

What Happened in Japan When the Bubble Crashed in the 1990s?

(A synopsis of the lecture by Akira IIDA at an international seminar
organized by the Ministry of Finance on April 21, 2000.)

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I. The Balance Sheet Effects of the Bubble Crash in the 1990s

The loans made by banks and non-banks under the banking practice that favored land as loan-collateral, resulted in the existence of massive unsecured loans, when land prices fell sharply during the process of the bubble-crash throughout the 1990¹s.

As the fall of asset prices (the price of both stock and real estate) induced a deflationary stagnation of economic activities, repayments of loans (both principal and interests) became difficult. The above two factors were at the heart of the massive increase of bad loans in the banking and non-banking sectors in Japan during the period.

Smaller institutions such as shinyo-kumiai (mutual credit associations), Jusen (Specialized housing loan companies) and some regional banks did not have sufficient power to endure the financial crisis and eventually started to fail during 1994-95.

The concern of international financial market participants regarding the liquidity of the Japanese banking system was well demonstrated in the rising Japan-Premium in the latter half of 1995. (The first wave of the financial crisis in the 1990s.)

The larger banks also suffered from damage to their balance sheets but they endured the stormy weather longer than smaller banks by utilizing both legal and illegal techniques to dress their balance sheets as if they were sound. However, there were obvious limits to such dressing operations and some of the larger banks and securities brokers started to fail during 1997-98. (The second wave of the financial crisis).

¹ Land-prices peaked in the fall of 1990 seconding to the fall of stock price at the start of the year. The asset price fall in 1990 reflected the tightening of monetary policy which started in May 1989. (namely; a series of increases in the official discount rate from 2.5% to 6%)

This note does not try to explain what measures or policy responses were taken with respect to such difficulties², but try to illustrate, in generic terms, the scope and depth of the balance sheet effects of the fall in land prices.

While the balance sheet effect of the fall in stock-prices is not explained in this note, it will be worthwhile to note that “cross shareholding” was the prevailing practice in Japanese business throughout the process of the rise of the Japanese economy. Through the cross shareholding practice, Japanese businesses intended to secure stable shareholders necessary to prevent volatile stock price fluctuation and to resist unfriendly take-over bids. However, such business practices turned out to have spirally depressive effects on stock prices in the process of the bubble-crash.

This being the case, since 1998, the unwinding of the cross shareholding(on mutual agreement basis) has become a strong trend³ among large business firms in Japan.

Six model-panels below are used to illustrate the change in balance sheets during the process of the formation of the land price bubble and in the aftermath of the bubble crash.

Let us assume, for simplicity sake, that an economy consists of the following five sectors:

- (1) Household sector
- (2) Land Supplier sector (Agriculture Sector etc.)
- (3) Manufacturing sector
- (4) Commerce and Services sector(except for (5) below)
- (5) Banking Sector (Non-bank business that does not take deposit is not included)

(Panel A) The Starting Point

As a starting point, Land Supplier is assumed to monopolize land ownership and holds 6 units of land in total with a book value of 100 each. (total 600).

Accounting principles will require the land be valued in the Balance Sheet at acquisition cost or market value whichever the lower. (This means that the land will be valued at the

² See Annex II

³ The precise degree of the unwinding is not known yet, but it is reported that the total amount of shares once cross-held by 16 largest banks and sold at the end of March 2000 reached J¥2.3 trillion(about US\$21 billion) on book value basis. Further sales are being planned in the next business year.

acquisition cost when the land price is on hike and at the market value in the aftermath of the price fall.)

It is also assumed that Household, Manufacturing and Commerce&Services have no land but possess bank deposits of 100 each. The Banking Sector is assumed to start its business with an initial capital of 300 and deposits of 300 (No loan and no collateral).

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral
A. Household	0	100	0	0
B. Land Supplier	(6 Units) 600	0	0	0
C. Manufacturing	0	100	0	0
D. Commerce&Services	0	100	0	0
E. Total	(6 Units) 600	300	0	0
	Capital	Deposit	Loan	Collateral
F. Banking	300	300	0	0

(Panel B) Phase One

Household is assumed to have bought one unit of land from the Land Supplier at the cost of 100, which it borrowed from the Bank. The Bank takes the land as collateral for the loan and receives from the Land Supplier a deposit of 100.

(In practice, the collateral value of the land is set, in maximum, at 70–80% of the market value or the acquisition cost. However, here we assume, for simplicity sake, that the Bank accepts the land at full acquisition cost for collateral purposes)

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral
A. Household	(1 unit) 100	100	100	(1 unit) 100
B. Land Supplier	(5 Units) 500	100	0	0
C. Manufacturing	0	100	0	0
D. Commerce&Services	0	100	0	0
E. Total	(6 Units) 600	400	100	(1 unit)100
	Capital	Deposit	Loan	Collateral
F. Banking	300	400	100	(1 unit)100

(Panel C) Phase Two

In this stage, the market value of a unit of land increases to 200.

Manufacturing sector purchases a unit of land at the market price, financing the transaction by borrowing from the Bank. The same assumption applies to the deposit of the Land money and the Bank collateral as above.

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral
A. Household	(1 unit) 100	100	100	(1 unit) 100
B. Land Supplier	(4 Units) 400	300	0	0
C. Manufacturing	(1 unit) 200	100	200	(1 unit) 200
D. Commerce&Services	0	100	0	0
E. Total	(6 Units) 700	600	300	(2 Units) 300
	Capital	Deposit	Loan	Collateral
F. Banking	300	600	300	(2 Units) 300

(Panel D) Phase Three

In this stage, the market price of a unit of land increases to 300.

This time, Commerce&Services Sector is assumed to purchase a unit of land from the Land Supplier at the market price. Other assumptions are the same with the previous phase.

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral
A. Household	(1 unit) 100	100	100	(1 unit) 100
B. Land Supplier	(3 Units) 300	600	0	0
C. Manufacturing	(1 unit) 200	100	200	(1 unit) 200
D. Commerce&Services	300	100	300	(1 unit) 300
E. Total	(6 Units) 900	900	600	(3 Units) 600
	Capital	Deposit	Loan	Collateral
F. Banking	300	900	600	(3 Units) 600

(Panel E) Phase Four

In this stage, the market price of a unit of land increases to 400.

