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Financial Crises and the Central Bank: Lessons from Japan during the 1920s

Masato Shizume

Waseda INstitute of Political EConomy
Waseda University
Tokyo,Japan

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Abstract *

A series of financial crises following a boom during World War I marked the turning point for the emergence of prudential policy in Japan. An economic backlash after the war created mounting bad loans. After the Great Kanto Earthquake in 1923, the Bank of Japan (BOJ) introduced a special treatment facility for the devastated area. The BOJ hoped to rescue solvent but illiquid financial institutions, but the facility was abused by banks that were already in financial distress, paving the way toward a financial crisis. Banking panic spread nationwide in the spring of 1927. In 1928, the authorities introduced new arrangements for prudential policy with mergers and acquisitions, new types of regulations, and dual inspection by the Ministry of Finance and the BOJ. These arrangements restored financial stability while imposing a new constraint on monetary policy.

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1. Introduction

In this chapter, we look at the conduct of prudential policy in Japan during the 1920s. Japan experienced economic stagnation and financial instability following a boom during and right after World War I (WWI). An economic backlash and the government's attempt to keep economic growth high even after the war created mounting bad loans. Then, the Great Kanto Earthquake hit the Tokyo metropolitan area in 1923, and the Bank of Japan (BOJ) introduced a special treatment facility for the devastated area. The BOJ'sintention *ex ante* was to rescue solvent but illiquid banks. However, the facility was abused *ex post* by banks already in financial distress, and uncovered the moral hazard problem. In the spring of 1927, financial panic spread nationwide. The crisis accelerated long-awaited reforms. In 1928, the authorities introduced a new scheme of prudential policy encouraging mergers and acquisitions, with new regulations, and dual inspection by the Ministry of Finance (MOF) and the BOJ.

2. The Modern Banking System in Japan

Japan has a long tradition of its version of a lightly-regulated financial system. During the Edo Era (1603-1867), money changers supported the national markets of rice and other commodities. They accepted deposits from and extended loans to customers, transferred funds through correspondent networks, and engaged in issuing paper money. Many moneychangers had their origins in commercial/industrial businesses such as rice trade, metal refining, and textile distribution. And, there was no regulation on concurrent business operations.[1]

After the opening of the treaty ports in 1859 and the following Meiji Restoration in 1868, the new government tried to establish a modern financial system by importing systems from Europe and the United States. In 1872, the government introduced the National Bank Act modeled after the United States. Japanese national banks were privately-run banks as in the United States. Under the initial National Bank Act of 1872, national banks were allowed to engage in the usual banking activities and were also authorized to issue convertible notes. In 1876, the government amended the National Bank Act, making national banknotes inconvertible. Under the new National Bank Act of 1876, national banks were allowed to issue banknotes backed by national bonds. Also in 1876, the government gave a charter to Mitsui Bank, the first private bank (*shiritsuginko*) in Japan apart from the national banks. After that, a number of private banks were established. These private banks were chartered by the government to engage in the usual banking business, but they were not allowed to issue banknotes. While the origins of the national and private banks were varied, their operations depended on the managerial skills of moneychangers. At the same time, many moneychangers remained engaged in the *de facto* banking business without government charters. The Meiji

[1] Shizume and Tsurumi (2016), pp.3-4.

government called such moneychangers quasi-banks.[2]

During the inflationary period after the Seinan Civil War (the last rebellion by former samurai) in 1877, the government became inclined to establishing a central bank as the sole issuer of convertible banknotes. The BOJ was established as the central bank of Japan in 1882, and the right to issue banknotes was taken from the national banks and given to the BOJ alone. In 1893, the government created a savings bank system in order to promote savings among the general public. The transformation from a multiple issuing bank system to a single issuing bank system was completed in 1899. The reform lowered former national banks to the same status as other private banks. After the reform, the private banks became called ordinary banks. The number of private banks kept increasing through the late 19th century along with the development of modern industries in Japan (Table 1).[3]

Table 1. Banks in Japan (1876-1925)

	National Banks		Private Banks (excl. National Banks)		Quasi-banks	
year	number	total capital	number	total capital	number	total capital
1876	5	2	1	2	n.a.	n.a.
1880	151	43	39	6	120	1
1890	134	49	217	19	702	15
	Ordinary Bank		Saving Bank			
year	number	Total capital	number	Total capital		
1900	1,801	353	157	32		
1910	1,618	437	302	72		
1920	1,322	1,576	661	548		
1925	1,534	2,387	133	90		

Note: Total capital is in million yen. *The Fourth Report of the Banking Bureau* (1884) admitted that the coverage of private banks and quasi-banks was incomplete and that the statistics were underestimated.
Sources: MOF (1938); Goto (1970), *Japanese Financial Statistics;National Statistical Abstract of the Japanese Empire* (various issues).

