

# Lessons from the Inoue Zaisei and the Takahashi Zaisei

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## Introduction<sup>1</sup>

Since the 1992 recession, the performance of the Japanese economy has been the worst of the developed nations. Japan's average rate of real economic growth was only 1.1% between 1992 and 2001, compared with 4.0% growth in the 1980s. The comparable figures for Australia, the United States, and the United Kingdom were 3.7%, 3.3%, and 2.6%, respectively. The question is why this poor performance has occurred.

A number of hypotheses have emerged, including the inadequacy of fiscal policy, inappropriate monetary policy leading to deflation, the low investment rate following over-investment during the bubble period of the late 1980s and early 1990s, financial disintermediation due to huge nonperforming loans, and a fall in the potential growth rate because of supply-side factors.

In an attempt to repair the economy, the then Prime Minister Keizo Obuchi from 1998 until 2000 substantially increased government expenditures and cut both income and corporate taxes. The result was a huge increase in the stock of government bonds. In contrast, for the past three years, the then Prime Minister Junichiro Koizumi from 2001 until 2006 largely reduced government expenditures and tried to improve the supply side of the Japanese economy. Koizumi was confident that regulated and inefficient public enterprises and financial corporations were responsible for Japan's poor performance in the 1990s. Therefore, he intended to regenerate the Japanese economy by implementing structural reforms, including deregulation and privatization of public enterprises and financial corporations. Such economic reforms were undertaken in developed countries such as the United Kingdom and Australia and are now considered to have improved economic performance.

However, we doubt whether the structural reforms succeeded in regenerating the Japanese economy. There had been a large deflationary gap in the Japanese economy since 1998, and it was highly likely that the structural reforms enlarged this gap by raising the potential growth rate. If so, it is less likely that the structural reforms are the cause of the economic recovery since 2002.

It should be noted that the developed countries, including the United States, the United Kingdom, Canada, Australia and New Zealand, undertook structural economic reforms when there was an inflationary gap in their economies. Structural reform is an effective economic policy in mitigating an infla-

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1 This paper is based on Iwata (2004a). We are grateful to participants in the workshop of the Shouwa Kyoukou (the Shouwa Great Depression).

tionary gap. In addition, the central banks in the UK, Canada, Australia and New Zealand have kept inflation low, in the range from 1% to 3%, by pursuing inflation targeting as their basic monetary strategy.

No country had experienced deflation in the postwar period until the Japanese economy did so in 1998. However, in the 1930s, many countries, including Japan, fell into depression because of deflation. Japan's average rate of real economic growth fell to 0.7% in 1930-1931, compared with 1.9% for the 1920-1929 decade. The average rates of decline of the consumer, stock, and land price indexes for 1930-1931 were 11%, 29%, and 21%, respectively (see table 1). This depression is called the Shouwa Kyou Kou (the Shouwa Great Depression). Japan succeeded in recovering from this depression as early as 1932 because of the macroeconomic policies conducted by the then Minister of Finance, Korekiyo Takahashi. In contrast, many countries, including the USA, suffered from severe depressions. Takahashi's macroeconomic policy, which is referred to as Takahashi Zaisei, ended on 26 February 1936 when Takahashi was unfortunately assassinated. During the period of the Takahashi Zaisei, the average rate of real economic growth soared to 7.2%, the inflation rate was a mild 2%, the stock price index rose by 70%, and land prices ceased their previous decline.

This paper examines the Takahashi Zaisei in order to throw light on the causes of the prolonged stagnation Japan experienced since 1992, the so-called "lost decade", and to consider what is the most effective economic policy for recovery, stability, and sustained growth. Section 1 analyzes why Japan fell into the Shouwa Kyou Kou and how it succeeded in recovering from it, by considering the policy regimes. Section 2 considers what lessons we should learn from the Shouwa Kyou Kou that could be applied to ending the prolonged stagnation of the Japanese economy that had occurred since 1992.

## **1 How Japan succeeded in recovering from the Shouwa Kyou Kou**

### **1-1 The Inoue Zaisei that caused the Shouwa Kyou Kou**

#### **Inoue Zaisei as a Deflationary Regime**

We evaluate economic policies from the perspective of the policy regimes adopted by policy agents. A policy regime is the framework that determines the rules of the game in which economic agents participate. It is systematic and hence predictable. Economic agents would not respond to policies that are inconsistent with the policy regime, but only to those that are consistent with it.

Then, we examine which policy regime resulted in the Shouwa Kyou Kou (the Shouwa Great Depression).

From the outbreak of World War I in 1914 until 1919, the Japanese economy boomed because of a huge trade surplus. However, at the end of the war, the trade surplus was reduced rapidly and Japan fell into a recession, with the bursting of stock and land price bubbles. Moreover, Japan had a great earthquake, Kantou Daishin-sai, in 1923. The banks, supported by credit from the Bank of Japan (BOJ), provided huge loans to assist the firms that suffered from the disaster. However, many of these turned out to be nonperforming loans. Hence, the performance of the Japanese economy in the 1920s was poor (see table 1).

The then Minister of Finance, Jyunnosuke Inoue, who took office in 1929, was confident that struc-

tural problems gave rise to the prolonged stagnation of the 1920s. He believed that inflation should have been lowered, the exchange rate increased, and inefficient firms liquidated. Therefore, he decided to appreciate the exchange rate to its prewar level by returning to the gold standard system that had been suspended since the beginning of the WWI. In addition, he adopted tight monetary and fiscal policies in order to lower the general price level. The end result was the Shouwa Kyou Kou. This economic policy is called Inoue Zaisei (Inoue Economic Policy) after the Minister of Finance.

The Inoue Zaisei policy regime was one of deflation, based on inefficient firm liquidations and the return to the gold standard. According to Schumpeter's creative destruction hypothesis, creative firms will appear only after inefficient firms are removed. Inoue believed that the liquidation of the inefficient firms would allow the Japanese economy to regenerate through the so-called Schumpeterian process of creative destruction.

## **1-2 The Change of the Economic Policy Regime by Takahashi**

### **Takahashi Zaisei as a Reflationary Regime**

As Inoue Zaisei caused an economic disaster, Tsuyoshi Inukai took over the reins of government and appointed Korekiyo Takahashi as Minister of Finance. Takahashi immediately suspended the gold standard system and then issued public bonds to finance increased public expenditures. In addition, he had the Bank of Japan buy public bonds directly from the government. This increased the money supply at the same time as public expenditures increased. Thus, Takahashi's regime involved not only expansionary fiscal policy but also easy monetary policy, even though this policy is called Takahashi Zaisei (Takahashi Fiscal Policy).

Chart 1 shows that, as the ratio of public bonds held by the Bank of Japan increased, the deflation ended and mild inflation developed. The average rate of growth of the money supply rose from negative 4.2% for 1930-1931 to 5.6% for the period 1932-1935 (see table 1).