Household is assumed to purchase one more unit of land at the market price.

Other assumptions are the same as above.

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral
A. Household	(2 Units) 500	100	500	(2 units) 500
B. Land Supplier	(2 Units) 200	1000	0	0
C. Manufacturing	(1 unit) 200	100	200	(1 unit) 200
D. Commerce&Services	(1 unit) 300	100	300	(1 unit) 300
E. Total	(6 Units) 1200	1300	1000	(4 Units) 1000
	Capital	Deposit	Loan	Collateral
F. Banking	300	1300	1000	(4 Units) 1000

(Panel F) Phase Five

The land price bubble finally crashes, and the market price of a unit of land falls back

to 100, the level of the starting point⁴. The value of the land will be shown, as assumed at the starting point, at a market price which is equal to or lower than the acquisition cost.

Sector	Land unit and the value	Deposit	Bank Borrowings	Collateral	Comments
A. Household	(2 Units) 200	100	500	(2 units) 200	Note a
B. Land Supplier	(2 Units) 200	1000	0	0	Note b
C. Manufacturing	(1 unit) 100	100	200	(1 unit) 100	Note c
D. Commerce&Services	(1 unit) 100	100	300	(1 unit) 100	Note d
E. Total	(6 Units) 600	1300	1000	(4 Units) 400	
	Capital	Deposit	Loan	Collateral	
F. Banking	300	1300	1000	(4 Units) 400	Note e

(Note a): Household is over-indebted. The value of land assets has shrank but the amount of borrowing does not shrink.

(Note b): Land Supplier has no borrowings from the Bank. But, as the Bank's financial soundness is questioned, it has to worry about repayment of its own bank deposits.

(Note c): Manufacturing Sector can not repay the bank borrowings from its own bank-deposit. In order to repay fully, it must fill shortage of 100. It is very much questionable if it can sell its land at 100 or can borrow the money from someone with Land as collateral. Even it could have done this, the sector faces a serious liquidity problem.

(Note d): Commerce&Services Sector has a clearly negative asset-liability gap. They are no longer solvent.

(Note e): Banking Sector is not secured of its loan recovery by the value of land- collateral, due to the fall in land-prices. As the down-turn of the economy is severely felt by borrowers, most of the loans will turn out to be bad loans. In this event, the Bank's capital and the collateral put together will not be sufficient to meet the repayment of the Bank's deposits. In other words, the banking sector faces a solvency problem and there arises a question as to

⁴ The land-price index in Japan as measured by the Land Research Institute (average price index of land for all use in the six large cities) between 1980 and 1987 had doubled and it doubled again to its peak in 1990. It has since continued to drop to date for nine consecutive years almost to the level of 1987. The land-prices of commercial areas has fallen most severely to almost one forth of its peak level.

whether the safety-net namely, the deposit insurance scheme will function at all.

The above six model-panels illustrate the economic and financial causality between the bubble-crash (focusing on fall in land-prices) and the liquidity problem, solvency problem and the safety-net issue for the protection of depositors.

II. Macro economic effects of the bubble crash in 1990s

The bubble-crash will give an adverse effect on household consumption just opposite of the stimulant effects seen in the process of the bubble formation⁵.

As to the corporate sector, the large fall in both land-prices and stock-prices has damaged corporate balance sheets. But the effects of the fall in land prices and that of the stock-prices were not symmetrical across sectors. The construction and real estate businesses were hit hardest, of course, by the fall in land-prices. The banking and non-banking business has been also hit by the land price fall as it caused massive accumulation of bad loans. In addition, the stock price fall has wiped away the unrealized capital gains which formed the tier-2 capital of the banking sector. This caused most Japanese banks embarrassing results as the ratio between total capital-base (both tier-1 and tier-2) versus risk weighted assets has gone down below the BIS capital adequacy ratio. (The bank loans had been made, during the bubbling period, on the basis of the inflated capital, whose rapid shrinking⁶ after the bubble-crash made some sort of capital injection(whether by self effort or official support) almost imperative. This situation caused political concerns about a credit crunch particularly in the 1997-99 period⁷ from which many small and medium scale businesses have suffered. (Although the same

⁵ As to the measurements of the stimulant effects of asset-price increase(or decrease) on household consumption, there are different measures reported. In general, the stimulant effects(or reverse stimulant effects) of stock-prices is considered to be larger than that of land-prices. However, since the average amount of stock holdings of a Japanese individual is about one third of that in the US, the effect is considered far lower in Japan than in the US. All in all, the extent with which household consumption was affected both ways by the asset price increase or decrease during 1987-90 and 90-93 seems to be somewhere between 4-5% on an incremental basis. Since household consumption occupies about 60% of GDP, the GDP increment should have been affected by 2.5-3% both ways.

⁶ The shrinking of the banking capital base was caused on the one hand by the loss of unrealized capital-gains(decrease of tier-2 capital)and ,on the other hand, by the accounting losses derived from the former(decrease of tier-1 capital).

⁷ Although, BIS regulations were blamed by many for causing the credit crunch, the real driving factors in this period seems to have been the failure of large financial institutions since late 97 and the introduction of prompt correction measures since April 1998.

concern had been expressed theoretically before and during the first wave of the financial crisis (1991-93 and 94-95) , the extent of the credit crunch is believed to have been small).

For other industries that have experienced similar wiping-out of unrealized capital gain on stock-holdings (or even the emergence of unrealized capital losses), the drop in stock-prices generally put them under pressure to restructure their businesses. Looking from the perspective of corporate financing, there is a clear contrast between the bubble period and the period in the aftermath of the bubble crash. In the latter period, the scale of corporate financing activities have markedly shrunk as compared to that in the former period due to the following factors:

(a) The fall in stock-prices brought a general decrease in returns for portfolio investments.

This made the corporate finance activities called “Zaiteku” almost non-existent.

(b) The transactions between banks and business firms shrank both in lending and deposit-taking.

(c) The cost of corporate fund-raising in the capital market, even for a highly rated companies, became less attractive as compared to the bubble period.

The above changes in the landscape of corporate finance activities may constitute the reverse side of the lowering of expected returns on investment in the real economy. This change in the expectation of the returns on investment was also supported by stagnant household consumption and the rising concern of social instability as unemployment increased and more than a few failures of the corporate retirement pension programs were reported.