The legacy of the Edo Era was widely utilized in the introduction of a westernized banking system. The regulations on private banks were minimal until the 1920s. At the outset of the modern banking system, there was virtually no specific banking regulation except rules for companies in general. The Bank Act and the Savings Bank Act of 1890 stipulated minimal requirements for bank operations such as limiting big loans to certain borrowers and restricting savings bank assets to safe ones. However, these acts were amended in 1895 to eliminate the limits on big loans and the

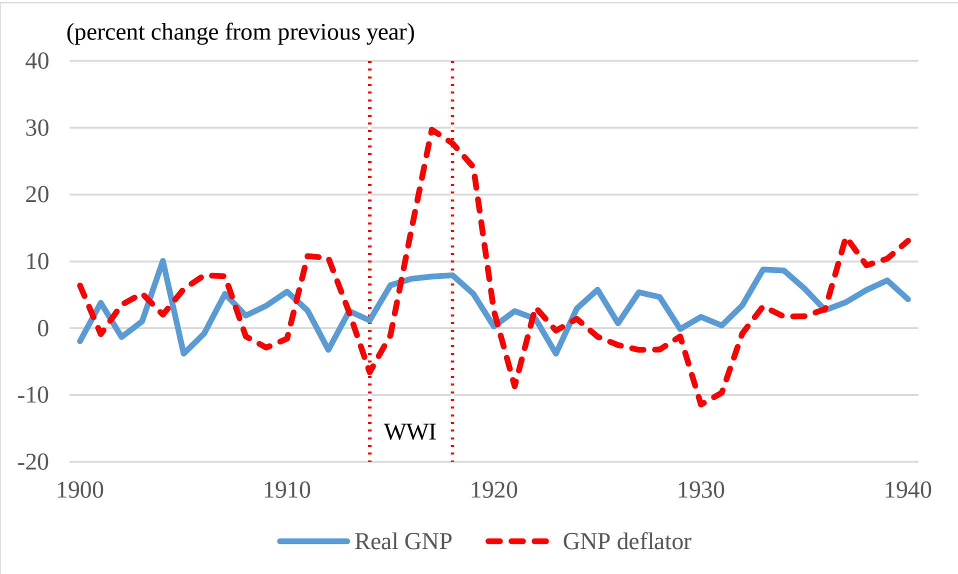
[2] Shizume and Tsurumi (2016), pp.4-6.
[3] Shizume and Tsurumi (2016), pp.6-7, pp.13-14.

savingsbank asset requirements.[4]

3. The World War I Boom (1914-1919)

During and right after WWI, the Japanese economy experienced a boom unprecedented in its modern era. Between 1915 and 1918, the Japanese economy, led by exports, grew by more than 6 percent annually for the four consecutive years from 1915 through 1918. In 1919, even though overseas demand shrank, the economy grew by another 5 percent, led by domestic consumption and supported by government expenditure. The gross national product (GNP) in 1919 was 1.41 times that in 1913. At the same time, prices increased over two-fold in the five years from 1915 through 1919 (Chart 1).

Figure 1. Output and Prices



Source: Ohkawa and Shinohara (1979), pp.256-257, pp.387-388.

January 1920, then BOJ Governor Junnosuke Inoue warned about the widespread speculation on commodities, company stocks and real estate. He stated, “We have to be cautious of some of the worrisome symptoms accompanying this boom. We see widespread speculation in all the commodities markets… Among new companies, quite a few have been set up only for seeking capital gains without clear strategies or operational plans… Even local farmers are engaged in speculation in real estate and company stocks.”[5] He was also worried about the fragility in the banking sector and claimed that “From now on, more banks need to be merged or affiliated with

[4] Kasuya (2000).
[5] “Speech by Governor Inoue at the New Year Party of the Tokyo Bills of Exchange,” January 27 1920, reprinted in Inoue (1935), pp.239-240.

each other."[6]

4. The Post-War Recession and Chronic Financial Panic (1920-1922)

4.1 The Post-War Collapse in 1920

With the end of the war boom, prices of commodities, company stocks, and real estate plunged. The average price of company shares listed in the Tokyo Stock Exchange (TSE) peaked at 452 yen (per paid-in capital of 100 yen) in March 1920 and fell by almost a half to 239 yen in August 1920 (Figure 2).

Figure 2. Stock Price (Listed in Tokyo Stock Exchange)

Source: Data collected by the Hypothetic Bank of Japan, archived in Asahi (1930), p.1089.

Companies including financial institutions that were involved in speculations suffered from liquidity shortages and/or losses in inventories and other assets. Of these, the Masuda Bill Broker Bank in Osaka failed because of a liquidity shortage in April 1920, triggering bank runs in several regions throughout Japan.[7]

The Masuda Bill Broker Bank was headquartered in Osaka and had branches in the national and regional commercial centers of Tokyo, Nagoya, Kyoto, and Moji. It had been engaged in the intermediation of interbank financial transactions, and its customers had included both local banks and large city banks. Over the four months following the bank's failure, 21 banks suspended

[6] "Speech by Governor Inoue at the New Year Party of the Tokyo Bills of Exchange," January 27 1920, reprinted in Inoue (1935), p.239.