When Takahashi was assassinated in February 1936, the Tokyo retail price index had risen to 1.04, almost 90% of its January 1930 predepression level of 1.11 (chart 2). An economic policy aimed at raising the price level to the level when the deflation began is called a reflationary policy. Therefore, the policy regime of Takahashi Zaisei was a reflationary regime.

### **A Two-Step Change of the Policy Regime**

We trace in detail the process in which the deflation was ended and inflation developed.

Takahashi suspended the gold standard system on 13 December 1931 and returned to a floating exchange system, with the result that the exchange rate depreciated from \$49 per yen to \$20-30 per yen (see chart 2). The retail price began to rise. Therefore, it seemed that the deflation had ended. This was the first step of the Takahashi reflationary policy.

However, some people may have been disappointed that Takahashi did not take advantage of the suspension of the gold standard to adopt an easy monetary policy stance. This unrealized expectation may have been the cause of the decline of stock prices (see chart 3) and the revival of deflation (see chart 2). Then, on 15 May 1932, the 5.15 coup d'état occurred, in which then Prime Minister Inukai was assassi-

nated, and this was followed by a steep plunge in confidence about the economy (chart 2).

In November 1932, against the background of these circumstances, Takahashi resolved to adopt an easy monetary policy under which the Bank of Japan directly underwrote public bonds issued by the government. This direct underwriting of public bonds is called a monetization policy. This was the second step of the Takahashi reflationary policy and it completely ended the deflation (see chart 2).

### **The Change of the Expected Inflation Rate caused by the Policy Regime Change**

According to chart 3, the stock price had risen substantially before the gold standard system was suspended in December 1931. Charts 2 and 3 show that the stock and the retail prices started to rise in August 1932, before the Bank of Japan began to directly underwrite the public bonds issued by the government in November of that year. This suggests that inflationary expectations had already developed before the suspension of the gold standard system or the start of the direct underwriting of issued public bonds by the Bank of Japan.

The change of the policy regime to a reflationary regime would first raise the expected rate of inflation, which in turn would raise stock and land prices, and then the actual rate of inflation. Finally, both the nominal and the real rate of economic growth would rise. We investigate further when inflationary expectations developed under the Takahashi Zaisei.

Okada and Iida (2004) estimated the expected rate of inflation in the 1920s and 1930s by using the interest rate model developed by Mishkin (1992). They found the following:

- (1) The expected rate of inflation rose to a positive figure in September 1931, before the suspension of the gold standard system in December 1931 (chart 4). In September 1931, the Manchurian incident broke out and Britain announced the suspension of its gold standard system. These incidents may have led to an expectation that the Japanese government would cease its tight fiscal policy and suspend its gold standard system. This expectation resulted in the above jump in the expected rate of inflation.
- (2) However, the expected rate of inflation began to decrease after the suspension of the gold standard system in December 1931. This may have been because an easy monetary policy was not adopted. The expected rate of inflation suddenly increased again in April 1932, after Takahashi's announcement in March of that year that, in the near future, he intended to adopt the policy under which the Bank of Japan directly underwrote public bonds (see chart 4). Okada and Iida (2004) suggested that this announcement was seen as a signal that Takahashi had definitely changed his policy regime to a reflationary regime. It is likely that this expectation of a change of the policy regime would substantially raise the expected rate of inflation.

### **The effects of inflationary expectations**

Let us consider how the development of inflationary expectations following Takahashi's reflationary policy regime stimulated the Japanese economy and saved it from the economic crisis.

#### **(1) The reduced expected real interest rate**

As long as the nominal interest rate does not rise as much as the expected rate of inflation does, the expected real interest rate falls<sup>2</sup>. Chart 5 shows that the expected real interest rate during the Takahashi

Zaisei period was much lower than just before and during the Shouwa Kyou Kou period.

This reduction in the expected real interest rate increased both investment and durable consumption expenditures to raise Gross Domestic Product (GDP).

**(2) The improvement in the balance sheet**

The increase of the expected rate of inflation raised stock and land prices (see chart 3). Those increases improved the balance sheets of firms and households, which may have increased their expenditures.

**(3) The increase of equity finance**

The rise of stock prices greatly increased equity finance (see chart 6), which encouraged the establishment of new firms (see chart 7).

Chart 8 shows that the number of corporations being established decreased during the deflationary period, whereas it increased during the inflationary period.

We infer from these facts that the hypothesis of a Schumpeterian creative destruction process is not supported.

### **1-3 Other Hypotheses about the Recovery from the Shouwa Kyou Kou**

We now consider alternative hypotheses about the recovery from the Shouwa Kyou Kou.

#### **The Reduced Nonperforming Loans Hypothesis**

It has been claimed that the Japanese economy stagnated during the 1920s because of the financial disintermediation that resulted from the huge nonperforming loans. From this point of view, the Takahashi Zaisei succeeded in regenerating the Japanese economy only because the Shouwa Kinyou Kyou Kou (the Shouwa Bank Crisis, not to be confused with the Shouwa Kyou Kou) removed almost all of the nonperforming loans in 1927.

Adachi (2004) disputed this hypothesis by indicating that new nonperforming loans increased remarkably during 1930-31 the Shouwa Kyou Kou period, even though many earlier loans were reduced in 1927.

Chart 9 shows that industrial output increased rapidly during the Takahashi Zaisei period, whereas bank loans were reduced. Thus, the financial disintermediation problem was not solved during the Takahashi Zaisei period. However, the Japanese economy succeeded in escaping from the Great Depression. The question is why.

Chart 10 shows that the corporations had abundant internal funds during the Shouwa Kyou Kou period and could therefore finance their own investment expenditures.

Another way of financing expenditures was by issuing equity, as shown above (see chart 10).

Corporations recovering from the Great Depression in the United States relied on funds other than bank loans, as in Japan (see charts 11 and 12). Therefore, we may conclude that corporations can finance their expenditures without depending on bank loans for recovery from depression.

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2 Note that the *expected* real rate of interest is equal to the nominal rate of interest less the *expected* rate of inflation.

### **The Fiscal Policy Hypothesis**

Another claim is that the Japanese economy recovered from the Shouwa Kyou Kou because of the combined effects of fiscal policy and the Pacific Ocean War.

In July 1935, Takahashi made the following comments on the public bond policy:

- (1) A large amount of public bonds have been issued since the 1932 fiscal year. So far, this public bond policy has resulted in a decline of the interest rate aimed at restoring the economy.
- (2) However, we will not be able to issue public bonds to the extent that we have done in the past. Excess issues cause an inflationary spiral and financial bankruptcy, as shown by the experiences of European countries after WWI.

Charts 13 and 14 show that both the military budget and the balance of long-term public bonds increased considerably in fiscal years 1932 and 1933, during the first half of the Takahashi Zaisei. However, the growth rates of both decreased substantially in fiscal years 1934 and 1935, the second half of the Takahashi Zaisei.

As the Japanese economy had already recovered from the crisis by 1933, Takahashi attempted to reduce the government budgets from that fiscal year. In February 1936, he was assassinated in the 2.26 coup d'etat by the military, which strongly demanded an increase in its portion of the budget.

