

# MPRA

Munich Personal RePEc Archive

## **Taipei, China's banking problems: lessons from the Japanese experience**

Montgomery, Heather  
Asian Development Bank Institute

September 2002

Online at <http://mpa.ub.uni-muenchen.de/14939/>  
MPRA Paper No. 14939, posted 30. April 2009 / 11:48

# Taipei,China's Banking Problems: Lessons from the Japanese Experience

Heather Montgomery

September 2002

---

Over the past decade, the health of the banking sector in Taipei,China has been in decline. Falling returns on assets and equity, steadily rising non-performing loans and bank runs at smaller financial institutions have highlighted problems across the banking sector as a whole.

This study analyzes both the causes of, and policy responses to, the banking sector problems in Taipei,China, drawing comparisons from the experience of Japan. The author shows that there are many valuable lessons to be learned from the Japanese experience. In particular, policy makers in Taipei,China are urged to heed the early warning signs of overall banking sector problems and to avoid the policy of forbearance. Importantly, a hoped-for macroeconomic recovery cannot be relied upon to help banks "grow out" of their problems.

**ADB Institute  
Research Paper Series  
No. 42**

September 2002

---

**Taipei, China's Banking Problems:  
Lessons from the Japanese Experience**

---

**Heather Montgomery**

**ABOUT THE AUTHOR**

*Heather Montgomery is a research fellow at the ADB Institute. Prior to joining the Institute, she held visiting positions at various institutions, including the United States Federal Reserve Board of Governors, Japan's Ministry of Finance, the Bank of Japan and Japan's Ministry of International Trade and Industry, while completing her Ph.D. dissertation research in economics at the University of Michigan.*

Additional copies of the paper are available free from the Asian Development Bank Institute, 8<sup>th</sup> Floor, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-ku, Tokyo 100-6008, Japan. Attention: Publications. Also online at [www.adbi.org](http://www.adbi.org)

**Copyright © 2002 Asian Development Bank Institute. All rights reserved. Produced by ADBI Publishing.**

*The Research Paper Series primarily disseminates selected work in progress to facilitate an exchange of ideas within the Institute's constituencies and the wider academic and policy communities. The findings, interpretations, and conclusions are the author's own and are not necessarily endorsed by the Asian Development Bank Institute. They should not be attributed to the Asian Development Bank, its Boards, or any of its member countries. They are published under the responsibility of the Dean of the ADB Institute. The Institute does not guarantee the accuracy or reasonableness of the contents herein and accepts no responsibility whatsoever for any consequences of its use. The term "country", as used in the context of the ADB, refers to a member of the ADB and does not imply any view on the part of the Institute as to sovereignty or independent status. Names of countries or economies mentioned in this series are chosen by the authors, in the exercise of their academic freedom, and the Institute is in no way responsible for such usage.*

## PREFACE

---

The ADB Institute aims to explore the most appropriate development paradigms for Asia composed of well-balanced combinations of the roles of markets, institutions, and governments in the post-crisis period.

Under this broad research project on development paradigms, the ADB Institute Research Paper Series will contribute to disseminating works-in-progress as a building block of the project and will invite comments and questions.

I trust that this series will provoke constructive discussions among policymakers as well as researchers about where Asian economies should go from the last crisis and recovery.

Masaru Yoshitomi  
Dean  
ADB Institute

## ABSTRACT

---

The economy of Taipei,China was able to escape the contagion of the Asian financial crisis and remains well insulated from the type of external shocks that forced other economies in the region into currency devaluations and deep recession in 1997. Since that time however, internal pressures have gradually weakened many of Taipei's banks and now threaten the stability of the banking sector as a whole. The domestic nature of these pressures have led to comparisons with the experience of Japan in the 1990s.

Early warning signs of the banking sector problems in Taipei,China have been evident since the mid-1990s in the form of falling ROA and ROE ratios, steadily rising non-performing loans and bank runs at several small financial institutions. More recently, the takeover of two medium-sized banks by the financial reconstruction fund has brought to light the fact that the problems have spread beyond the small credit cooperatives and credit departments of farmers' and fishermen's associations. The experiences of Taipei,China thus far closely resemble the early stages of Japan's banking sector problems. Since 1990, Japan's banking sector has also demonstrated declining ROE and ROA ratios. Non-performing loans have been an issue since the early 1990s as well, and as in Taipei,China, non-performing loan ratios have always been particularly acute in Japan's smaller financial institutions. In fact, several credit cooperatives and *shinkin* banks were closed in the 1990s. Often, these failures were resolved via the "convoy" system under which weak financial institutions are taken over by larger, stronger banks, a practice which has been adopted by authorities in Taipei,China as well. In Japan, the banking sector problems finally erupted into a full-blown banking crisis in 1997, with the collapse of three of the top 20 banks that had previously been considered "too big to fail".

