Causes of Japanese Financial Crisis in the late 1990s

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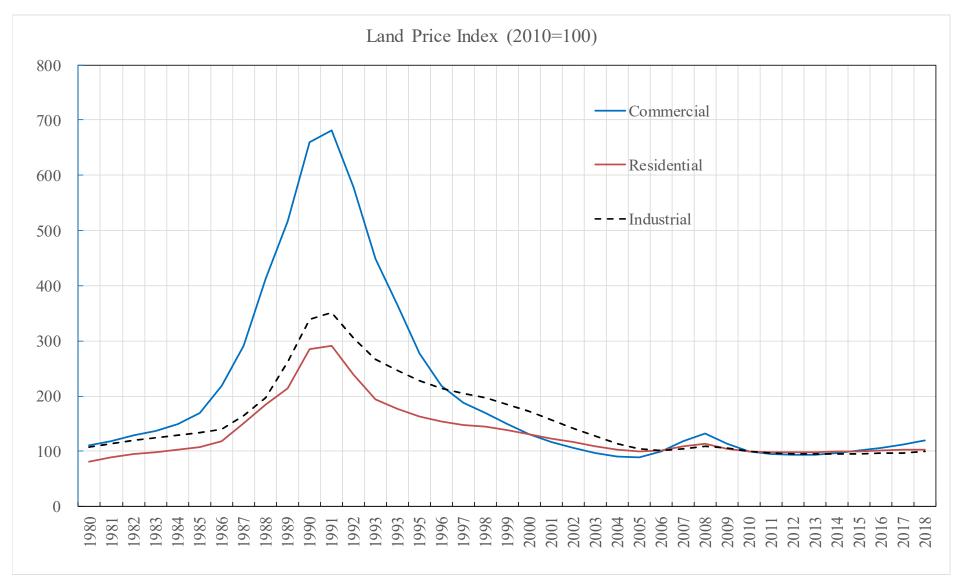
1. Speculative Bubble in Real Estate and Stock Markets

- (1) Overheating of the economy in 1987-88 and slow response of monetary policy.

 Excessive loosening of monetary policy against a large appreciation of the yen after the Plaza agreement.
 - Excessive response to the sharp temporary fall in stock prices in 1987.
- (2) Tax distortions favoring real estate investment.

 Inheritance tax and corporate income tax favored unrealized capital gains in real estate.
- (3) Excessive reliance in real estate collateral by banks.
- (4) General perception that real estate prices will never fall.
- (5) Real estate prices started to fall in 1990 after the monetary policy tightening in 1989.

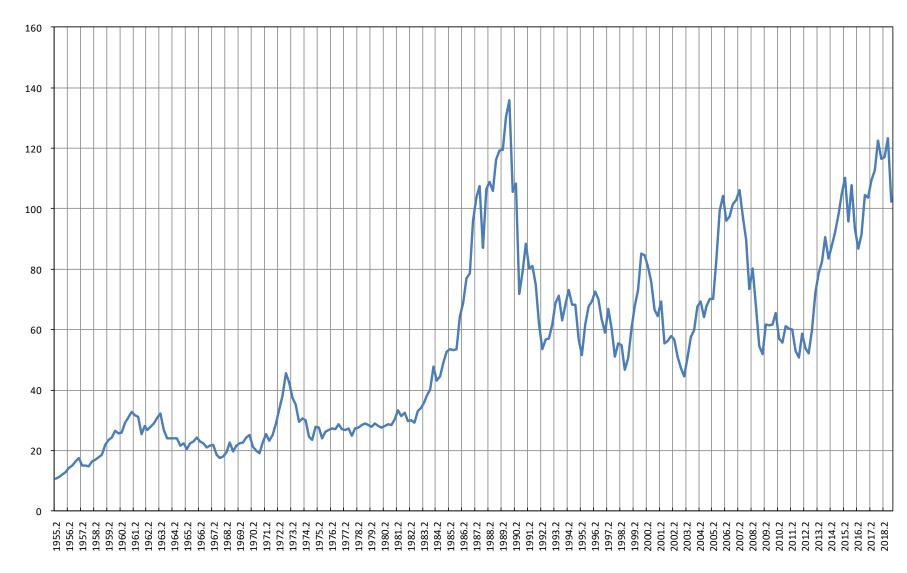
Chart 1 Development of Land Prices Since 1980s



Note: Prepared by the author form the data of Japan Real Estate Institute. This data is useful due to its very long time series. However, the value is estimated by certified real estate appraisers at only ten points in each city and not based on actual transaction prices.