The above factors all together brought about stagnation in corporate productive investments. On the other hand, there are macro-economic explanations which say that the “Three Excesse” (excess-capacity, over-employment and too many bad assets) were the real causes of stagnant productive investments. However, the latter explanation does not clearly explain the logical causal relationship between the bubble-crash and the stagnating investment behavior. Instead, the observation earlier, in this note, regarding the effects of the bubble-crash clearly explains how the crash gave rise to changes in the expectations of business owners regarding the return on investments and how it has caused the stagnation in productive investments.

III. Japan-Premium (International Aspects)

In the summer of 1995, Japanese banks started to pay a risk-premium when borrowing from the London Euro-dollar market (LIBOR-base transaction), from the Tokyo Offshore market (TIBOR-base transaction) or when swapping Yen into Dollar or vice versa..

The risk-premium reflected the lender-side concerns of the market participants regarding the liquidity of Japanese banks and hence their ability for financially settle their borrowings. In the latter half of 1995, an increasing number of business failures among small banks (mutual credit associations) and the financial difficulties of Jusen (Special housing loan corporations---Non-banks) were considered to reflect the worsening balance sheets after the bubble-crash and, to that extent, it was assumed that the financial system of Japan as a whole was undergoing more or less the same problems. The poor banking disclosure in Japan was also a matter of an international concern. There were sporadic official announcements regarding the total amount of bad loans, but informal estimates by private institutions indicated far larger sums. Just immediately after the report of the failure of Hyogo Bank and Kizu Shinyo-Kumiai in late August 1995 the risk premium jumped and it peaked around October 1995, when Daiwa Bank New York case was reported. The Bank of Japan indicated its policy stance that the central bank, as “the last lender of resort”, was prepared to supply ample liquidity to the Japanese banks. More practically, the BOJ started and continued to provide an ample amount of yen into the over-night call-money market with a rate lower than the official discount rate (0.5%). This was also consistent with the Japanese policy to keep the yen-dollar rate lower, especially after the yen hit an all time peak record of 1 US\$=J¥79.15 in mid April 1995.

However, the good gestures of the BOJ were taken advantage of by speculators such as US hedge funds in the so-called international yen-carry trade. Given the fact the Yen could be borrowed with less than 0.5% of an interest rate to be swapped into the Dollar or European currencies and then invested for 5-6% return, this was an attractive operation even after paying the swap costs. Besides, it was clear that the BOJ would continue such a policy stance for a sufficiently long time until the Japan-premium subsided and that the yen-rate was actually on a down-ward slope because of Japanese policy needs to rectify the overly strong yen.

Due to the above liquidity supply by the BOJ, the Japan-premium subsided at last (although it did not disappear) toward the end of 1995 but it re-occurred when larger banks started to fail

in 1997–98.

When Yamaichi Securities, the fourth largest securities broker in Japan, failed in November 1997, the Japan premium went up to a prohibitive level and stayed at a level higher than the peak level of 1995 for most of the period until early 1999. The Yamaichi case was interpreted as a symbol of an opaque financial system in Japan, (since it involved an illegal dressing of financial statements).

In the same month, earlier than Yamaichi, Hokkaido-Takushoku Bank (one of the then 13 commercial city banks) and Sanyo Securities(one of the medium scale securities broker) failed, but the market did not react sharply until Yamaichi failure was reported. The fact that the Japan-premium went up to its peak when the Daiwa Bank NY case was reported in October 1995 and when the Yamaichi case involving illegal dressing was reported in November 1997 suggests how keenly the market has concerned about the quality of the financial disclosure system and financial supervision in Japan.

Annex I Basic Understandings (Valuation of Assets, Income Inversion Method)

Annex II Government Response to the Financial Crisis

Annex III Questions for the Work-Shop Participants

Chart A Formation and Crash of Economic Bubbles

Chart B Economic Conjuncture and Fiscal Policy

Chart C Japan-Premium and Call-Rate

Basic Understandings

I. Valuation of assets*Notation**r* = return on asset*P* = price of asset*i* = interest rate*t* : time series

• perfect arbitration is assumed among bond market, stock-share market and land(real estate) market

$$r_{t+1}^* = r_t + (P_{t+1}^* - P_t) \quad (1.1)$$

Where P_{t+1}^* = expected price of asset at t + 1 r_{t+1}^* = expected return on asset at t + 1

under the above assumption of perfect arbitration;

$$i_t = \frac{r_t}{P_t} + \frac{P_{t+1}^* - P_t}{P_t} \quad (1.2)$$

$$\therefore P_t = \frac{r + P_{t+1}^*}{1+i} \quad (1.3)$$

$$\text{If } r_t = r_{t+1} = r_{t+2} = \dots = r_{t+n} = r$$

$$i_t = i_{t+1} = i_{t+2} = \dots = i_{t+n} = i$$

equation (1.3) can be rewritten;

$$P_t = \frac{r + P_{t+1}^*}{1+i} \quad (1.3)'$$

$$P_{t+1} = \frac{r + P_{t+2}^*}{1+i} \quad (1.4)$$

from (1.3)' and (1.4)

$$P_t = \frac{r}{1+i} + \frac{r}{(1+i)^2} + \frac{P_{t+2}^*}{(1+i)^2} \quad (1.5)$$

the same operation is repeated until:

$$P_t = \frac{r}{1+i} + \frac{r}{(1+i)^2} + \dots + \frac{r}{(1+i)^n} + \frac{P_{t+n}^*}{(1+i)^n} \quad (1.6)$$

$$= \lim_{n \rightarrow \infty} \left(\frac{r}{1+i} + \frac{r}{(1+i)^2} + \dots + \frac{r}{(1+i)^n} + \frac{P_{t+n}^*}{(1+i)^n} \right) = \lim_{n \rightarrow \infty} \left(X + \frac{P_{t+n}^*}{(1+i)^n} \right) \quad (1.6)'$$

$$= \lim_{n \rightarrow \infty} X \quad \left(= \lim_{n \rightarrow \infty} \frac{P_{t+n}^*}{(1+i)^n} = 0 \right) \quad (1.6)''$$

