1910 (Suwa Warehouse, 1986, p.81).

Establishing reliable warehouses was also critical from a lending perspective. Given the perceived riskiness of the silk reeling business, the Nineteenth Bank had to somehow secure its credit. Because the Suwa district, then called the Hirano village, was a hamlet–its population reaching 10,000 only in 1896–the value of real estate was negligible and could not be considered viable collateral (Hirano Village, 1932, p.153). Since the wholesale merchants had already pledged raw silk as pawn items, the silk cocoons were the only remaining viable asset that can be used for collateral.

III. The Lending Mechanism

Silk cocoons are moveable goods, thus making it tricky to be used as collateral compared to other assets such real estate. To begin with, they are a liquid commodity, i.e., they tend to be moved around and frequently change their value. Hence, the secured lender must monitor the condition, including the existence and value of the collateral.\(^\text{11}\) Having a professional warehouse to do these tasks proved tremendously beneficial. In addition, having advanced scientific expertise to dry and store the silk cocoons helped preserve their value.

There were, however, a legal challenge. Under the Japan Civil Code in the early Meiji era, the only way to treat moveable asset as collateral was to treat it as a pawn item. That would be fine for a pawnbroker; however, for the silk reeling manufacturers, it would in effect prohibit them from using the raw material that is essential for producing silk.\(^\text{12}\)

The new Commercial Code that came into effect in 1899 created a breakthrough, as a section on the deposit of goods to warehouses was established.\(^\text{13}\) It clearly stated that warrants issued by warehouses (warehouse certificates, kura’ni shoken) were

---
\(^\text{11}\) Achieving proper monitoring at reasonable cost still remains to be one of the major obstacles for using moveable assets for collateral in today’s Japan.
\(^\text{12}\) Real estate did not have such issues because if a mortgage was permitted, it allowed the debtor to freely use the pledged asset as long as conditions pertinent to lending were met. To this day, Japanese law does not allow lenders to pledge for a mortgage with moveable goods.
\(^\text{13}\) It may be the case that the Commercial Code formalized the business practice from the Edo period by using warehouses to secure assets.
allowed to have the legal status of a commercial bill that could be negotiable. As such, goods in the warehouse would be deemed to be legally transferred to other parties by negotiating the warehouse certificates, without actual physical transfers (Arita, 1974, pp. 102-103). In effect, silk cocoons were emancipated from being treated as a pawn item and became much closer to being mortgaged.

Such legal structuring significantly facilitated the use of silk cocoons as collateral. In fact, the percentage of moveable asset in the Nineteenth Bank’s collateral pool increased from under 10% in 1901 to over 60% in 1912 (The Hachijuni Bank, 1983, p.57). Nevertheless, as the business grew, rigidly observing the treatment of issuing warehouse certificates became overly cumbersome from a practical standpoint. Therefore, the Nineteenth Bank and Suwa Warehouse took innovative steps to overcome the challenges. For creditworthy borrowers, it stopped issuing warehouse certificates and replaced them with warehousing notifications for the bank and storage notifications for the borrower (The Hachijuni Bank, 1968, p.191; see Figure 3). In addition, the Nineteenth Bank established a special checking account without pre-establishing a limit on the lending amount, but the bank was allowed to extend loans in accordance to the value of collateral that was pledged. These measures contributed in establishing the Nineteenth Bank as the leading lender in silk reeling finance.

![Figure 3 Sample Warehousing Notification](Provided by Suwa Warehouse Corporation)

14 These measures are very much in common with what is today called Asset Based Lending.

---

---
IV. Implications

This paper examined how a regional bank in the Suwa district contributed to the development of the Japanese silk reeling industry. In doing so, we discovered that silk cocoons, a moveable asset, were used as collateral to secure credit extended to the silk reeling manufacturers. Moveable assets are scarcely used as collateral in contemporary Japan: less than 0.1% of outstanding corporate loans are secured by moveable assets in Japan (MRI, 2013). Rather, real estate is the dominant asset used for collateral in secured loans in today’s Japan. Approximately 85% of assets for all secured lending have been real estate (BoJ, 2011), although real estate consists of only 13% of all assets in the corporate balance sheet (Ministry of Finance, 2011).