Chart 2 Development of TSE Market Capitalization-GDP Ratio

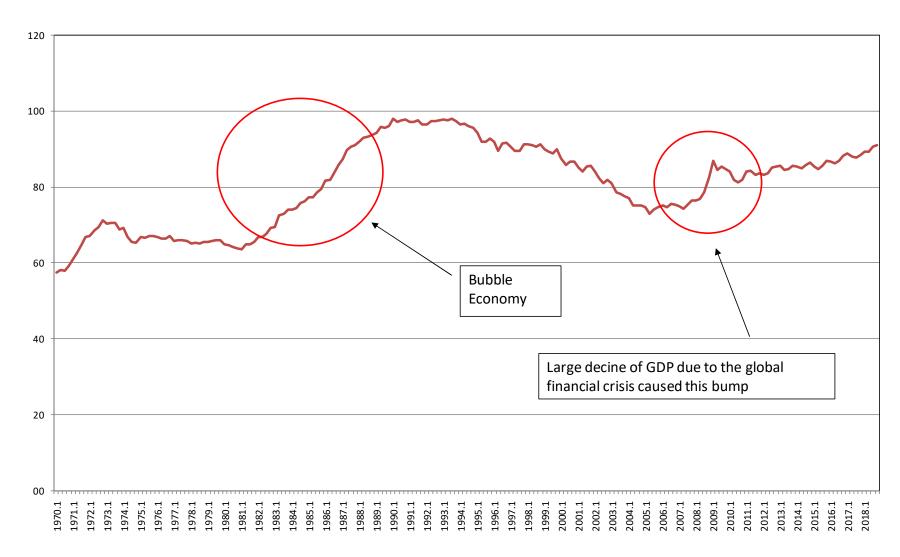
TSE 1st Section Capitalization-Nominal GDP Ratio (percent, June 1955-December 2018)



Notes: Prepared by the author from the data of Tokyo Stock Exchange and Cabinet Office of Japanese government.

Chart 3

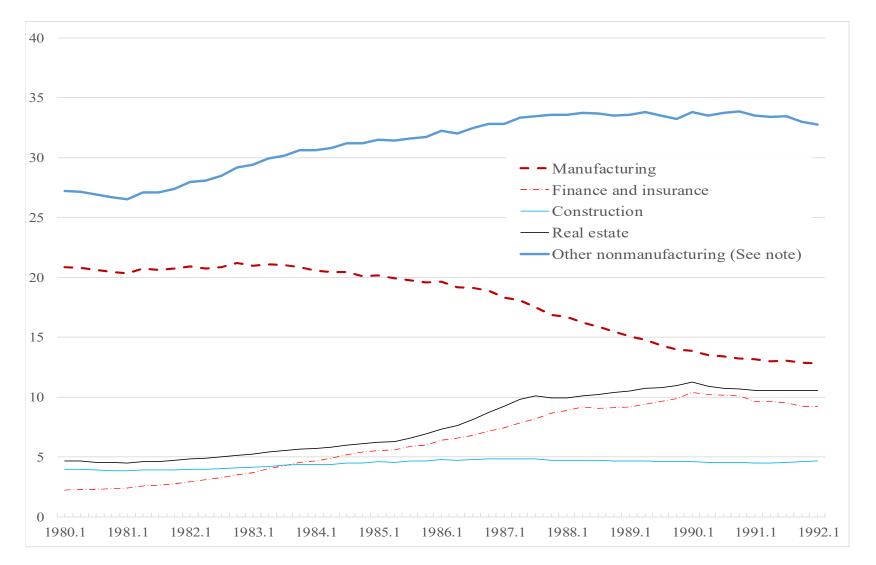
Domestic Bank Lending-Nominal GDP Ratio



Note: Lending is defined as the lending by all domestically licensed banks in Japan but exclude foreign branch lending. The data before 1993 are based on Japan Bankers Association, Zengin data.