[7] Osaka Asahi Shinbun, April 9, 1920, archived in Kobe University Newspaper Articles Archives, Economic Policy (5-086).

their operations either permanently or temporarily.[8]

The BOJ extended various types of "special loans" to ease tensions within the financial markets in general and to relieve key industries such as silk and cotton. "Special loans" referred to various kinds of loans extended by the BOJ with special arrangements. They included loans exceeding the credit line per borrower, loans with extended collateral coverage, and loans to borrowers who had no ties to the BOJ as clients at that time. A total of 385 million yen worth of "special loans" were approved and, of this, a total of 242 million yen worth of loans were provided. Virtually all the "special loans" were repaid within a year.[9]

4.2 Financial panic of 1922

In 1922, the failure of a local company led to nationwide panic. Ishii Corporation, a lumber company engaged in speculative activities, went bankrupt at the end of February 1922. The failure of Ishii triggered bank runs in Kochi Prefecture (in the southwestern part of Japan) and the Kansai region (Osaka, Kyoto and their environs). This incident indicated how anxious depositors were about the financial soundness of banks in general. Then, from October through December 1922, bank runs spread far across the country, from Kyushu (the westernmost part of Japan) through Kanto (Tokyo and its environs in eastern Japan). In 1922, operations were suspended at 15 banks, either permanently or temporarily. The BOJ extended "special loans" to 20 banks from December 1922 to April 1923.[10]

In the wake of a series of financial crises, the government tightened regulations on smaller savings banks by enacting the Savings Bank Act of 1921, and it initiated reforms in the financial system as a whole, including for the larger ordinary banks. As we will see later, reforming the whole system turned out to need far more political capital than the reform of smaller savings banks.

5. The Earthquake Bill Facility[11]

5.1 The Great Kanto Earthquake and the Earthquake Bill Facility

On 1 September 1923, a severe earthquake hit the central part of Japan, including the cities of Tokyo and Yokohama. According to a survey by the Social Bureau of the Ministry of Home Affairs, the damage to human life and property from the earthquake was as follows: In the seven prefectures of Tokyo, Kanagawa (in which the City of Yokohama located), Chiba, Saitama, Shizuoka, Yamanashi, and Ibaraki, 91,344 people were reported dead, 13,275 were reported missing, and 52,074 were reported to have been injured. The homes of 3,248,205 people were reported to have sustained

[8] Shizume (2009), p.2.
[9] The Bank of Japan (1983), pp.10-23; Shizume (2009), p.2, footnote 5.
[10] Shizume (2009), p.2.
[11] Shizume and Nanjo (2015) discuss the process and consequences of the introduction of the Earthquake Bill facility in detail.

damages. 29 percent of the total population of the seven prefectures suffered some form of damage from the earthquake, while 47 percent of Tokyo residents and 85 percent of Kanagawa residents suffered such damage.[12]

The Research Department of the BOJ later put the total amount of physical damage at 4.57billion yen (29.3 percent of the GNP in 1922), with 343 of the 448 (76.6 percent) bank head offices and branches located in Tokyo and virtually all of the 42 located in Yokohama having burned down.[13]Depositors feared bank losses and delays in the repayment of bank loans.

The government and the BOJ responded quickly. On September 7, the government promulgated an emergency ordinance to impose a moratorium, which allowed for the postponement of payments due from that month onward in the districts affected. As the deadline for payment approached, large numbers of debtors (drawers of bills) were still unable to repay their debts and the banks holding loans to such debtors were concerned about potential runs on their deposits. On September 27, the government promulgated another emergency ordinance that allowed the BOJ to discount bills issued to and/or to be paid by victims of the earthquake. The government would indemnify the BOJ for any losses incurred in the re-discounting of bills and certain other papers payable in the stricken areas (Earthquake Bills, or EBs), to a ceiling of 100 million yen.[14]

Bills eligible as EBs consisted of i) bills discounted by banks on or before 1 September 1923, to be paid in affected areas (Tokyo, Kanagawa, Saitama, Chiba, and Shizuoka prefectures), ii) bills discounted by banks on or before 1 September 1923, drawn or payable by parties holding business facilities in the affected areas at the time of the earthquake, iii) bills renewing any of the above bills, etc., and iv) bills renewing any of the bills described above and discounted by the BOJ. The BOJ may have discounted the original EBs by March 31, 1924, and the discounted bills may have been renewed.[15]

The discounted bills and renewed bills were to be paid by no later than September 30, 1925. Depositors were relieved by these special measures of the government and the BOJ. By the time the moratorium was lifted in October 1923, financial turbulence had been curbed. Meanwhile, large sums of EBs had yet to be settled.[16]

5.2 The Implementation of the Earthquake Bill Facility

At the onset, the government estimated outstanding EBs at approximately 2.1 billion yen, or the equivalent of 13 percent of the total of loans held by banks. Of this, 500 million yen was estimated to be discounted by the BOJ, and 100 million yen, or 20 percent of those bills discounted by the BOJ,

[12] The Bank of Japan (1933), pp.749-51.
[13] The Bank of Japan (1933), pp.751-3.
[14] The Bank of Japan (1983), pp.50-60.
[15] The Bank of japan (1983), pp.59-60.
[16] The Bank of Japan (1983), pp.60-61); Shizume (2009), pp.2-3.

were estimated to be unrecoverable and would eventually be losses. The estimated loss was more than 80 percent of the equity of the BOJ.