The next Minister of Finance, Eiichi Baba, adopted an inflationary economic policy that increased the military budget as much as the military demanded. He had the Bank of Japan directly underwrite public bonds to finance the budget.

Charts 13 and 14 show that both the military budget and the balance of long-term public bonds increased enormously after the end of the Takahashi Zaisei in the 1935 fiscal year.

The average rate of real economic growth was 4.5% and inflation was around 10% for the period from 1936 to 1940, whereas these rates were 7.2% and 2.0%, respectively, during the Takahashi Zaisei. The ratio of real consumption expenditures to real GDP, which indicates living standards, dropped to less than 60% in 1940, whereas it was about 72% during the Takahashi Zaisei.

Hence, we conclude as follows:

- (1) The fiscal policy hypothesis that the Takahashi Zaisei succeeded in recovering from the Shouwa Kyou Kou by a huge increase in the fiscal budget is not supported.
- (2) The Pacific Ocean War did not finally save the Japanese economy from the Shouwa Kyou Kou. Instead, it completely ruined the economy.

## **2 Lessons from the Shouwa Kyou Kou**

We now consider what lessons we should learn from the Shouwa Kyou Kou that may throw light on the causes of the prolonged stagnation of the Japanese economy in the 1990s and early 2000s, and what policies will sustain and stabilize growth.

### **Why the Takahashi Zaisei Succeeded**

As long as deflationary expectations exist, the expected real interest rate may not decrease to levels necessary to increase both investment and durable consumption expenditures. This is due to downward

rigidity in the nominal rate of interest. In addition, deflationary expectations may decrease both the stock and land prices, worsening the balance sheets of firms and households, with the result that their expenditures will decline. Therefore, to restore the economy from stagnation, which arises from persistent deflationary expectations, and to return to sustained and stable growth, the expectation of deflation itself must be removed.

Section 1 shows that the reasons for the success of the Takahashi Zaisei were the suspension of the gold standard system accompanied by the direct underwriting of public bonds by the Bank of Japan. This definite change of the policy regime to a reflationary regime raised the expected rate of inflation and stimulated the economy, as shown in section 1-2.

Eichengreen (1992) and Bernanke (2000) showed that the US economy recovered from the Great Depression after the suspension of the gold standard system in combination with an enormous purchase of public bonds by the Federal Reserve Bank (FRB) (chart 15).

If the persistent expectation of deflation is removed and an expectation of mild inflation is established, the macroeconomy would become stable. To change expectations, it is essential that the policy regime is credible. Therefore, the policy agents should be strongly committed to maintaining their policy regimes.

### **Policies for Sustained Economic Growth**

Since 1992, there have been fierce debates among economists about the causes of Japan's stagnation. These arguments, which have continued for more than 10 years, can be categorized into two broad theories: first, the argument that Japan's structural problems were the cause of the stagnation, and second, the argument that the Bank of Japan's monetary policy, which induced deflation, was to blame. In assessing the validity of these arguments, it is worthwhile to reflect on these theories in the light of the recovery from the Shouwa Kyou Kou, as well as the more recent recovery that has occurred since 2002.

There are variations within the broad theory that structural problems are the cause of the stagnation. The most typical argument is that the banks were to blame because they were reluctant to advance new loans, and extended forbearance lending. If the reluctance of banks to lend was indeed the cause of the stagnation, economic recovery would require an increase in the volume of bank loans. However, the Japanese economy began to recover in 2002, despite the fact that bank loans had been decreasing (chart 16). That is, the recent recovery was achieved without an increase in bank lending, as was the recovery from the Shouwa Kyou Kou, and that of the US economy from the Great Depression of the 1930s.

According to the proponents of the forbearance-lending hypothesis, the economy remained suppressed as funds were absorbed by forbearance lending and were unavailable to new businesses. However, during the recovery of 2002-2004, sound firms utilized their own funds (chart 17). In fact, firms in general repaid their bank loans just as firms did during the recovery from the Shouwa Kyou Kou and the Great Depression (charts 10 and 11).

Some supporters of the structural-problem hypothesis claim that the recovery of 2002 was a result of the Koizumi reforms. However, the Koizumi reforms were limited to laying the groundwork for privatization of the Housing Loan Corporation and the Japan Highway Public Corporation during 2001-2004. It is difficult to relate those decisions to the recovery of the economy. In addition, it is argued that the Koizumi government's cuts in public spending aided the recovery by encouraging the self-reliance of lo-

cal regions. However, this is not a convincing argument.

Before examining the theory that deflationary expectations caused the prolonged stagnation, we must correct the common misconception that the economy cannot recover while deflation persists. There are countless cases in history when relatively high growth was achieved in a deflationary environment. The recoveries from the Shouwa Kyou Kou and the Great Depression began before deflation ended. In Japan, the mini-growth experienced during 1995-1996 occurred in a period of deflation, according to GDP deflator figures. Moreover, the recovery of 2000, dubbed the "IT bubble recovery", was attained when the consumer price index and the GDP deflator were registering deflation. Yet these recoveries were short-lived and not sustainable.

Section 1 shows that it is necessary for public sentiment to change from anticipating deflation to expecting inflation. This study points to the necessity of a decline in expected real interest rates to a level compatible with the realization of full employment, which in turn sets the basis for sustained and stable growth. Hence, if deflation has not ended, but the anticipation of future deflation ceases, or inflationary expectations develop, expected real interest rates would fall, bringing about real economic recovery. That is, we should distinguish between actual deflation and the expectation of deflation. What is relevant to the performance of the macroeconomy is not actual deflation, but the expectation of deflation.

Analyses of the behavior of the inflation-indexed government bonds in the market indicated changes in 2006 in people's sentiment toward the future, in that they seemed to sense an end to the deflationary trend. The reasons for this calming of deflationary sentiment were the heavy intervention in the foreign exchange market by the Ministry of Finance that occurred in 2003, and clear indications by the Bank of Japan that it was committed to breaking away from deflation. The remarks by BOJ Governor Fukui expressed a strong commitment to the fight against deflation, which had been unexpected given Fukui's words and actions before assuming the governorship.

However, despite this positive development, the expected real interest rate has not yet reached the levels required to realize full employment. For the expected real interest rate to drop to the required level, inflationary expectations need to rise to around 2-3%. Therefore, the BOJ should pursue an inflation target and show a strong commitment to attaining a level of inflation within this range.