Chart 4

Lending to Selected Industry Sectors in the Bubble Period (Percent of Nominal GDP)



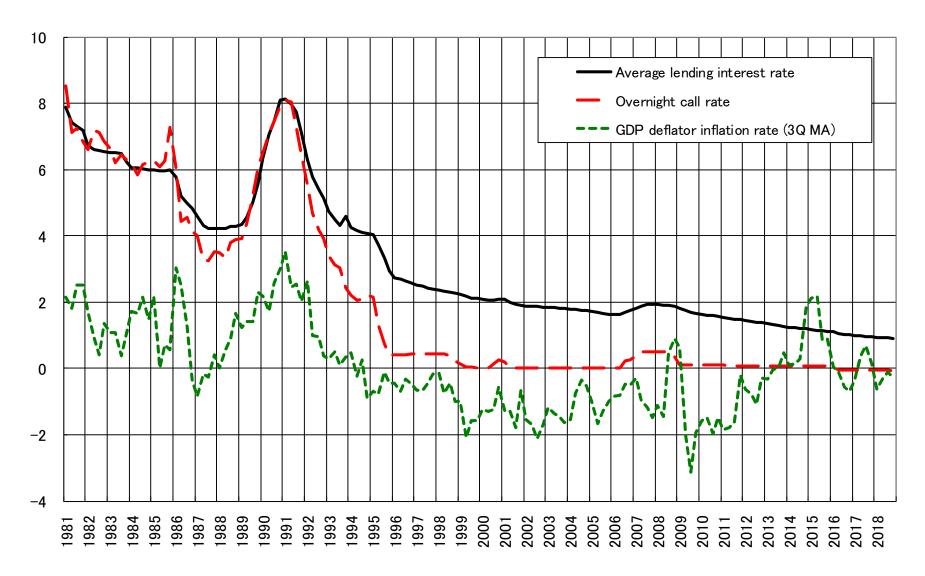
Notes: Data are based on Zengin (Japan Bankers Association). Outstanding lending-Nominal GDP ratio. Other nonmanufacturing data excludes lending to finance and insurance, construction, and real estate sectors.

Chart 5 Yen's Real Effective Exchange Rate



Note: BIS narrow index of real effective exchange rate for Japan.

Chart 6 Inflation Rate, Average Lending Rate and Money Market Rate



Note: GPD deflator is adjusted for change in consumption tax hikes in 1989 Q2, 1997 Q2, and 2014 Q2 to smooth the bumps.

2. Increasing Distrust of Disclosures by Financial Institutions

Financial institutions and regulators postponed the disposal of bad loans.

Deterioration of non-bank housing loan companies (Jusen companies) was obvious by 1992-93 but MOF did not move.

In 1995, MOF finally used public money to take care Jusen failures.

Strong negative public opinion on the use of public money.

This tied hands of the MOF until the financial crisis in 1997-98.

Distrust on external auditors and financial supervision gradually intensified.

Banks postponed the recognition of loan losses by window dressings.

3. Financial Crisis of 1997-98 (1)

Successive failures of financial institutions started a panic in the market.

November 4, 1997: Sanyo Securities filed bankruptcy.