In 1923, the amount of loans provided by the BOJ to the domestic private sector almost doubled from 344 million yen to 641 million yen. Of this, EBs worth 133 million yen, or 45 percent of net increase in the BOJ loans, were rediscounted.[17]

The authorities were aware of the potential trade-off between financial stability in the short-run and the prevention of a moral hazard problem in the long-run. To prevent the moral hazard problem, the discount rate of the EBs was set at 8.76 percent, 0.73 percentage points higher than the ordinary discount rate on commercial bills (8.03 percent). By doing so, the government's and the BOJ's intention *ex ante* was to supply liquidity only to solvent parties. However, in reality, it was difficult to evaluate the solvency of related parties in such an emergency. In the course of events, the BOJ needed to take decisive action to avoid turbulence in business conditions, even if it was not convinced that it could properly evaluate the solvency of each bank and debtor. As a result, bills not directly related to the earthquake crept into the EBs discounted by the BOJ.

The biggest moral hazard was the case of the Bank of Taiwan (BOT) and its client, Suzuki and Company. The BOT was a Japanese colonial bank established in 1899. It issued bank notes in Taiwan as well as engaged in the usual banking operations in Taiwan and in mainland Japan. During WWI, it increased lending to companies related to Taiwan, such as Suzuki, a trading house based in Kobe, owning camphor factories and sugar mills, and importing those items from Taiwan. Suzuki did very well during the war but suffered poor business performance after the post-WWI panic in 1920. While the BOT tried to bailout Suzuki, Suzuki remained inclined to engage in more and more risky businesses, expecting a miracle.[18]

The amount of loans to the BOT by the BOJ was relatively modest when the discounting of EBs began in September 1923. However, as the deadline for new discounting approached, the bills brought by the BOT, mainly in connection with the distressed Suzuki, stood out within the total amount of EBs. While the discounting of the EBs from the BOT did not stand out on a daily balance basis, the BOT did stand out in the total amount of the bills presented by the deadline (Table 2). Apparently, the BOT had exploited the status of a devastated institution and brought as many bills as issued by its indebted customers to the discount window of the BOJ. Though Suzuki had offices in the Tokyo-Yokohama area, its main office in Kobe was far from "the affected area" and the physical damage it suffered was relatively small.[19]

[17] Shizume and Nanjo (2015).
[18] Shizume and Nanjo (2015)
[19] Shizume and Nanjo (2015)

Table 2. Amount of the Earthquake Bills Discounted by the BOJ (September 1923-March 1924)

Bank	Earthquake Bills (thousand yen)	Share (percent)
Bank of Taiwan	115,225	26.7
Fujimoto Bill Broker Bank	37,214	8.6
Bank of Chosen	35,987	8.4
Yasuda Bank	25,000	5.8
Murai Bank	20,429	4.7
Total	430,816	100.0

Source: Ehiro (2000), p.116.

In April 1924, the BOJ first noticed that the BOT was using the EBs to raise short-term funds. On 19 April 1924, a notice to branch managers from the manager of the BOJ's Supervision Department reports,"The balance discounted under the imperial emergency ordinance was 126,180,000 yen at the end of the preceding month, the deadline for new discounting. Collection of the discounted bills are delayed… The amount of the discounted bills continues to increase, even in the middle of the month, mainly due to demands from the BOT for loans having the nature of call loans."[20]

In the course of events, the moral hazard problem became increasingly apparent, and the discounting of the EBs turned out to be a means of relief for insolvent banks contrary to its original purpose. The BOJ was not able to find an exit from entrenched lending. Settlement did not proceed smoothly, and, due to political pressure, the discount rate of the EBs was lowered to the same level as the ordinary discount rate on commercial bills in December 1924, and the payment deadline was extended twice, once in March 1925 and again in March 1926, and finally set to be September 30, 1927.[21]

[20] "Notice from the head of the Supervision Department to branch managers, 19 April 1924," BOJ archive document no. 70543, *Supervision Department Report*, Oct. 1923–June 1925, cited in Shizume and Nanjo (2015).

[21] The Bank of Japan (1983), pp.95-102, pp.106-109.

Table 3. Unsettled Balance of the Earthquake Bills (December 1926)

Bank	Discounted by March 1924 (thousand yen)	Share (percent)	Unsettled at Dec. 1926 (thousand yen)	Share (percent)
Bank of Taiwan	115,225	26.7	100,035	48.4
Fujimoto Bill Broker Bank	37,214	8.6	2,181	1.1
Bank of Chosen	35,987	8.4	21,606	10.4
Yasuda Bank	25,000	5.8	0.0	0.0
Murai Bank	20,429	4.7	15,204	7.4
Total	430,816	100.0	206,800	100.0

Source: Ehiro (2000), p.116.