where,

$$X = \frac{r}{1+i} + \frac{r}{(1+i)^2} + \dots + \frac{r}{(1+i)^n} \quad (1.7)$$

$$(1+i)X = r + \frac{r}{1+i} + \dots + \frac{r}{(1+i)^{n-1}} \quad (1.7)'$$

$$(1.7)' - (1.7)$$

$$i \cdot X = r - \frac{r}{i(1+i)^n} \quad (1.7)''$$

then,

$$X = \frac{r}{i} - \frac{r}{i \cdot (1+i)^n} \quad (1.8)$$

here,

$$\lim_{n \rightarrow \infty} \frac{r}{i \cdot (1+i)^n} = 0 \quad (1.9)$$

from (1.6)'', (1.8) and (1.9)

$$P_t = \lim_{n \rightarrow \infty} \left(X + \frac{P_{t+n}^*}{(1+i)^{n+1}} \right) = \lim_{n \rightarrow \infty} X = \frac{r}{i} \quad (1.10)$$

II. Income Inversion Method

$$P_t = \frac{r}{i} \quad (2.1)$$

If r grows every year by a constant rate g , (2.1) could be rewritten

$$P_t = \frac{r}{i-g} \quad (2.2)$$

assuming risk premium δ

$$P_t = \frac{r}{i + \delta - g} \quad (2.3)$$

Notes:

- The assumption of “the perfect arbitration” does not apply to the real market especially to the land (real estate) market.
- On the other hand, the above Income Inversion Method implies that the movement of the interest rate (upward or downward) will carry a decisive impact on the asset price.

Government Response to the Financial Crisis

1. The Financial Crisis

(1) The First Wave.

(a) In the period of 1994-95, smaller banks (Shinyo- Kumiai- Mutual Credit Association) and Specialized Housing Loan Companies (Jusen- Jutaku Kinyu Senmon kaisha⁸-) continued to fail.

The government tried to settle the crisis by creating the saucer banks⁹; namely one for Small Banks called Seiri-Kaishu Ginko (RCB--Resolution and Collection Bank) and another called Jutaku Kinyu Saiken Kanri Kikou (HRCC--Housing-Loan Resolution and Collection Corporation).

Both saucer companies were created as a subsidiary¹⁰ of the Deposit Insurance Corporation (DIC) and they succeeded to the assets and liabilities of the failed banks and Jusen Companies.

In order to fill the losses made by the Jusen companies, they were all dissolved except for one that was established by the Agri-financial Institutions. The shareholders of and lenders to the Jusen companies had shared the losses of about 6.4 trillion yen under an agreed formula, but finally 685 billion yen¹¹ had to be born by the government. This was the first time ever in the post World War II period that public money of such a scale was injected¹²

(b) When the above measures were made possible in 1996, through the budget and other legislative actions, another reform was introduced to the Deposit Insurance System in addition to the increase in special premiums in order to enhance the financial capacity of the Deposit Insurance Corporation (DIC).

⁸ There were eight Jusen Companies of which seven were established by commercial banks or life insurance companies and one was held by Agri-finance institutions. The eight companies were non-banks which could not receive deposits but raised funds through borrowings from their mother institutions or through mortgage-like securities and lent to individual housing investors or to construction and real estate businesses. The scale of their lending in total stood, at their peak, at about 11-12% of total housing credit in Japan.

⁹ A new company that takes over a failed one.

¹⁰ Although DIC is a 100% shareholder of HRCC, there are other minor and historic shareholders, in the case of RCB which replaced Tokyo Kyodo Bank that had been created earlier, by RCB and other commercial banks, as the saucer bank for a certain failed sinnyo-kumiais. HRCC and RCB has been merged into one institution, later in 1998, which is called Seiri-Kaishu-Kikou (RCC--Resolution and Collection Corporation).

¹¹ 5 billion yen for equity investment in DIC and remaining 680 billion yen for loss compensation.

¹² There are not a few cases of the special lending by the BOJ in accordance with the article 25 of the Bank of Japan Law (before amendments). But these BOJ lendings assumed repayments in due courses, whereas the public money injection to Jusen companies has been paid from the Governments annual budget and it does not expect recovery. This disposition has aroused such a political turmoil that it somehow caused a delay in the decision of another public money injection when it was needed after the consecutive failures of large banks in 1997-98.

In other words, the government decided to suspend¹³ the pay-off scheme, originally built-in within the deposit insurance system, by which only deposits up to 10 million yen were to be protected.

Instead, the government declared that, for the period of 5 years until the end of March 2001, all deposits would be protected. The aim of such extraordinary government action was to calm the uncertainty and the anxiety among the general public regarding the safety of deposits and restore confidence in the financial system as a whole. However, as the time-limit approached, arguments arose for the extension of the measures for one more year and the government succumbed to such calls. The core issue in this matter is what is the desirable and feasible design of the safety-net for depositors. Voices arguing that the simple return to the original pay-off system was not the right answer, seems to be gaining force.

(c) Following the report of the failure of Hyogo Bank and Kizu Shinyo-Kumiai, in August 1995, the Japan Premium surged and peaked just when Daiwa Bank NY case has been reported. The Bank of Japan decided to provide an ample Yen liquidity to the over-night call market at a rate lower than the official discount rate. This had the effect of calming down the market participants' concern about the credit risk of Japanese banks but the Japan premium persisted in a subdued risk premium range until it rose again to almost a prohibitive height after the announcement of the failure of the Yamaichi. (See the Note / Section III)

(2.) The Second Wave

For the period of 1995-96, there was a temporary resurgence of GDP thanks to the large scale of reflationary policy packages during the period 1992-94.

However, the recovery was short-lived (1995-96) and the down-turn in economic activity and the worsening financial performance of large banks coincided in subsequent years 1997-98.

In order to restore corporate balance-sheets that were so severely damaged, needed were (1) strong improvement of corporate profits that will enable borrower industries to repay debts or (2) resumption of the upward trend of asset-prices that will allow banking businesses to resume unrealized capital-gains that was lost during the process of the bubble crash.

¹³ More accurately, the government guarantees to pay back the whole amount of deposits beyond the pay-off cost originally assumed under the Deposit Insurance Law of 1971. The pay-off scheme has never been applied, since, under the traditional banking administration with stronger regulations and control over banking business as a whole, the authority would normally arrange a merger or absorption of the failing banks with or by other sound banks. Therefore, depositors were always protected any way.