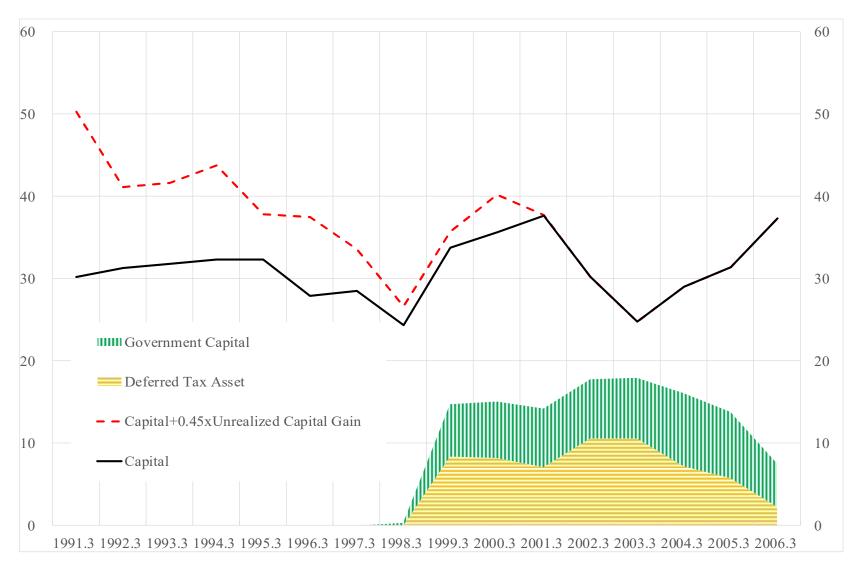
First failure of a publicly listed security company since the war. Fist default in the short-term money market (call market).

November 17, 1997: Hokkaido Takushoku Bank asked BOJ for emergency loan. First failure of a City Bank since the war.

November 22, 1997: Yamaichi Securities started voluntary liquidation One of top four security companies failed.

March 1998: First capital injection (1.8 trillion yen for 21 banks) was too small to stabilize the market.

Chart 7. Capital Structure of Japanese Banking Sector (trillion yen)



Note: This chart is prepared by the author based on the data of the banking account of all commercial banks in Japan compiled by Japan Bankers' Association. Capital is the total of the net asset of all banks from their unconsolidated financial statement. The red dotted line is the sum of the capital and 45 percent of unrealized capital gain in their stock portfolio. The discount of 55 percent is applied based on the BIS capital rule at the time.

4. Financial Crisis of 1997-98 (2)

July 1995: Ministry of Finance announced that DIC would protect all deposits for five years.

Until this announcement, the DIC coverage was limited to 10 million yen per person.

June 1996: Deposit Insurance Law was amended to allow DIC to protect all deposits and other liabilities of banks until March 2001.

March 1998: Fist attempt of recapitalization of banks by the government could not stabilize the market.

October 1998: The Diet passed Financial Revitalization Act (bankruptcy procedure for banks without stopping payments) and Bank Recapitalization Act.

5. Financial Crisis of 1997-98 (3)

The turmoil in the financial market deteriorated as the Diet was debating laws to stabilize banks.

October 1998: Diet finally passed a strong and usable bankruptcy law for banks and
a law for public capital injection

October 23, 1998: Nationalization of Long-Term Credit Bank of Japan All the LTCB shares lost value

December 14, 1998: Nationalization of Nippon Credit Bank All the NCB shares lost value

March 13, 1999: Government iInjected 6.7 trillion yen to 15 banks

6. Crisis Management by the Government

March 1999: Second attempt of recapitalization by the government could stabilize the market.

Japan premium mostly disappeared by the injection.

Could not stop deterioration of bank assed due to recession.

March 1999: Bank were allowed to show deferred tax asset by new accounting standard.

Deferred tax asset was much abused by banks to show fake asset.

FSA tacitly approved this abuse.

By 2002-03: Bank capital was almost depleted due to new bad loans.

Capital injection without economic recovery did not work.

7. Financial Crisis weakened the Real Side of the Economy

Banks stopped to lend short-term money to other banks.

Banks started to call back loans to businesses to improve their own cash balance.