6. The Financial Crisis of 1927

In January 1927, the government incorporated new measures into two legislative bills associated with the disposal of the EBs. In the proposed legislation, the government would issue government bonds of up to 100 million yen to compensate the BOJ for losses resulting from the discounting of the EBs. The government bonds would be lent to banks holding unsettled EBs based on the balance remaining after deducting the BOJ's losses, which is the amount of compensation received from the government. Banks holding EBs would be allowed to apply for the government bond loans only if they had concluded loan agreements for redemption in yearly installments with their debtors. The government bond loans were to be paid back with interest rates of 5 percent or higher and the terms of the loanswere not to exceed 10 years.[22]

The two legislative bills related to the resolution of EBs were tabled in the Diet session on 26 January 1927. After passing the House of Representatives (the Lower House) on 4 March, they moved on to the House of Peers (the Upper House). On 12 March, the supplementary budget for fiscal 1927, which was attached to the legislation, was submitted to the Diet session. Discussion on the legislation got underway as part of the deliberations on the supplementary budget bill. In the deliberations, the legislation ran afoul of attacks by the opposition Seiyu-Kai Party, which charged that the measures amounted to the use of public funds to provide relief for an individual business and bank (Suzuki and the BOT). On 23 March, the Diet approved the new legislation for the final resolution of the EBs.[23]

Financial panic erupted during these deliberations, triggered by a mistaken remark by Finance Minister NaoharuKataoka on 14 March in the House of Representatives budget committee. He stated, "As a matter of fact, Watanabe Bank in Tokyo finally went bankrupt around noon today," even though Watanabe Bank had not yet failed.

[22] The Bank of Japan (1983), pp.233-234.
[23] The Bank of Japan (1983), p.169.

In the wake of the panic, the Cabinet tried to issue an emergency ordinance authorizing the BOJ to provide relief funds to the BOT, and indemnifying the BOJ for any losses incurred by this action up to a ceiling of 200 million yen. The Privy Council, the body invested with the authority to approve the emergency ordinance, politicized the Cabinet's plan and rejected it on April 17. Then, financial panic spread nationwide. The government declared a moratorium on payments (bank holidays) on 22 April to last until 13 May. The BOJ extended its credit from 506 million yen on April 8 to 2,096 million yen on April 25. Finally, the panic subsided.[24]

Table 4. Balances of the BOJ's Loans to the Private Sector and Banknotes in Circulation

(million yen)

Date		BOJ Loans	d/d change	Banknotes	d/d change
1927/3/14	Monday	228	n.a.	1,088	n.a.
1927/3/18	Friday	265	37	1,101	13
1927/3/25	Friday	557	292	1,325	224
1927/4/1	Friday	516	-41	1,324	-1
1927/4/8	Friday	506	-10	1,209	-115
1927/4/15	Friday	554	48	1,204	-5
1927/4/16	Saturday	581	27	1,226	22
1927/4/17	Sunday	-	-	-	-
1927/4/18	Monday	870	289	1,497	271
1927/4/19	Tuesday	1,002	132	1,626	129
1927/4/20	Wednesday	1,063	61	1,679	53
1927/4/21	Thursday	1,665	602	2,318	639
1927/4/22	Friday	1,671	6	2,328	10
1927/4/23	Saturday	1,677	6	2,334	6
1927/4/24	Sunday	-	-	-	-
1927/4/25	Monday	2,096	419	2,660	326
1927/4/26	Tuesday	1,932	-164	2,448	-212
1927/4/27	Wednesday	1,693	-239	2,216	-232
1927/4/28	Thursday	1,559	-134	2,081	-135
1927/4/29	Friday (holiday)	-	-	-	-
1927/4/30	Saturday	1,484	-75	2,037	-44

Source: The Bank of Japan (1983), p.173, p.179.

[24] The Bank of Japan (1983), pp.169-181; Shizume (2009), p.3

7. The Consequences of the Financial Crisis in 1927

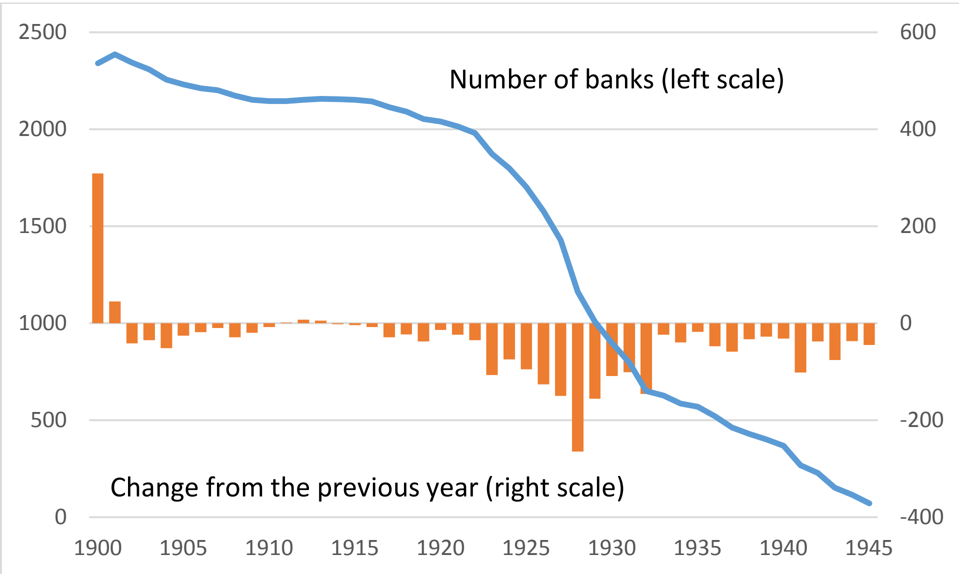
7.1 Acceleration of Financial System Reforms