There are similarities in not only the symptoms, but also the causes of the banking sector problems in Taipei,China and Japan. In both cases, macroeconomic shocks, in particular the asset bubbles in equity and real estate prices, played a significant role in weakening the banking sector. But the crucial factor in both cases was the combination of these macroeconomic shocks with financial deregulation, which led to disintermediation and "overbanking" in the financial sector.

As documented here, policy makers in both Taipei,China and Japan, have taken steps to address the weakness of the banking system in each economy. While acknowledging the aggressive response of policy makers in Taipei,China, this study points out that there are many lessons—positive and negative—to be learned from the experience of Japan. In particular, policy makers in Taipei,China are urged to heed the early warning signs of overall banking sector problems and to avoid the policy of forbearance. Macroeconomic recovery cannot be relied upon to help banks "grow out" of their problems.

## TABLE OF CONTENTS

---

<i>About the Author</i>	II
<i>Preface</i>	III
<i>Abstract</i>	IV
<i>Table of Contents</i>	V
1. Introduction	1
2. Early Warning Signs	1
2.1. Taipei,China	1
2.2. Japan	3
3. Causes of the Banking Sector Problems	8
3.1. Asset Bubbles	8
3.2. Financial Liberalization	15
4. Policy Response	19
4.1. Japan	19
4.2. Taipei,China	21
5. Similarities and Differences	22
6. Lessons from the Japanese Experience	25
Figures	
Figure 1. Taipei,China: Performance of Major Banks 1991-2001	2
Figure 2. Taipei,China: Non-Performing Loans of Financial Institutions 1993-2001	2
Figure 3. Taipei,China: List of Arranged Mergers	3
Figure 4. Taipei,China: List of Bank Runs	3
Figure 5. Japan: Performance of Major Banks 1980-1997	4
Figure 6. Japan: Loss on Disposal of Bad Loans of All Japanese Banks	5
Figure 7. Japan: NPL/Loans	6
Figure 8. Japan: NPL/Loans	6
Figure 9. Japan: List of Failed Credit Cooperatives and Shinkins	7
Figure 10. Taipei,China: Housing Price Index 1982-2000	8
Figure 11. Taipei,China: Taiwan Stock Exchange 1980-2000	9
Figure 12. Japan: Commercial Land Prices 1980-2000	9
Figure 13. Japan: NIKKEI 225 Stock Average 1980-2000	10
Figure 14. Japan: Growth Rate of Loans Outstanding by Sector 1980-2000	11
Figure 15. Japan: Outstanding Loans-Share by Sector 1980 & 1990	11
Figure 16. Taipei,China: Growth Rate of Loans Outstanding 1980-2001	12
Figure 17. Taipei,China: Outstanding Loans-Share by Sector 1980 & 1990	12

Figure 18. Taipei,China: Composition of NPL by Sector 2001	13
Figure 19. Japan: Composition of Balance Sheet by Bank Type	14
Figure 20. Taipei,China: Composition of Balance Sheet by Bank Type	14
Figure 21. Japan: Borrowings/Total Liabilities by Firm Size 1980-2000	15
Figure 22. Taipei,China: Number of Companies Listed on the TSE and OTC 1980-2001	16
Figure 23. Taipei,China: Outstanding Corporate Bond Issues 1980-2001	16
Figure 24. Taipei,China: Borrowing/Total Liabilities Manufacturing Firms 1980-2000	17
Figure 25. Taipei,China: Share of Total Asset of Domestic Banks by Type 1993-2001	18
Figure 26. Taipei,China: Return on Assets of Domestic Banks by Type 1993-2001	19
Figure 27. Taipei,China: Non-Performing Loans of Domestic Banks by Type 1993-2001	19
Figure 28. Japan: Growth Rates of Key Economic Variables	25
Appendix	27
References	31



# Taipei,China's Banking Problems: Lessons from the Japanese Experience

Heather Montgomery

## 1. Introduction

The economy of Taipei,China weathered the Asian financial crisis of 1997 remarkably well. While many other Asian economies slipped into recession in 1998, Taipei,China maintained a moderate growth rate of 4.83%<sup>1</sup> (Ding and Yeh 2001). The current account balance remained positive and the central bank maintained ample foreign reserves. Although the NT dollar has lost some strength since 1999, the currency faced nothing like the devaluations experienced in crisis-hit Asian countries. Neither financial institutions nor firms in Taipei,China face the maturity and currency “double mismatch” that pushed much of the rest of Asia into a capital account crisis in the late 1990s (see Yoshitomi and Ohno (1999) and Yoshitomi and Shirai (2000)).