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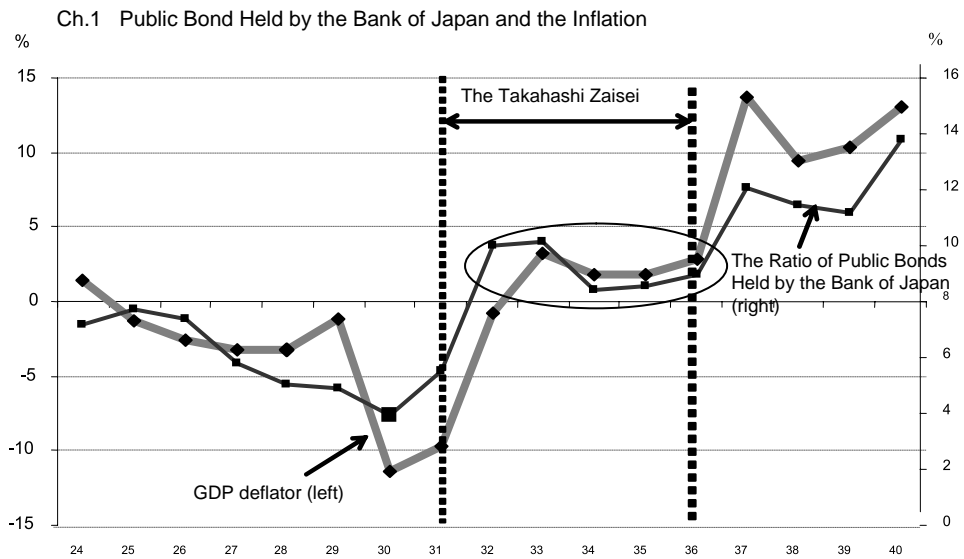


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Table 1 Economic Performance after 1915 (%)

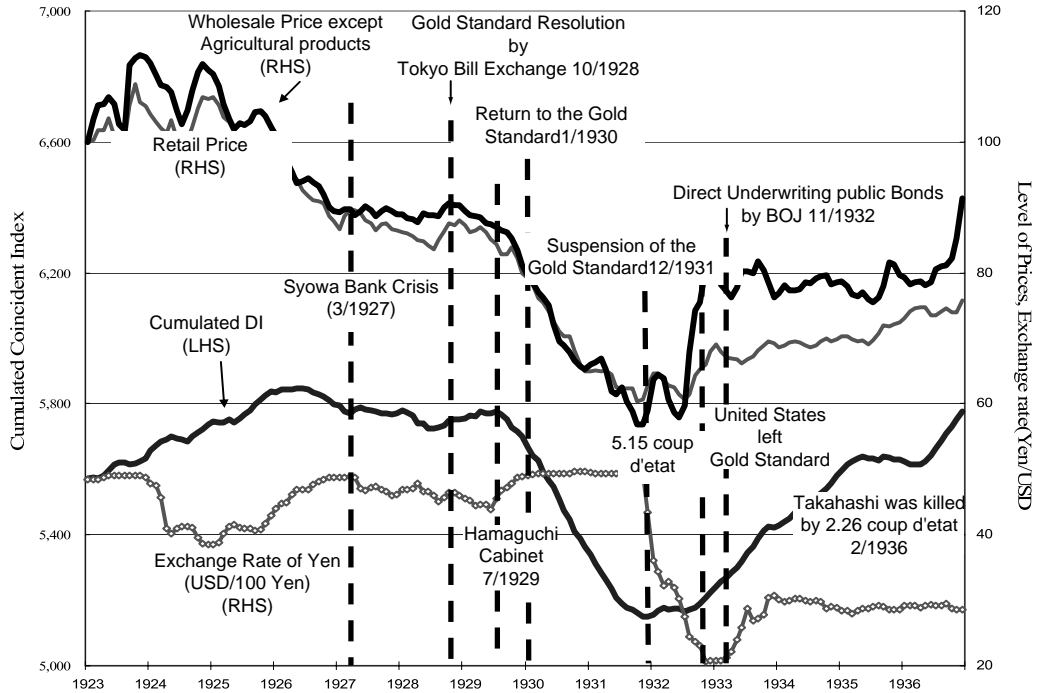
year	Nominal rate of Growth	Real rate of Growth	CPI	Stock Price	Land Price	Money
1915-1919	27.3	7.3	14.7	67.6	178.0	31.6
1920-1929	0.6	1.9	-1.6	-63.5	-25.9	2.9
1930-1931	-9.6	0.7	-10.8	-29.4	-21.4	-4.2
1932-1935	8.3	7.2	2.0	70.3	1.0	5.6

(Source) Okawa et al., Keizai Seicho Tokei. Bank of Japan, Meiji Ikou Honpo Shuyo Keizai Tokei.



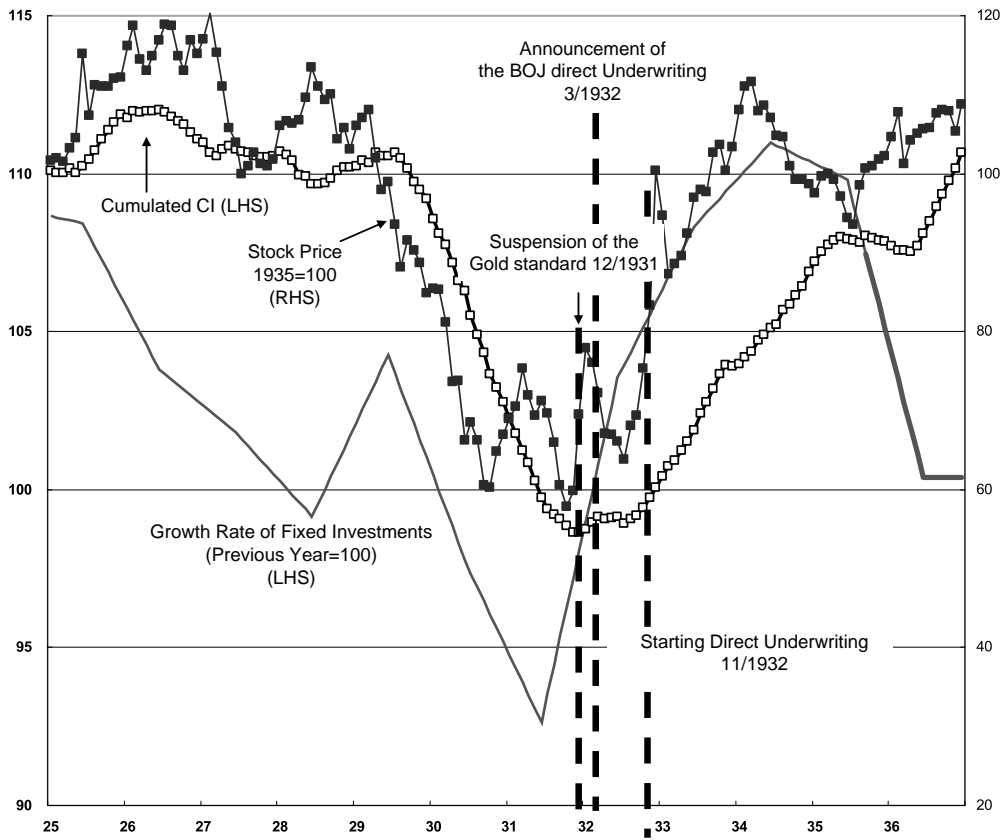
(Source) K. Iwata ed. (2004a)