Major progress towards the resolution of the 1920s financial instability was made in 1927, when structural reforms in the banking sector gained momentum in step with measures to dispose of the bad loans. The new Banking Act was promulgated on March 30, 1927, in the midst of the Showa Financial Crisis, with plans for effectuation on January 1, 1928. The Act stipulated minimum capital requirements for banks and prohibited banks and bank managers from conducting most non-banking businesses.

Under this Act, the authorities established the prudential policy in a systematic way for the first time, reinforcing bank examination and encouraging the amalgamation of banks to stabilize the financial system as a whole.[25] To this end, the MOF established the Bank Examination Division under its Banking Bureau in 1927, and the BOJ established its Supervision Department in 1928.[26]

After the crisis in 1927, mergers and acquisitions accelerated. The number of banks in Japan peaked in 1901 as it reached 2385, and stayed at over 2000 until 1921. Though the number declined steadily through the 1920s, 1577 banks still existed in 1926. The trend accelerated in 1927 with a drastic increase in mergers and acquisitions. The number decreased by 150 in 1927 and by 265 in 1928. In 1932, only 650 banks existed (Figure 3).

Figure 3. The Number of Banks in Japan



Source: Goto (1970), pp.56-58.

At the same time, the Japanese banking system transformed from unit banking to branch

[25] Shizume (2009), pp.3-4.

[26] The Bank of Japan (1983), pp.286-292.

banking. In 1900, the average number of offices per ordinary bank was 1.74, meaning that most banks operated only in their head offices and had no branches. The number was 4.76 in 1926 and jumped to 7.06 in 1927. In 1929, it reached to 8.97, meaning that ordinary banks had eight branches on average.

Table 5. Average Number of Offices per Ordinary Bank

1900	1.74
1910	2.05
1920	3.11
1925	4.49
1926	4.76
1927	7.06
1928	8.12
1929	8.97

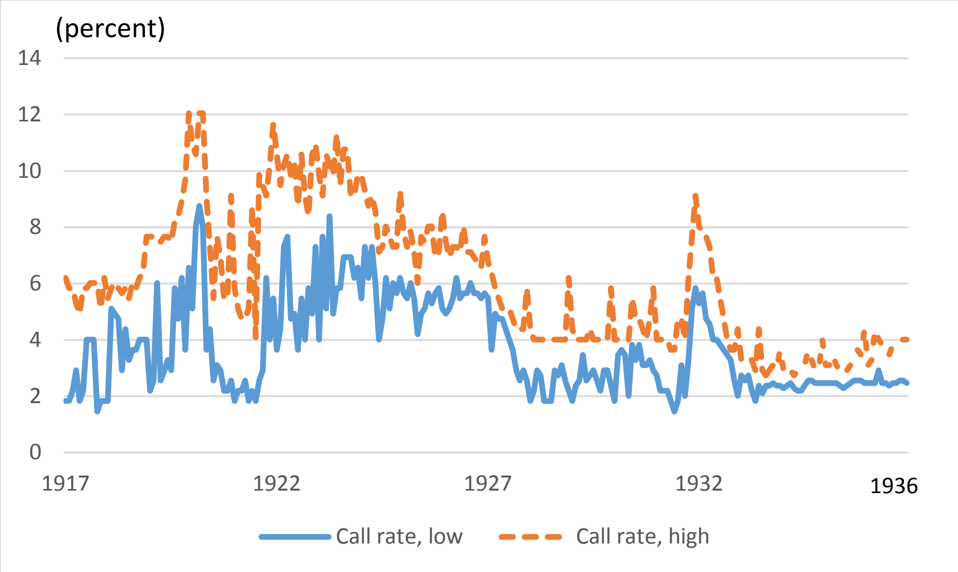
Source: Goto (1970), p.86.

7.2 Restored Financial Stability

Supported by the banking reforms and public funding, financial stability was finally restored. Figure 4 shows developments in the call rates, the referenced interest rates for the short-term interbank transactions of funds. Call rates remained high between the financial panic of 1922 and the Showa Financial Crisis of 1927, reflecting high risk premiums. A number of banks with high risk profiles, such as the BOT, tried to raise funds in the interbank market over that period. Aware of the credit risk of the distressed banks and instability in the financial market in general, lenders required high risk premiums. Call rates decreased substantially in the spring of 1927, as market participants gained confidence from the new Banking Act, the disposition of the financial crisis, and theBOJ's liquidity provisioning.[27]

[27] Shizume (2009), p.4.