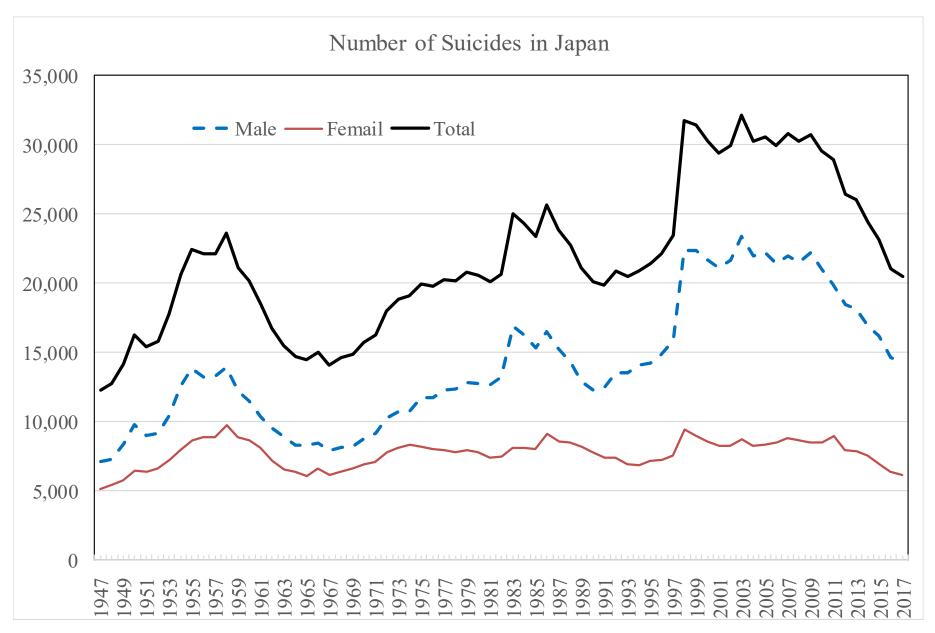
Severe credit crunch was started, and sudden failure of private companies increased sharply.

The number of suicides increased sharply during the severe recession under the credit crunch.

The banking sector started to recover after 2003-04 when loan losses declined.

Many failed deposit-taking financial institutions were deeply insolvent. Even large banks were deeply insolvent. LTCB; 11.6%, NCB; 29.3%. Hokkaido Takushoku Bank; 18.8%.

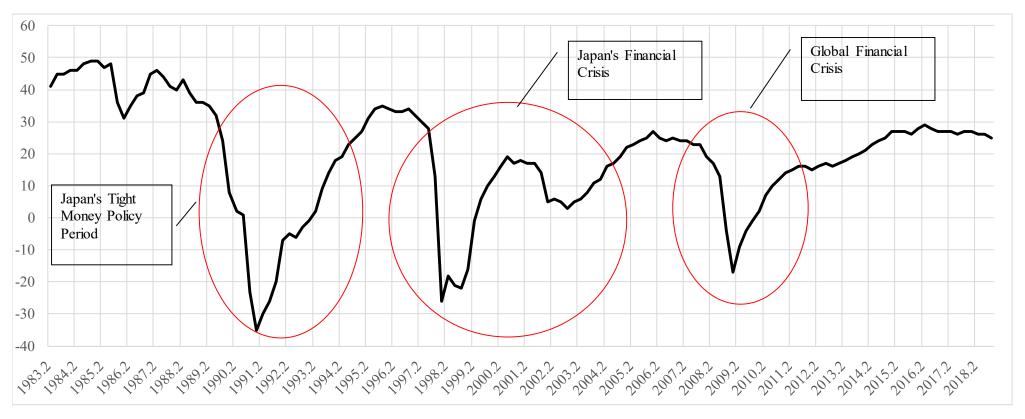
Chart 8



Notes: Prepared by the author based on the Vital Statistics of Ministry of Health, Labor and Welfare.

Chart 9

Lending Attitude of Financial Institutions (easy-tight)



Note: Bank of Japan Tankan Survey data on the lending attitudes of financial institutions viewed from borrowing firms. Percent of firms answered "easy" minus percent of firms answered "tight" in all industries.