Ch. 2 Price and Exchange rate



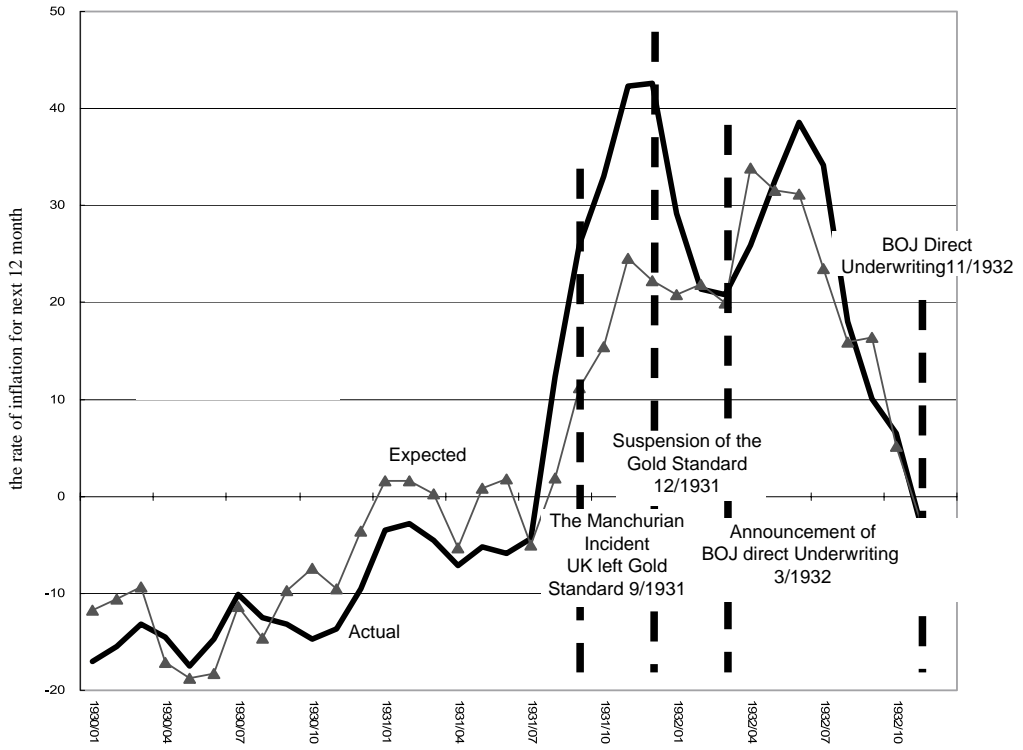
(Source) K. Iwata ed. (2004a)

Ch.3 Stock Price, Fixed Investments and Business Cycle Indicator



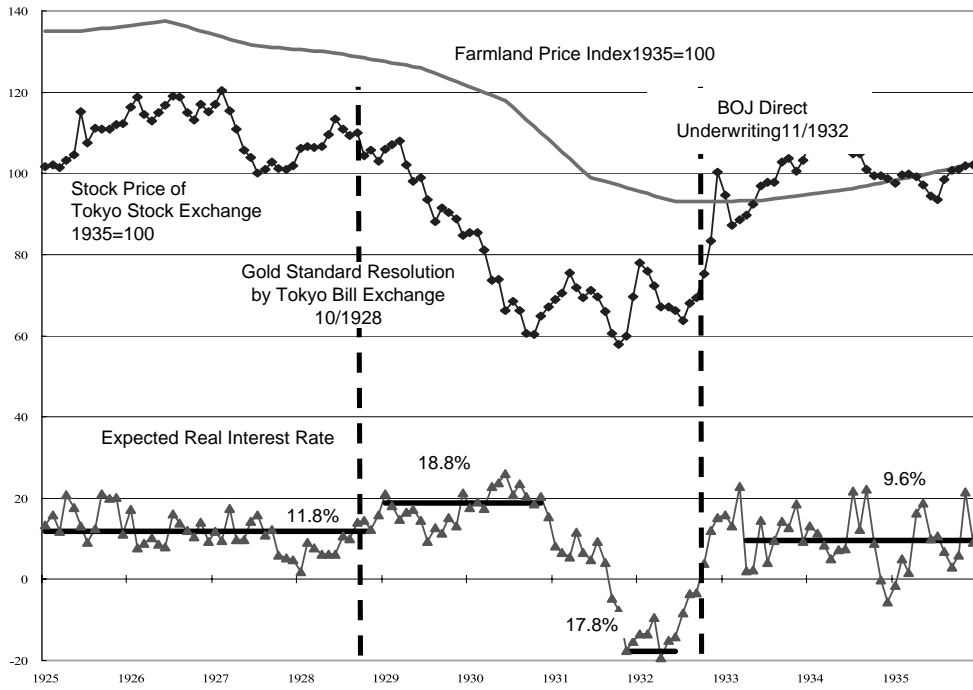
(Source) K. Iwata ed. (2004a)

Ch.4 The Expected Rate of Inflation and The Expectation of the change of Policy Regime



(Source) K. Iwata ed. (2004a)

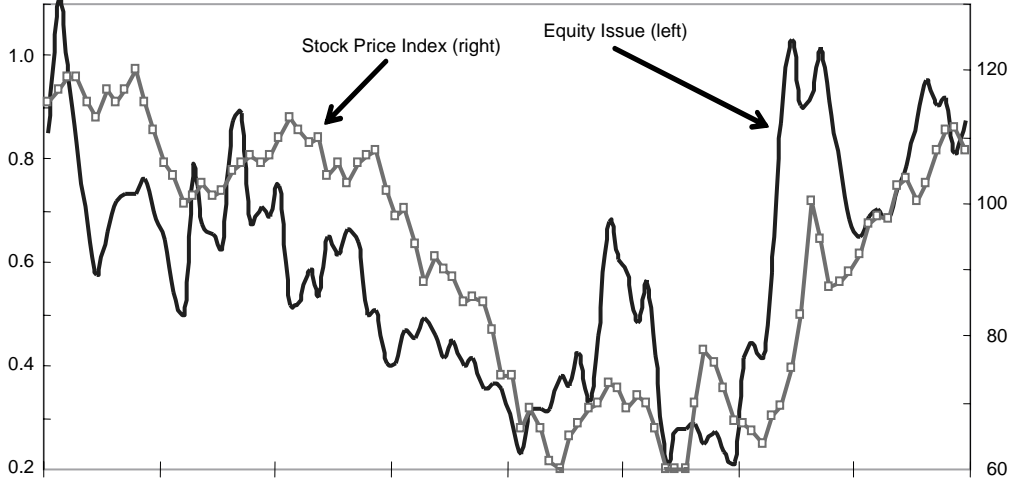
CH.5 The Expected Real Interest Rate and Asset Prices



(Source) K. Iwata ed. (2004a)