Figure 4. Interbank Interest Rates



Source: The Ministry of Finance, *Reference Book of Financial Matters*, annual editions.

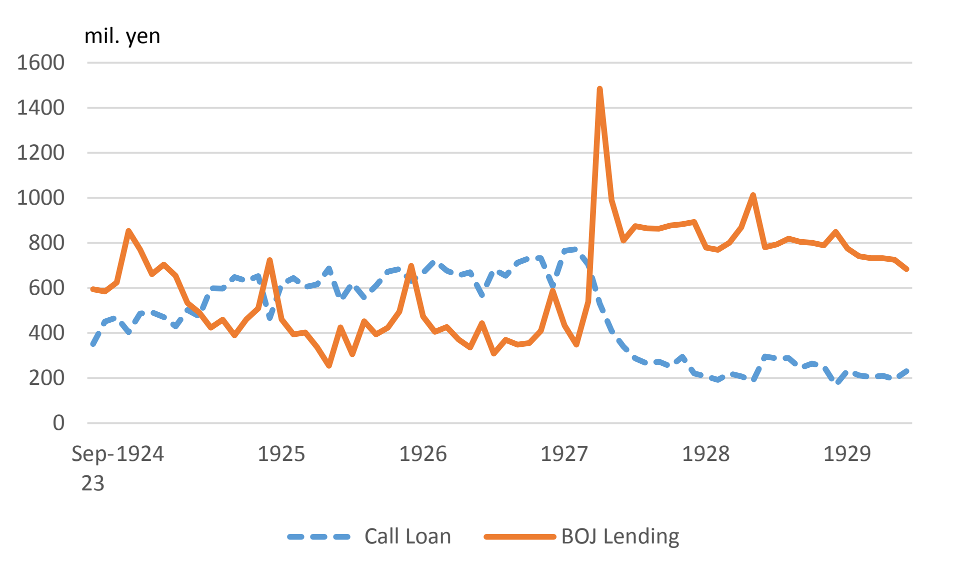
Kamekichi Takahashi, a prominent contemporary economist and ex-editor of *Toyo Keizai Shinpo* (the Oriental Economist) argued that the reforms of the domestic financial system after the financial crisis of 1927 helped Japan respond effectively to the Great Depression in the 1930s:

> A number of leading industrial countries suffered from the World Financial Crisis, a financial collapse without precedent, in the third quarter of 1931 (in the case of the United States, the crisis hit in the first quarter of 1933). For many years to follow, the economic activities of these countries were severely disrupted by the financial collapse. Yet Japan remained immune to the financial crisis of the 1930s, enjoying the benefits of the policy changes and the depreciation of the yen… This could be credited to the total restructuring of Japan's banking system in the wake of the financial crisis of 1927.[28]

We should note that the financial stability was also supported by the provision of liquidity by the BOJ. Until the financial crisis of 1927, the BOJ extended its credit to private banks at the level of around 4 hundred million yen. It jumped during the crisis and stayed at around 8 hundred million yen through the rest of the 1920s, substituting call loans to banks with high risk profiles (Figure 5).

[28] Takahashi (1955b), pp.1315-1316, translated and cited in Shizume (2009), p.4.

Figure 5. Interbank Loans and BOJ Credit



Source: The Ministry of Finance, *Reference Book for Financial Matters*, various issues.

7.3 Enduring the Moral Hazard Problem

Junnosuke Inoue was the BOJ Governor in 1923, was appointed as the Finance Minister immediately after the Great Kanto Earthquake and played a central role in implementing the EB facility during the initial phase, and was later appointed as the BOJ Governor once again.

Inoue recalled in the meeting of directors and branch managers of the BOJ in May 1928 that the BOJ's efforts for relief finance in the 1920s had gone too far. He said, "From the perspective of the BOJ's policy tradition, there has been much to regret about its actions since 1920. The irregular measures after the earthquake in 1923 were a notable example… The attitude of the BOJ during that period was one that should not be tolerated in light of the standards of a central bank."[29]

Eigo Fukai, executive director of the BOJ during the financial crisis of 1927, who later served as Vice Governor and Governor, recalled about the BOJ's experience in the 1920s:

> When we saw the risk of financial distress, we conducted special rescue measures from time to time, stepping into a muddle... When we conducted an individual special accommodation, we saw little cost to dealing with it. We saw little risk of deterioration in monetary conditions. We saw great risk of contagion if the bank failure became open. So, we judged that it was necessary… In retrospect, it was difficult to exit from recurrent cases of special accommodation when the economic conditions changed in such a drastic way. As a result, public sentiment turned to think that the main task of the BOJ should be to rescue businesses through special