As we have observed, however, real estate was not always the paramount asset used as collateral. In pre-war Japan, a much wider range of asset classes were employed to secure credit (Goto, 1970). The most popular asset was securities, namely stocks, not real estate. Moveable assets, such as raw materials, inventory and merchandise were also popular. In particular, as we have observed, approximately 47% of all secured loans extended to the silk reeling industry used moveable assets as collateral (MoA, 1930). As such, analyzing such practices reintroduces an institutional and professional heritage that has mostly disappeared from today’s market practices. But what are the practical implications?

First and foremost, banking was a hands-on business for the Nineteenth Bank. The bank and the warehouse were, in effect, one lending entity. Pledging raw material as collateral required intensive monitoring that helped the bank collect relevant information about the borrower’s credit. Furthermore, such practice engaged the bank with active involvement in the operational aspects of the business. In that regards, they were not merely providing working capital but were also simultaneously working alongside with the silk reeling manufacturers. Considering that the bank also issued documentary bills for shipping, the Nineteenth Bank was intimately involved in the entire value chain of the business, with particular emphasis on the purchase, drying and storage of the silk cocoons.

Such heavy involvement by the lender is not necessarily required when real estate is used as collateral. Lenders do not have to be concerned with the loan not being

---

15 From 1909 to 1929, moveable assets consisted of 8.0~20.2% of collateral, while stock certificates being 29.7~56.8% and real estate was 14.7~51.1% (Goto, 1970).
repaired as long as the value of real estate used as collateral covers the amount of loan extended. Unlike moveable assets, the value of real estate generally has nothing to do with the condition of the borrower’s business. Hence, the lender has the option to avoid diligent communication with the borrower and need not be actively involved in the borrower’s business to help make it successful. As we have seen, the Nineteenth Bank did not have such luxury.

After all, what is the fundamental role of banks in society? In the silk reeling industry, the wholesale merchants were traders between the market and the manufacturers who extended loans to facilitate their trading business. In turn, the Nineteenth Bank took the responsibility to help develop the silk reeling industry in the Suwa district. Takajiro Kurosawa, the president who led the bank between 1887 and 1919 made the following observation:

The wholesale merchants are mere traders, not taking ownership to develop the silk reeling industry. I am deeply disappointed that they are busy trading and disrespecting the manufacturers. To the contrary, we, as bankers, are responsible to lead the industry by gathering information to prevent our borrowers from making mistakes and regrets. We must diligently monitor the business conditions of our borrowers, be prudent of the amount of credit to be extended, particularly in the form of secured loans (abridged translation, The Hachijuni Bank, 1983, p.61).

The Nineteenth Bank used warehouses so that it had full control over the collateral. The question is, for what purpose? Did the bank use the collateral only to protect its secured interest, i.e., by liquidating the asset when the loan was not paid? Surely, this is one of the reasons, however, when the silk reeling manufactures faced difficulties, the bank was extremely reluctant to foreclose on the loans. When the global silk market plummeted after US shares crashed in 1929, for example, the bank provided liquidity to support the borrowers and patiently waited for the market to recover (The Hachijuni Bank, 1983, p.59). Arguably, that was the spirit of the industrial banker—committed to growing the industry and region—at a time when Japan was industrializing. There is a reason why the silk reeling manufacturers in the Suwa district erected a statue of Kurosawa while he was still living. It is an open question

---

16 Venture capital funds in Silicon Valley today appear to have such hands-on-commitment with their portfolio companies.
whether such spirit and mutual respect between the lenders and the borrowers, including sharing the pain and gain of building an enterprise, remain among today’s bankers who appear to be adamant on using real estate as collateral. 

Figure 4 Statue of Takejiro Kurosawa Overlooking the Suwa District

References
Bank of Japan (2011). Deposits and Loans, Amount of Loans by Collateral Type.
Bank of Japan Matsumoto Branch (1924). Seishi Kinyū [Silk reeling finance].
Hirano Village (1932). Hirano son shi (gekan), fukkokuban [History of Suwa village (vol.2) (reprint)]. Okaya: Okaya Shiyaku’sho [Okaya City Office].
Ministry of Agriculture (1930). Sanshi kyoku hen [Silk reeling bureau] (Ed), Seishi Kinyū Chosa Seiseki [Research and evaluation on silk reeling finance].

17 The Nineteenth Bank was not immune from systemic risk of the silk reeling industry. World War II and the innovation of synthetic fiber devastated the industry. However, it should be noted that the Suwa region revived after WW II in manufacturing precision machinery.
The Rise of the Nineteenth Bank in Japanese Silk Reeling Finance: 
How a Regional Bank Provided Loans to Silk Reeling Manufacturers in the Early 20th Century


（本学教授）