Table 1

Number of Financial Institutions and Bank Failures in Japan

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
163	162	160	164	167	174	176	176	173	171	167	165	159	155	154	148	
0	1	0	0	0	2	1	3	5	5	0	2	0	1	0	0	20
451	440	435	428	421	416	410	401	396	386	372	349	326	306	298	292	
0	0	1	1	0	0	0	0	0	10	2	13	0	0	0	0	27
408	398	394	384	374	370	364	352	323	292	281	247	191	181	175	172	
0	0	0	1	4	4	4	14	25	29	12	41	0	0	0	0	134
1022	1000	989	976	962	960	950	<u>92</u> 9	892	849	820	761	676	642	627	612	
0	1	1	2	$\overline{4}$	6	5	17	30	44	14	56	> 0	1	0	0	181
	163 0 451 0 408 0	163 162 0 1 451 440 0 0 408 398 0 0	163 162 160 0 1 0 451 440 435 0 0 1 408 398 394 0 0 0	163 162 160 164 0 1 0 0 451 440 435 428 0 0 1 1 408 398 394 384 0 0 0 1	163 162 160 164 167 0 1 0 0 0 451 440 435 428 421 0 0 1 1 0 408 398 394 384 374 0 0 0 1 4	163 162 160 164 167 174 0 1 0 0 0 2 451 440 435 428 421 416 0 0 1 1 0 0 408 398 394 384 374 370 0 0 0 1 4 4	163 162 160 164 167 174 176 0 1 0 0 0 2 1 451 440 435 428 421 416 410 0 0 1 1 0 0 0 408 398 394 384 374 370 364 0 0 0 1 4 4 4	163 162 160 164 167 174 176 176 0 1 0 0 0 2 1 3 451 440 435 428 421 416 410 401 0 0 1 1 0 0 0 0 408 398 394 384 374 370 364 352 0 0 0 1 4 4 4 14	163 162 160 164 167 174 176 176 173 0 1 0 0 0 2 1 3 5 451 440 435 428 421 416 410 401 396 0 0 1 1 0 0 0 0 0 408 398 394 384 374 370 364 352 323 0 0 0 1 4 4 4 14 25 1022 1000 989 976 962 960 950 929 892	163 162 160 164 167 174 176 176 173 171 0 1 0 0 0 2 1 3 5 5 451 440 435 428 421 416 410 401 396 386 0 0 1 1 0 0 0 0 0 10 408 398 394 384 374 370 364 352 323 292 0 0 0 0 1 4 4 4 14 25 29 1022 1000 989 976 962 960 950 929 892 849	163 162 160 164 167 174 176 176 173 171 167 0 1 0 0 0 2 1 3 5 5 0 451 440 435 428 421 416 410 401 396 386 372 0 0 1 1 0 0 0 0 0 10 2 408 398 394 384 374 370 364 352 323 292 281 0 0 0 1 4 4 4 14 25 29 12 1022 1000 989 976 962 960 950 929 892 849 820	163 162 160 164 167 174 176 176 173 171 167 165 0 1 0 0 0 2 1 3 5 5 0 2 451 440 435 428 421 416 410 401 396 386 372 349 0 0 1 1 0 0 0 0 0 10 2 13 408 398 394 384 374 370 364 352 323 292 281 247 0 0 0 0 1 4 4 4 4 14 25 29 12 41 1022 1000 989 976 962 960 950 929 892 849 820 761	163 162 160 164 167 174 176 176 173 171 167 165 159 0 1 0 0 0 2 1 3 5 5 0 2 0 451 440 435 428 421 416 410 401 396 386 372 349 326 0 0 1 1 0 0 0 0 0 10 2 13 0 408 398 394 384 374 370 364 352 323 292 281 247 191 0 0 0 0 1 4 4 4 14 25 29 12 41 0 1022 1000 989 976 962 960 950 929 892 849 820 761 676	163 162 160 164 167 174 176 173 171 167 165 159 155 0 1 0 0 0 2 1 3 5 5 0 2 0 1 451 440 435 428 421 416 410 401 396 386 372 349 326 306 0 0 1 1 0 0 0 0 0 10 2 13 0 0 408 398 394 384 374 370 364 352 323 292 281 247 191 181 0 0 0 0 1 4 4 4 4 14 25 29 12 41 0 0 1022 1000 989 976 962 960 950 929 892 849 820 761 676 642	163 162 160 164 167 174 176 176 173 171 165 159 155 154 0 1 0 0 0 2 1 3 5 5 0 2 0 1 0 451 440 435 428 421 416 410 401 396 386 372 349 326 306 298 0 0 1 1 0 0 0 0 0 10 2 13 0 0 0 0 408 398 394 384 374 370 364 352 323 292 281 247 191 181 175 0 0 0 0 1 4 4 4 14 25 29 12 41 0 0 0 1022 1000 989 976 962 960 950 929 892 849 820 761 676 642	163 162 160 164 167 174 176 176 173 171 167 165 159 155 154 148 0 1 0 0 0 2 1 3 5 5 0 2 0 1 0 0 451 440 435 428 421 416 410 401 396 386 372 349 326 306 298 292 0 0 1 1 0 0 0 0 10 2 13 0 0 0 0 408 398 394 384 374 370 364 352 323 292 281 247 191 181 175 172 0 0 0 1 4 4 4 14 25 29 12 41 0 0 0 0 1022 1000 989 976 962 960 950 929 892 849