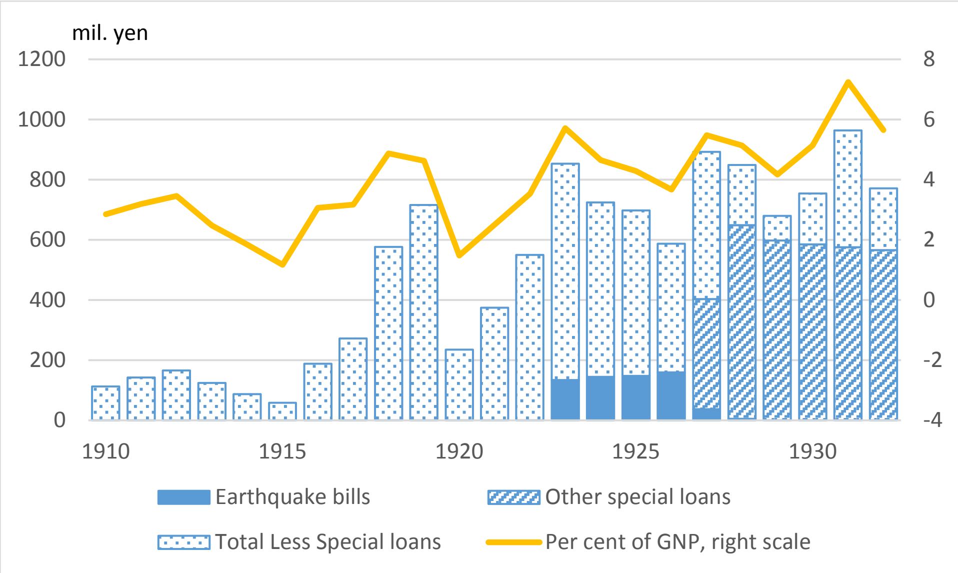
[29] BOJ archive document no. 9293, Branch manager conference documents (Spring 1927–fall 1928).

accommodations.[30]

7.4 Implications for Monetary Policy

The entrenched lending by the central bank imposed a new constraint on the operation of monetary policy. After the financial crisis of 1927, most of the lending by the BOJ to the private sector consisted of special loans. Though they were guaranteed by the government, the funds could not be easily removed from the financial markets. The BOJ had to bear the loss of flexibility in its monetary policy operation (Figure 6).

Figure 6. The BOJ's Loans to the Private Sector



Source: The Ministry of Finance, *Reference Book for Financial Matters*, various issues.

Eigo Fukai recalled:

Loans by the issuing bank should be repaid in the short-term in a prompt manner. If this procedure is secured, the money stock remains stable because when someone invests his/her surplus funds, the investment will eventually be repaid by the deadline. However, if the funds are provided by the issuing bank and the policy is entrenched, there is no way to get the funds repaid. For example, assume Bank A borrows from the issuing bank to repay deposits. The depositors withdraw the funds from Bank A and deposit them in Bank B. If Bank B has borrowed short-term funds from the issuing bank, Bank B may repay its loans borrowed from the issuing bank. Then, even if the money stock remains stable, the short-term lending of the issuing bank to Bank B transformsinto an entrenched lending to Bank A in this process.

[30] Fukai (1941), pp.197-8.

> Looking at it from the issuing bank's perspective, a loan to a sound bank turns out to be an entrenched loan to a troubled bank. That is, a bad loan drives out a good loan. If this process continues, in the end, all loans of the issuing bank become entrenched, and the bank has no way to get its loans repaid.[31]

8. Lessons for Today

From the experience in the 1920s in Japan, we can draw a number of lessons for today's monetary and prudential policies.

First, although the authorities were aware of the bad loan problem caused by inappropriate investments during and right after WWI from the early stages, the required reforms were postponed due to political difficulties, resulting in the deepening and widening of the problem. Kamekichi Takahashi wrote:

> The fundamental causes of the financial crisis of 1927 were the cumulative mismanagement of cover-ups and halfway measures against earlier flaws dating back to the post-war collapse. These problems were revealed inadvertently during the debate on EBs, igniting the explosion of the financial crisis.[32]

Second, the BOJ's intention *ex ante* was to provide liquidity to solvent financial institutions and to improve the conditions of financial intermediation after the Great Kanto Earthquake. However, it was difficult to evaluate risk profiles of debtors in the midst of an emergency, and the operation of the discounting of EBs resulted in rescuing already insolvent financial institutions. The course of events delayed the disposal of bad loans, exacerbated the moral hazard problem, and paved the way for the financial crisis of 1927.

Third, once the financial crisis erupted, a momentum toward reforms was soon built, and the long-awaited reforms proceeded decisively. In a sense, the crisis accelerated the reforms. Kamekichi Takahashi also wrote, "The unimaginable financial panic induced drastic reforms in the banking system, whether people liked it or not. The panic contributed to many of the reforms that were to follow."[33]

Fourth, even though the central bank could restore the financial stability with its liquidity provisioning, it had to endure lasting constraints on its operation in monetary policy matters. As EigoFukai remarked in his book in 1928, prudential policy and monetary policy could not be separated in the operation of central banking.

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[31] Fukai (1928), pp.442-3.
[32] Takahashi (1955a), p.739, translated and cited in Shizume (2009), p.4.
[33] Takahashi and Morigaki (1993), p.289, translated and cited in Shizume (2009), p.4.

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