However, while the economy of Taipei,China remains well insulated from the type of external shocks that caused the Asian crisis of 1997, the economy is currently facing an internal crisis in its banking system. The non-performing loan ratio of banks in Taipei,China have reached an all-time high and measures of bank performance such as return on equity and return on assets have been declining steadily since 1997.

The domestic nature of the problems faced by Taipei,China's banking sector has led to comparisons with Japan's banking crisis of 1997 (Cavey 2002). This study closely examines the banking problems in Taipei,China and the banking crisis in Japan that has been so costly, not only to the banking sector, but to the economy as a whole. Section 2 reviews events in both countries and presents some statistics on the condition of the banking sector. Section 3 analyzes the causes of the banking sector problems and section 4 discusses the policies that have been made in response. Section 5 reviews the similarities and differences in the experience of Japan and Taipei,China. And section 6 concludes with some policy recommendations for Taipei,China in light of the similarities.

## 2. Early Warning Signs

### 2.1. Taipei,China

What are the symptoms of Taipei,China's banking sector problems? The return on assets (ROA) and return on equity (ROE) of the major banks in Taipei,China have been declining since 1997 (see figure 1). In addition, the non-performing loan ratio of the major banks in Taipei,China has been steadily increasing over the past decade and is now at an all-time high. The most current figure of 7.79% reported in figure 1 is underestimated by global standards.<sup>2</sup>

---

<sup>1</sup> In the 5 years prior to the 1997 crisis, Taipei,China had an average growth rate of 6.3% (ADB 1998).

<sup>2</sup> The biggest difference is the definition of past-due loans. Under global standards, this would include any loans past due by more than 90 days. The definition currently in use in Taipei,China is any loan past due by more than 6 months.

**Figure 1. Taipei,China: Performance of Major Banks 1991-2001**

	Taipei,China		
	ROA	ROE	NPL/ Loans
1993	0.97%	8.76%	1.14%
1994	1.16%	9.31%	1.82%
1995	0.93%	7.81%	2.85%
1996	0.99%	9.15%	3.68%
1997	1.09%	10.21%	3.70%
1998	0.75%	5.69%	4.36%
1999	0.59%	4.55%	4.88%
2000	0.38%	2.28%	5.34%
2001			7.79%

The non-performing loan problem, although serious for all banks in Taipei,China, is much more pronounced at smaller financial institutions such as the credit cooperatives and credit departments of farmers' and fishermen's associations (see figure 2).

Even before the non-performing loan problem had grown to such proportions, there were a string of arranged mergers between troubled credit cooperatives and healthier banks in the late 1990s (see figure 3 from Lee (2001)). When the problems in the banking sector began to surface after 1997, there were also runs on several financial institutions (see figure 4 from Lee (2001)). These were also resolved, in many cases, via arranged mergers with healthier institutions.

**Figure 2. Taipei,China: Non-Performing Loans of Financial Institutions 1993-2001**

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Domestic Banks	1.17%	1.85%	2.92%	3.68%	3.70%	4.36%	4.88%	5.34%	8.26%
Foreign Banks	0.38%	0.45%	0.82%	0.97%	1.00%	1.60%	3.20%	3.22%	3.59%
Credit Cooperatives	1.17%	2.15%	3.14%	6.11%	6.44%	7.58%	10.44%	12.44%	11.89%
Credit Department of Farmers' Association	1.70%	2.87%	5.24%	8.46%	10.83%	13.18%	16.10%	17.97%	19.44%
Credit Department of Fishermen's Association	2.90%	2.55%	5.02%	6.21%	9.21%	11.32%	12.99%	14.11%	15.19%