Ch.6 Stock Price and Equity Issue

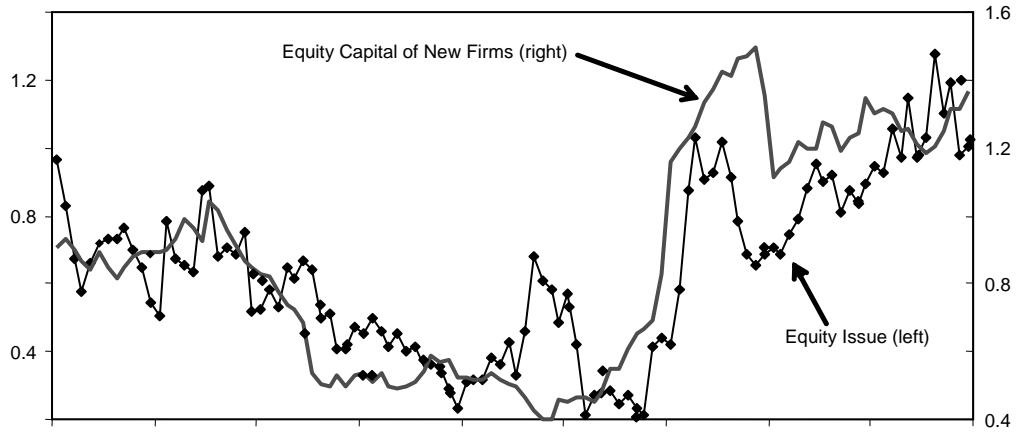
Hundred million yen



(Sources) Toyo Keizai Shinposha, Nippon Keizai Nenpo. The Ministry of Finance, Kinyu Jiko Sankosho.

### Ch.7 Establishment of New Firms and Equity Issue

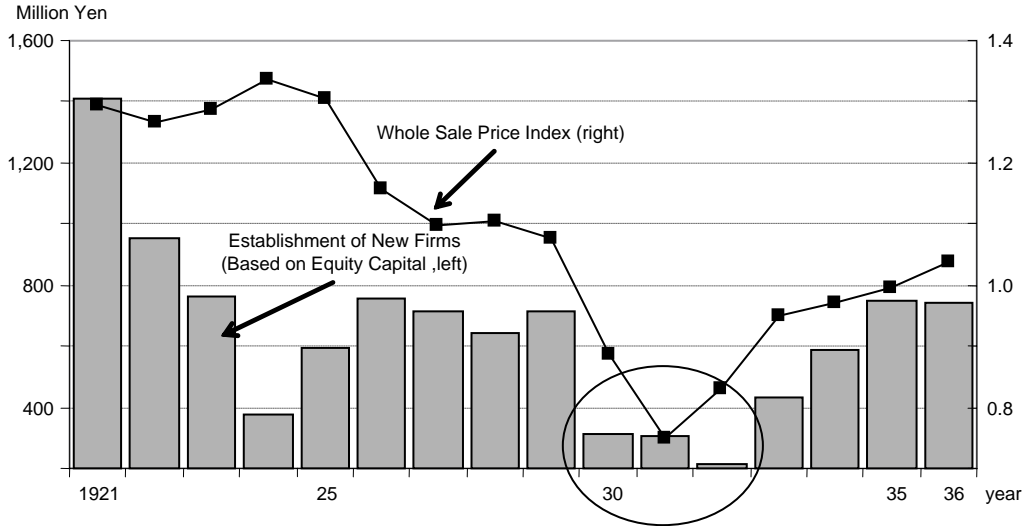
Hundred Million Yen



(Source) The Ministry of Finance, Kinyu Jiko Sankosho.

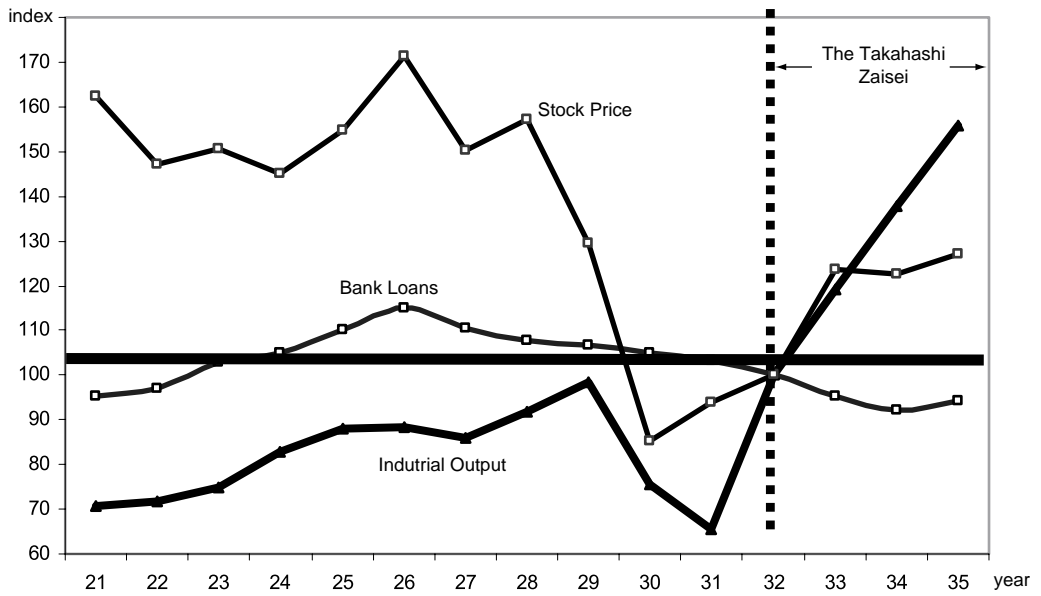


Ch.8 Deflation and Establishment of New Firms



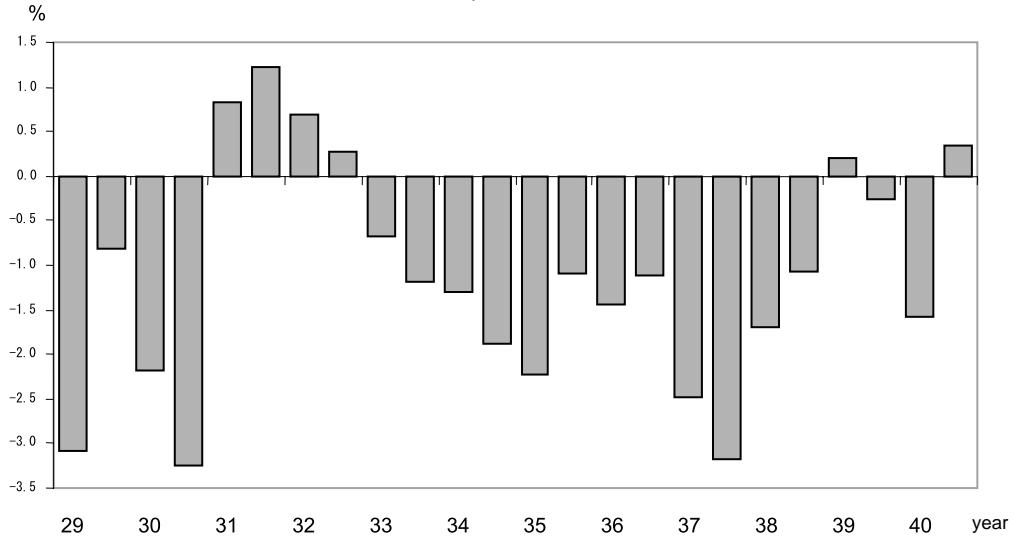
(Source) The Bank of Japan, Meiji Ikou Honpo Shuyo Keizai Tokai.