Note: Data is taken from Annual Report of Deposit Insurance Corporation, 2012.

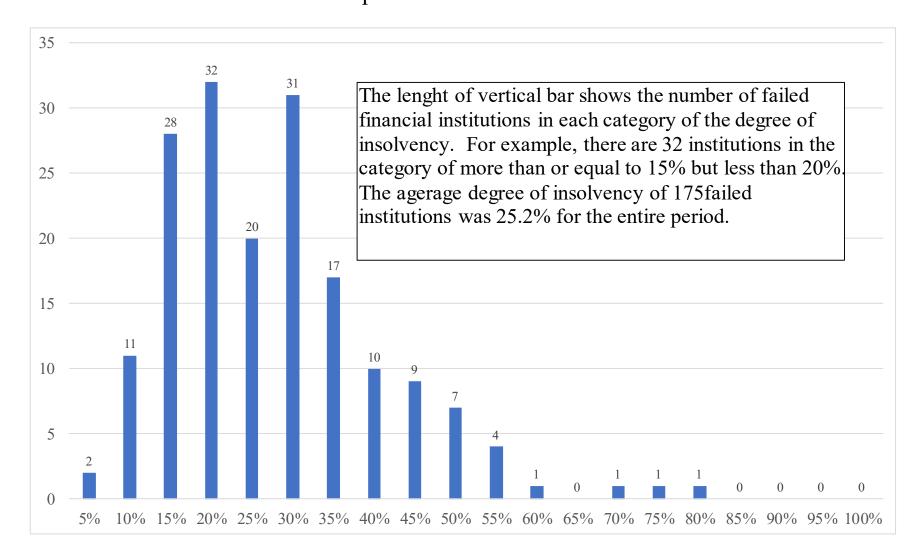
Table 2 Profitability of Japanese Banking Sector