The 1995-96 economic recovery was not strong enough to realize the above conditions nor the asset-price performance promising. The Land-prices continued to fall for nine consecutive years after 1990 and the Nikkei Dow Average(225 selected stocks) went up and down between the range of ¥14000- 24000.

The large banks and security brokers had relatively more strength to endure the difficult time as compared to smaller ones, either through legal or illegal dressing of their balance sheet. However, given the absence of a dramatic turn in the situation, there was a limit for dressing operations. In November 1997, Sanyo Securities has failed followed by Hokkaido Takushoku Bank and Yamaichi Securities. In early 1998, LTCB(Long Term Credit Bank of Japan) and NCB(Nippon Credit Bank) turned out¹⁴ to have negative net-worth. Both of them were inspected by the government supervisory body(FSA-Financial Supervisory Agency) and later declared insolvent as of the end of March 1998.

The government first decided upon a public money injection of 30 trillion yen(February 1998) but subsequently enlarged the scale of injection to 60 trillion yen(October 1998)¹⁵.

(a)Under the new scheme, both LTCB and NCB were made “Special Publicly-administered Bank” , the newly created category of bank, which will continue to engage in banking business under special administration, legally by the FRC(Financial Reconstruction Commission) and practically by the Deposit Insurance Corporation(DIC).

The shares of the two banks were acquired by DIC and their bad loans were bought by RCB. The capacity of fund raising up to 18 trillion yen was granted to the DIC under government guarantee. Eventually, DIC played the role of administrator until a purchaser of the banks could later be identified. (Ripplewood holding companies for NTCB in October 99 and Soft Bank syndication for NCB in February 2000)

¹⁴ The inspection by the FSA(Financial Supervisory Agency) was conducted in the summer of 1998 and found that both banks had a negative net-worth as of March 31, 1998. However, the government has anticipated this earlier and moved for the legislation of Financial Reconstruction Law which embraced the categorical notion of “Special Publicly Administered Bank” and LTCB had become the first bank to have that legal status as soon as the law became applicable in October 98. Then NCB followed in December 98. These administrative decisions were made by the FRC(Financial Reconstruction Commission).

¹⁵ The figures of Public Money Injection(initially 30 trillion yen which was restructured and increased to 60 trillion yen) is the total of the limit amount of government guarantee(GG) and the amount of Government Bond(GB) made available or given to DIC for its various operations. The 60 trillion yen is broken down to (a)17 trillion yen(of which 10t. y. of GG . and 7t. y. of GB) of Special Operation Account for the financial support of failed banks and (b)18 trillion yen of GG for Financial Reconstruction Operation Account for the “Special Publicly Administered Banks” and (c) 25 trillion yen of Prompt Soundness-maintenance Operation Account aiming at capital injection etc. for banks not failed but in need of capital base enhancement etc.

(b) For other banks and non-banks that failed, RCB and HRCC were created in 1996 as mentioned above. The RCB was created originally as a saucer bank for the failed small banks and the HRCC as a saucer corporation for the failed Jusen. In April 1999, the two institutions were merged into one unit called RCC (Resolution and Collection Corporation) of which the 100% shareholder is DIC. The total amount of money available for DIC was increased to 17 trillion yen, of which seven trillion yen was given in the form of government bonds that can be changed into cash by the Government Bond Redemption Fund when needed and the remaining 10 trillion yen was government guarantee authorization under which DIC could raise money and lend to RCC.

(c) For other banks, that had not failed but still needed earlier capital base enhancement or other early corrective measures, another 25 trillion yen of government guarantees were authorized under which DIC could raise money and utilize it for specific purposes as defined by the above legislative measures. In particular, most of the commercial banks that were almost at the threshold of BIS capital adequacy ratio (8%) were invited to give preferred stock (without voting right but with preferred status vis-a-vis other shareholders when liquidating) to the government or to receive a subordinated long term loan from the government. The aim of this invitation was to allow commercial banks sufficient capital base for provisionings or for undertaking desirable business restructuring. The avoidance of a credit crunch was also part of the overall objectives of such capital injection. All the city banks (except for Tokyo Mitsubishi Bank¹⁶) and a regional bank submitted a request for capital injections and the total of such injection amounted to 7.4 trillion yen.

2. Macro-Economic Policy and the Zero Interest-Rate Policy

(a) The government has planned and implemented a series of reflationary policy packages from March 1992 to September 1994, mainly to stimulate demands through public works etc. The total scale of the policy packages during this period totaled about 60 trillion yen.

The economy seemed to recover for a short period of 1995-96, but the recovery was short-lived. The damage to the corporate balance sheets was so severe that, it was soon revealed that even the large banks could not escape from the aggravation of their portfolios emanating from the

¹⁶ Tokyo Mitsubishi Bank had accepted a small amount of capital injection (in the form of subordinate loan) on February 1998 but later declined additional injection coming from October 98 legislation. In March 2000, the bank prepaid the government for the subordinated loan.

downward trend in rates of return on investments, increasing amounts of bad loans and the diminishing amount of hidden capital (unrealized capital-gain on stock share and land-holdings.

However, the Government was optimistic to stay on schedule with the Consumption Tax Increase and even proposed for the new legislative action on the Fiscal Structure Reform, which, like the US OBRA, laid out the rail for elimination of the fiscal deficit. The Consumption Tax Law was amended in December 1994, in which a tax-rate increase from 3% to 5%(4% for national tax revenue and 1% for local tax revenue) had been decided to become effective in April 97. The tax increase was implemented as planned. On the other hand, the Fiscal Structure Reform Law was enacted in December 97 but the down-turn of the economy was unexpectedly too severe for the law to serve its role. The government finally decided to freeze its implementation in December 1998.

(b) As the down-turn in the economy became steep, the government introduced the second round of reflationary policy packages from November 1997 to early 2000. The total scale of stimulant measures exceeded 100 trillion yen, which included a temporary government guarantees of 30 trillion yen¹⁷ for the SMEs (Small and Medium scale Enterprises) to be accorded through SME Credit Insurance Associations, when SMEs wish to borrow from banks. The government thought that credit crunch was becoming serious hazard for SMEs that want to stay in business.