Ch. 9 Bank Loans during the Takahashi Zaisei Period



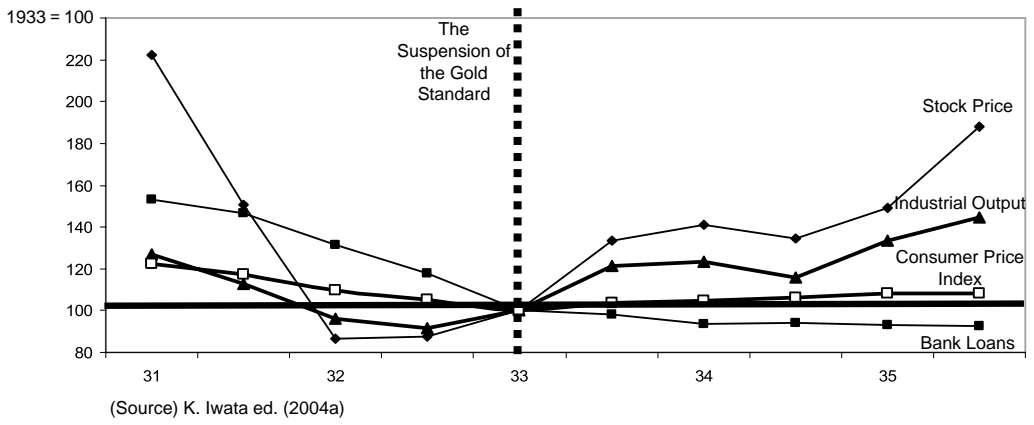
(Source) K. Iwata ed. (2004a)

Ch.10 The Ratio of Internal Funds of the Corporations

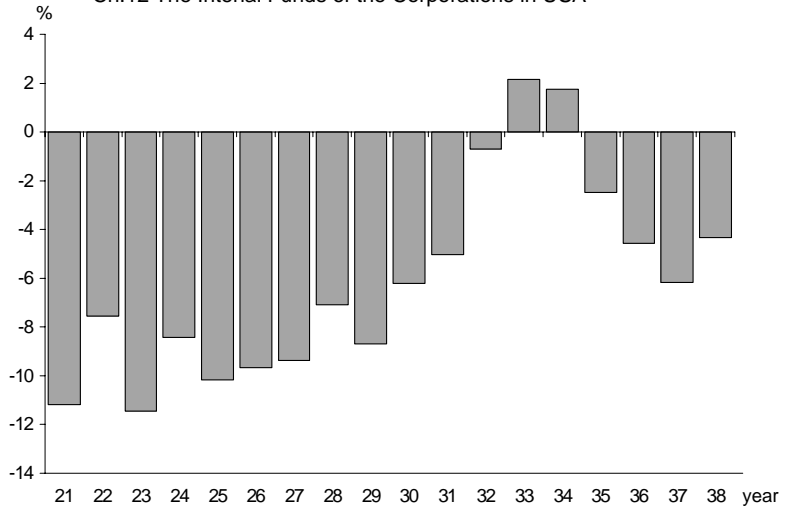


(Source) K. Iwata ed. (2004a)

Ch.11 Bank Loans during the Recovery from The Great Depression in US



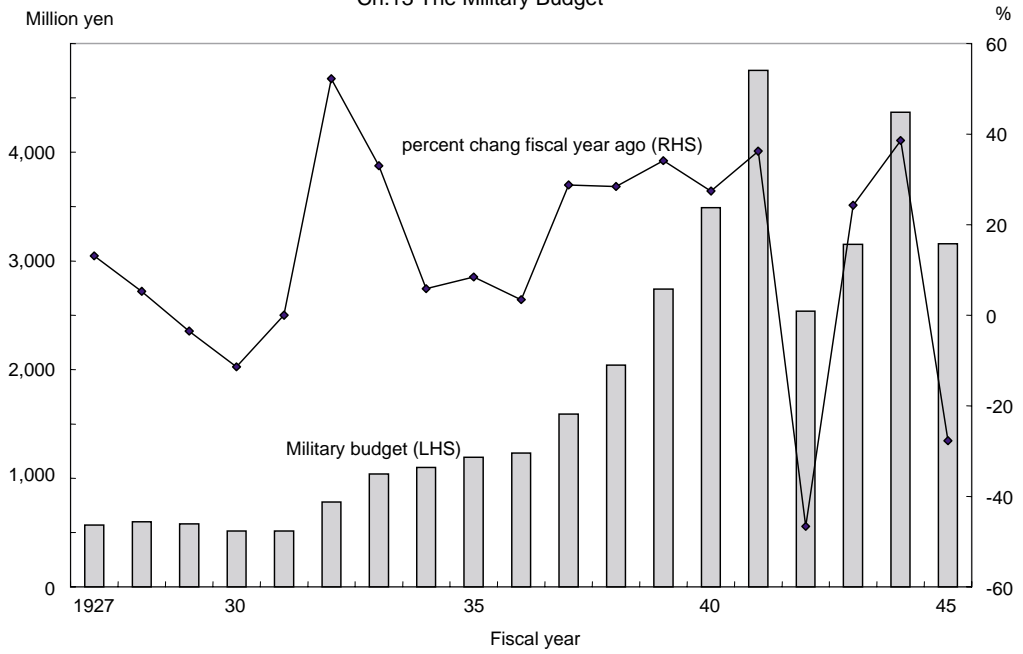
Ch.12 The Internal Funds of the Corporations in USA