Financial Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Lending Margin (A)	7.1	8.9	9.8	9.2	9.7	10.8	10.7	10.0	9.6	9.7	9.4	9.8	9.4	9.0
Other Revenue (B)	2.6	2.2	2.5	2.8	2.1	3.3	3.7	3.6	3.1	2.5	3.0	3.1	3.6	4.3
Operating Costs (C)	7.1	7.5	7.7	7.7	7.8	7.8	8.0	8.0	7.5	7.3	7.1	7.0	7.0	6.7
Salaries and Wages	3.7	3.9	4.0	4.0	4.0	4.0	4.0	4.0	3.6	3.5	3.4	3.2	2.8	3.1
Gross Profit (D)=(A)+(B)-(C)	2.6	3.5	4.5	4.3	4.0	6.3	6.4	5.6	5.2	4.9	5.3	5.9	6.0	6.6
Loan Loss (E)	0.8	1.0	2.0	4.6	6.2	13.3	7.3	13.5	13.5	6.3	6.6	9.4	7.0	6.1
Net Operating Profit (F)=(D)-(E)	1.8	2.5	2.5	-0.4	-2.2	-7.0	-1.0	-7.9	-8.3	-1.4	-1.3	-3.5	-1.0	0.5
Realized Capital Gains (G)	2.0	0.7	0.0	2.0	3.2	4.4	1.2	3.6	1.4	3.8	1.4	-2.4	-4.1	0.6
Net Profit (F)+(G)	3.8	3.3	2.5	1.7	1.0	-2.6	0.2	-4.2	-6.9	2.3	0.1	-5.9	-5.1	1.1
Asset	928	914	859	850	845	848	856	848	760	737	804	772	739	750
Outstanding loans	522	537	542	539	539	554	563	536	492	476	474	465	435	423

Financial Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Lending Margin (A)	8.7	8.7	8.5	8.6	8.7	8.7	8.3	8.2	7.9	7.9	8.2	7.8	7.5	7.2
Other Revenue (B)	4.6	5.2	4.1	3.3	2.4	3.0	3.6	3.8	4.2	3.9	4.0	4.0	3.8	3.7
Operating Costs (C)	6.4	6.5	6.5	6.7	6.9	7.0	6.8	6.9	6.8	6.8	6.9	6.8	7.1	6.9
Salaries and Wages	2.8	2.8	2.6	2.7	2.9	3.2	3.1	3.1	3.2	3.1	3.1	3.1	3.3	3.2
Gross Profit (D)=(A)+(B)-(C)	6.9	7.4	6.0	5.1	4.2	4.7	5.1	5.1	5.3	5.2	5.2	5.0	4.0	3.8
Loan Loss (E)	4.2	2.0	1.7	2.0	3.6	2.2	1.3	1.0	1.0	0.6	0.6	0.6	0.8	0.6
Net Operating Profit (F)=(D)-(E)	2.7	5.4	4.4	3.2	0.6	2.6	3.8	4.1	4.3	4.6	4.6	4.4	3.2	3.3
Realized Capital Gains (G)	-0.1	0.5	0.2	0.0	-1.9	-0.0	-0.5	-0.4	-0.4	0.3	0.3	0.4	0.7	0.7
Net Profit (F)+(G)	2.6	5.9	4.5	3.2	-1.4	2.5	3.3	3.7	3.9	4.9	4.9	4.8	3.9	4.0
Asset	748	757	761	781	807	816	843	874	916	945	1020	1047	1076	1110
Outstanding loans	414	428	423	427	445	445	447	458	478	499	523	538	551	558

Note: The data is based on Financial Statement of All Commercial Banks in Japan compiled by Japan Bankers Association. Other revenue (B) includes all the other profit such as dealing profits and fees but excludes realized capital gains on stocks and real estates. Realized capital gains (G) includes gains of stocks and real estates. The data was first estimated by the author and updated by Japan Center for Economic Research.

Chart 10 Degree of Insolvency of Failed Deposit Taking Financial Institutions
From April 1992 to June 2004



Note: Data is based on Japan Center for Economic Research [2004], pp 147-149. Degree of insolvency is defined as the amount of DIC grant to protect depositors divided by the value of debt before the failure.

8. A Proposal on Capital Requirements and Tax Rules

We need a much higher capital/asset ratio (e.g. 20-30%).

We have to remove disincentive to raise capital ratio under corporate tax system.

Replace current high tax on corporate income with low financial intermediation tax (FIT) for deposit-taking financial institutions.

Total tax revenue on financial institutions should be kept the same under the new system.

The FIT rate will be 0.1 to 0.2% to generate the current tax revenue of corporate income tax for Japan.