As the consequence of the flamboyant policy planning and implementation as mentioned so far, the total outstanding amount of public debt (Central Government and local governments all together) exceeded 600 trillion yen which was over 120% of GDP, as of the end of FY1999.

(c) The Bank of Japan lowered its official discount rate (ODR) from its peak of 6% to 5.5% on July 91, to 5% on November 91, to 4.5% on December 91, to 3.75% on April 92, to 3.25% on July 92, to 2.5% on February 93, to 1.75% on September 93, to 1.0% on April 95 and to 0.5% on September 95. The ODR has stayed until now at 0.5%, the lowest level of all time. As mentioned earlier, the BOJ started to supply yen in the over-night unsecured call market at a rate lower than the ODR.

In February 1999, the BOJ announced that it would lower the interest rate of call money (over-night, unsecured) from about 0.25% to its lowest-ever level of around 0.15%,

¹⁷ The guarantee authorization in the original measure announced in October 1998 was 20 trillion yen until the end of March 2000. Later, another 10 trillion yen of government guarantees was additionally authorized in October 1999 due to the prolonged concerns for the credit crunch, and the time limit for the use of guarantees was extended for one more year, namely; until the end of March 2001.

which means that the de-facto interest rate would be zero when subtracting actual transaction costs. (This policy is called zero interest-rate policy)

This policy stance intended to ease the money supply and aimed at weakening the yen.

3. Big-Bang

Although it was not a direct policy response against the financial crisis of the 1990s, it will be fair to mention the government's effort to overhaul the Japanese financial system as a whole.

Prime Minister Hashimoto announced his plan to undertake the Big-Bang of the Japanese financial system in November 1996 under the guiding principles of "Free, Fair and Global". Subsequently, the government announced a five-year program to be accomplished by the end of FY2001, under which the financial system of Japan will be over-hauled¹⁸. All the measures to be taken were itemized and the action plan schedule was made public. There may be some who should say that the government was too optimistic to undertake such a courageous plan without confirming the readiness of the financial sector which revealed itself to be too fragile to endure the second wave of the financial crisis during the period 1997-99.

It is true that the government did not anticipate such a reprisal of the financial crisis in 1997-99 when announcing the Big-Bang, but it seems that the announcement of the action plan schedule has been very useful for individual businesses for designing their own business restructuring plan.

It should be also noted that the piece-meal deregulation measures for the financial market in Japan, that have been taken during the 1980s, had not been sufficient enough to modernize the Japanese financial system so that it could compete with that of the US and Europe¹⁹. The government was aware of this and tried to catch up with a stride (not a step) in 1992²⁰. However, the deepening of the financial crisis towards 1994-95 slowed the Government in pursuing this

¹⁸ Legally speaking, the contents of the Big-Bang were embodied in the Financial System Reform Law of 1998 (Kinyu-Sisutemu Kaikaku-Hou) that was enacted and promulgated in June 1998 and implemented in December 1998.

¹⁹ US liberalization of securities fees : May 1 1975. UK big-bang of 1986 (reform of British Stock Exchange) has been inextricably bound up with the legal framework change embodied in the Financial Services Act that took effect in 1987.

²⁰ Financial System Reform Law of 1992 (Kinyu-Seido Kaikaku-Hou) enacted and promulgated in June 92 and implemented on April 93.

effort. The Big-Bang announcement of 1996 followed by the legislative action²¹ in 1998 built upon this earlier effort in 1992.

4 Assessment of the Above Policy Responses

(To be discussed during the work-shop study)

²¹ See foot-note 7

Questions for Work-Shop Participants

It may be interesting to consider the following questions during the work-shop study in light of your knowledge and experience in your own country.

1. Did your country experience bubble-crash in recent years?

2. If so, what triggered the bubble-crash?

3. What was the economic effect of the bubble-crash?

(Financial crisis?)

(Economic Slump?)

4. How did international markets react to the above ?

(Did your commercial banks pay a risk premium similar to Japan-premium during the problem period?

How long and how much?)

5. What was the policy response of your government to the above?

Rise and Fall of Bubble Economy (tentative translation)

year	Major Policies and Measures	
1985	Sep. 22	Plaza Agreement
	Oct. 15	First Policy Package to increase domestic demand
	Dec. 28	Second Policy Package to increase domestic demand (¥3. 12 trillion)
1986	Apr. 7	Maekawa Report
	Sep. 9	Comprehensive economic Package (¥3.63 trillion)
1987	Feb. 22	Louvre Agreement
	May 29	Emergency Economic Package
	Oct. 19	Black Monday
1988	Jun. 28	Comprehensive Land Measures
1989	Apr. 1	Tax Reform(Income tax reduction/introduction of consumption tax)
	Dec. 22	Land Basic Law
1990	Mar. 27	Notification of Regulation on Total Lending Amount
	Aug. 2	Gulf War
1991	Apr. 24	Land Tax Reform(Introduction of Land Value Tax/Revision of capital gain tax)
	Jun. to Aug.	Scandals in Security Business
	Dec. 20	Abolition of Regulation on Total Lending Amount/Introduction of Trigger System
1992	Mar. 31	Emergency Economic Package
	Jun. 19	Law of Financial System Reform passed
	Aug. 18	Policy for Financial Administration Implementation
	Aug. 28	Comprehensive Economic Package (¥10.7 trillion)
1993	Apr. 13	New Comprehensive Economic Package (¥13,2 trillion)
	Sep. 16	Emergency Economic Package (¥6 trillion)
1994	Feb. 8	Comprehensive Economic Package (¥15.25 trillion)
	Dec. 9	Measures for the two bankrupt credit cooperatives
1995	Apr. 14	Emergency Economic Package for Yen Appreciation
	Jun. 8	About Restoration Function of Financial Systems
	Sep. 20	Economic Package (¥7 trillion)
	Dec. 19	Measures for bad housing-loan companies
1996	Jun. 18	Housing loan companies liquidation and three laws related to financial matters enacted.
	Jul. 26	Housing Loan Administration Corp. established
	Nov. 11	Financial system reform(by Prime Minister's order)
1997	Mar. 31	Comprehensive Measures for Liquidation of collateral realties
	Jun. 13	Report from Council on Financial System Reform and related issues.
1998	Feb. 16	Two Laws related to Financial System Stabilization enacted
	Apr. 24	Comprehensive Economic Measures (¥16 trillion)
	Jun. 5	Law for Financial System Reform and related issued enacted
	Oct. 12	Financial Revitalization Law enacted
	Oct. 16	Financial Function Early Strengthening Law enacted
	Nov. 16	Emergency Economic Package (about ¥17 trillion)
1999	Nov. 11	Policy Measures for Economic Rebirth (about ¥17 trillion)