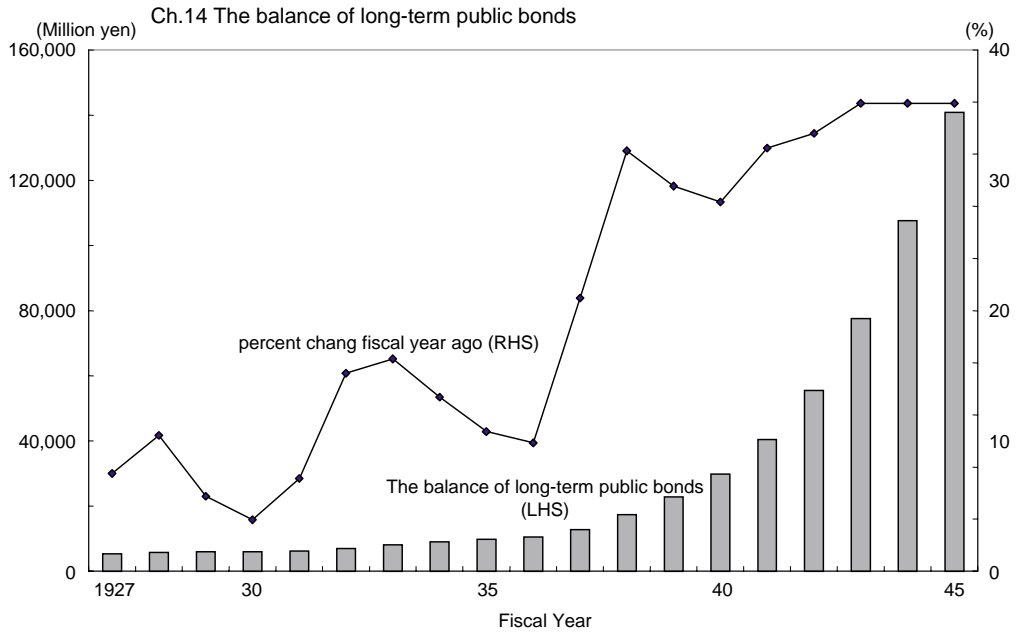
(Source) K. Iwata ed. (2004a)

(note) The ratio of the internal funds to nominal GDP

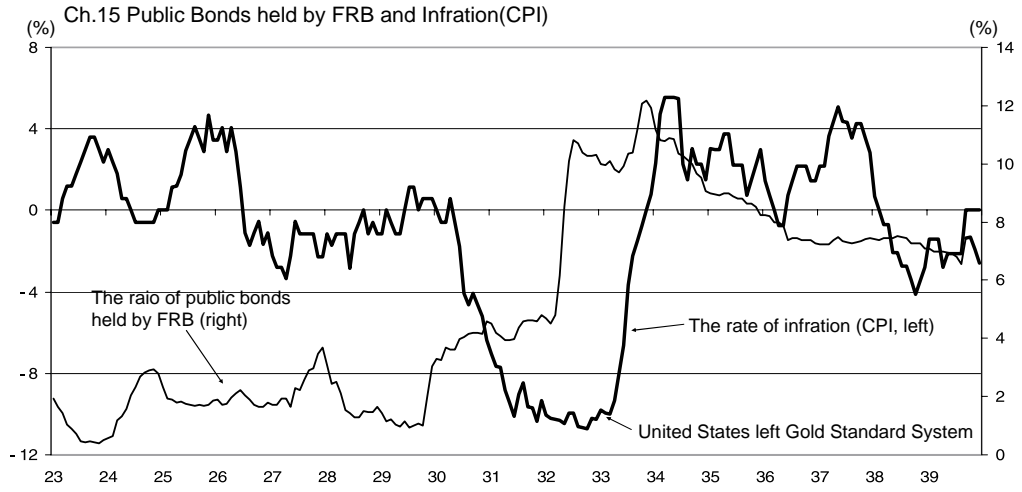
### Ch.13 The Military Budget



(Source) Bank of Japan, Meiji-ikou Honpo Shuyo Keizai Tokei.

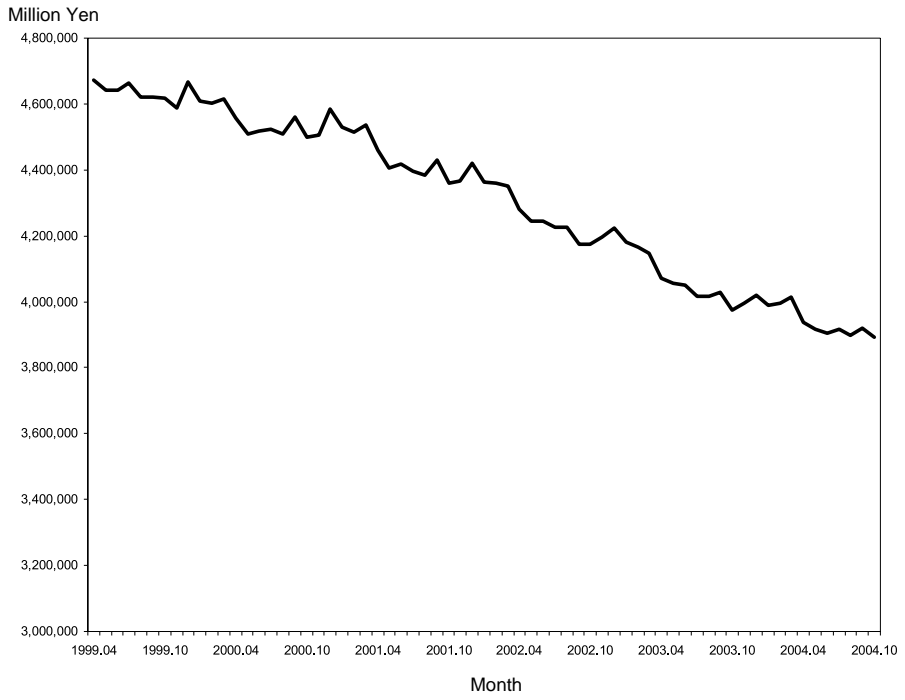


(Source) Bank of Japan, Meiji-ikou Honpo Shuyo Keizai Tokei





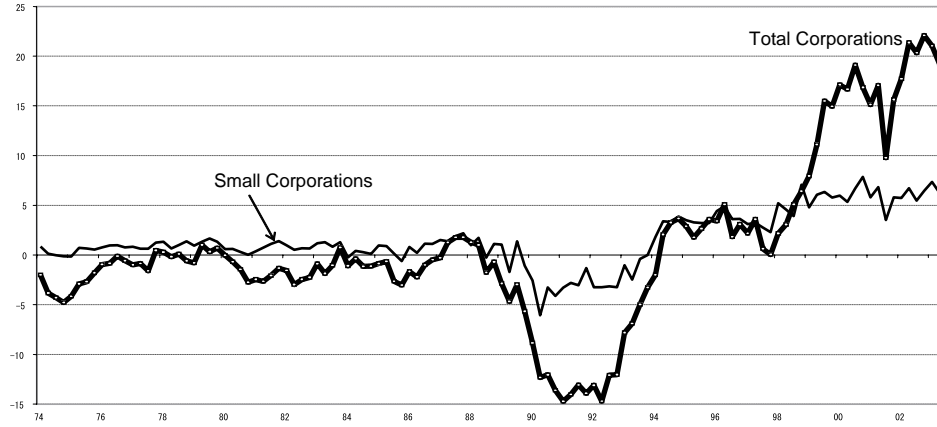
Ch.16 Bank Loans (Domestic Bank)



(Source) Bank of Japan Homepage

### Ch.17 Free Cash Flow

trillion



(note) Free cash flow = net current profit + depreciation — investment

(Source) The Ministry of Finance, Houjin Kigyo Tokei.