Chart A Formation and Crash of Economic Bubbles

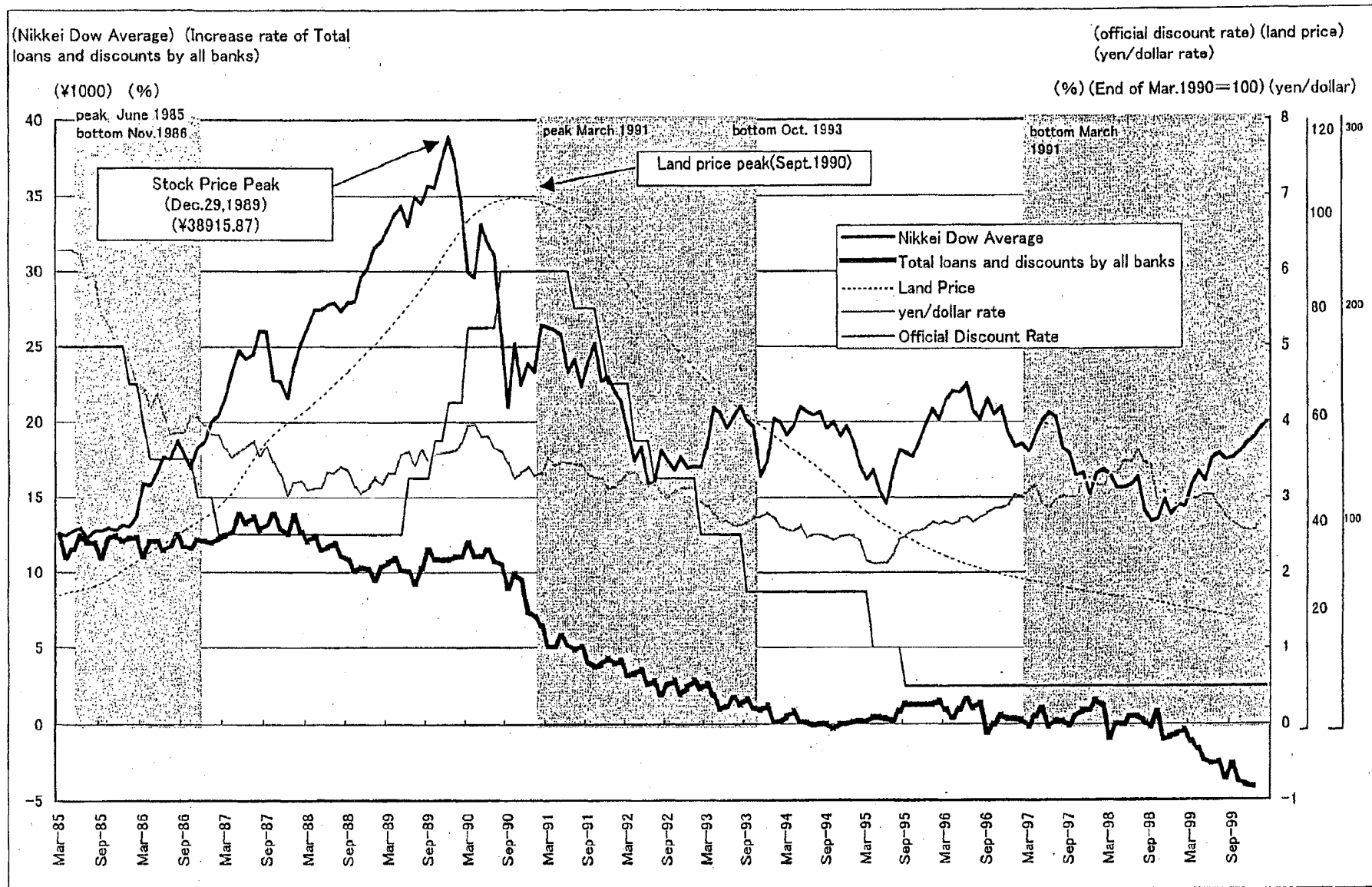


Chart B Economic Conjuncture and Fiscal Policy

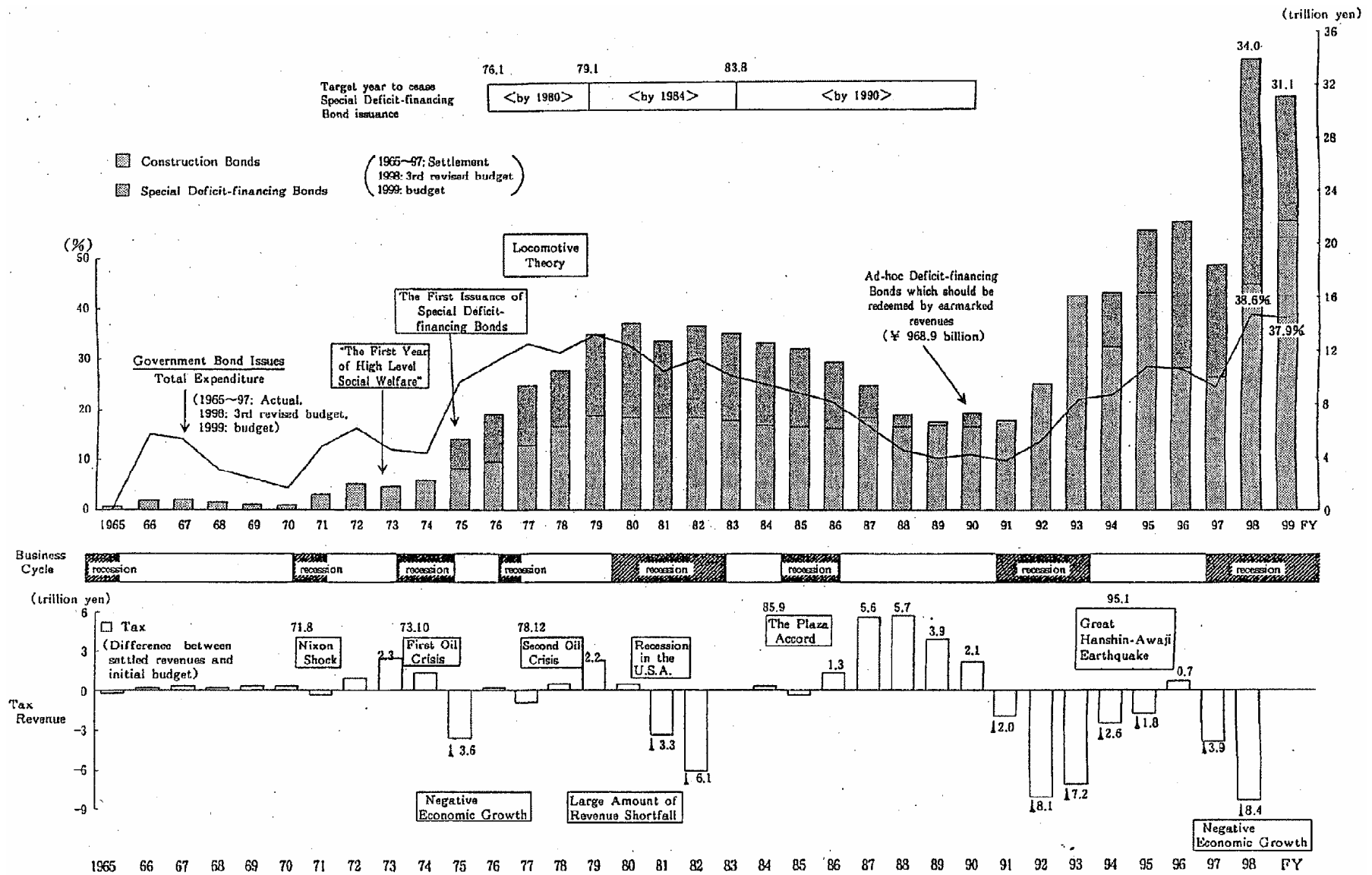
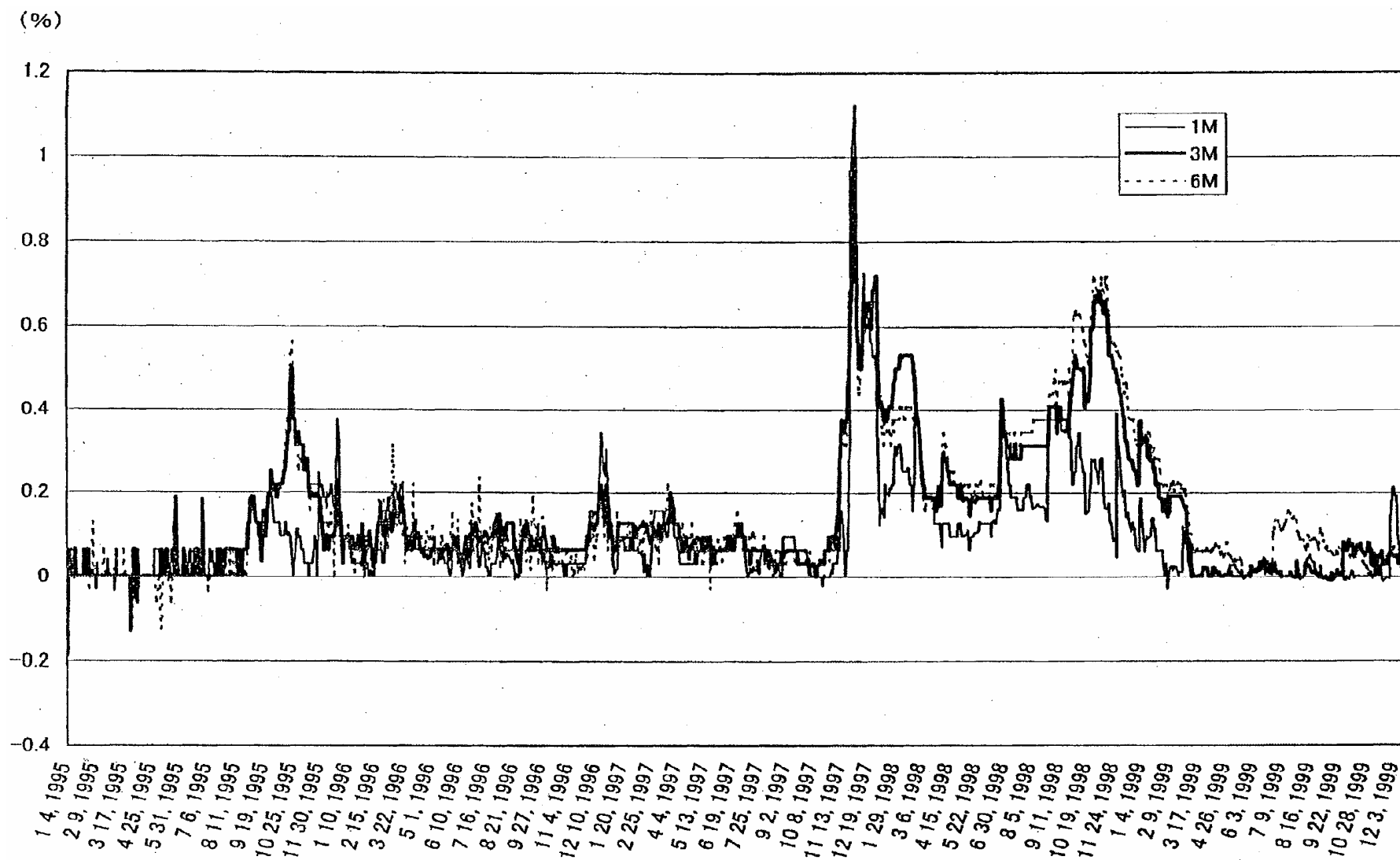


Chart C Japan-Premium and Call-Rate

(1) Japan Premium



(2) Change of Next Day Uncollateral Call Rate and Official Discount rate