**Figure 3. Taipei,China: List of Arranged Mergers**

7/1995	Changhwa Fourth Credit Cooperative
1/1997	Hsinchu Second Credit Cooperative
9/1997	Beigong Credit Cooperative
9/1997	Kaohsiung Fifth Credit Cooperative
9/1997	Kaohsiung Tenth Credit Cooperative
10/1997	Taichung Eighth Credit Cooperative
1/1998	Tainan Second Credit Cooperative
1/1998	Hsinchu Sixth Credit Cooperative
1/1998	Tainan First Credit Cooperative
4/1998	Tainan Fourth Credit Cooperative
4/1998	Taichung Fourth Credit Cooperative
5/1998	Nantou City Credit Cooperative
5/1998	Chishang Credit Cooperative
6/1998	Tainan Tenth Credit Cooperative
7/1998	Changhua Second Credit Cooperative
7/1998	Taipei Seventh Credit Cooperative
9/1999	Dokong Credit Cooperative
4/2000	Miaoli City Credit Cooperative

**Figure 4. Taipei,China: List of Bank Runs**

11/1998	Central Bill Finance Company
11/1998	Hung-Fu Bill Finance Company
11/1998	Taichung Business Bank
12/1998	Pan Asia Bank
02/1999	Bank of Panshin
07/1999	Dong-Gong Credit Cooperative
04/2000	Chung Shing Bank
05/2000	Taiwan Development and Trust Corporation
05/2000	Overseas Chinese Bank
08/2000	Credit Department of Yuan-Lin Farmers' Association

As the banking sector problems grew, the government finally allocated a special Financial Reconstruction Fund to deal with troubled institutions and this was first activated in August of last year when 36 institutions, mostly agricultural cooperatives, were placed under state management. Although some public funds were used in this process, eventually the troubled financial institutions were again pushed off on to healthier banks. In October 2001, this fund took over the management of Chung Shing Bank, a mid-sized bank. In January of this year, the reconstruction fund took over the Medium Business Bank of Kaosiung, another mid-sized bank. The government has still failed to come to an agreement with bidders in order to sell off the bank to a merger partner.

## **2.2. Japan**

The experience of Taipei,China thus far closely resembles the early stages of Japan's banking crisis. Measures of performance such as ROA and ROE are currently much higher for banks in Taipei,China than for banks in Japan, where ROA and ROE have been negative since 1995. But the shift in these measures of performance for banks

in Taipei,China in 1997 mirrors the shift that occurred in Japan in 1990. Figure 5, from Hoshi and Kashyap (1999), shows long-term trends in the ROE and ROA of Japanese banks. There is a clear shift in 1990, when the trend went from increasing measures of performance to steadily declining ROE and ROA ratios.

**Figure 5. Japan: Performance of Major Banks 1980-1997**

	R O A	R O E
1 9 8 0	0 . 0 7 %	3 . 0 0 %
1 9 8 1	0 . 0 9 %	4 . 2 5 %
1 9 8 2	0 . 2 2 %	1 0 . 9 4 %
1 9 8 3	0 . 2 0 %	1 0 . 3 0 %
1 9 8 4	0 . 2 4 %	1 2 . 9 7 %
1 9 8 5	0 . 2 3 %	1 1 . 9 0 %
1 9 8 6	0 . 2 2 %	1 2 . 1 3 %
1 9 8 7	0 . 2 6 %	1 3 . 4 1 %
1 9 8 8	0 . 3 0 %	1 5 . 4 1 %
1 9 8 9	0 . 3 6 %	1 6 . 1 7 %
1 9 9 0	0 . 2 7 %	1 0 . 7 3 %
1 9 9 1	0 . 1 9 %	6 . 8 3 %
1 9 9 2	0 . 1 4 %	4 . 6 5 %
1 9 9 3	0 . 0 8 %	2 . 4 8 %
1 9 9 4	0 . 0 7 %	2 . 1 2 %
1 9 9 5	- 0 . 0 2 %	- 0 . 4 6 %
1 9 9 6	- 0 . 4 2 %	- 1 1 . 7 1 %
1 9 9 7	- 0 . 0 1 %	- 0 . 4 0 %

Of course, a major factor in the negative returns of Japanese banks is the massive amount of profits the banks have been setting aside as loan loss provisions or to cover direct loan write offs.<sup>3</sup> It is not coincidental that in the same year that major Japanese banks first reported negative ROE and ROA ratios, 1995, the banks dramatically increased the amount of funds used in direct loan write offs and provisions (see figure 6). Banks in Taipei,China have only just begun to tackle their non-performing loan problem, and we may expect to see quickly declining returns as they do so. If banks in Taipei,China follow the same path as Japanese banks, they will be reporting negative ROE and ROA in the next fiscal year.

<sup>3</sup> Measures of performance using pre-provision operating profits, “gyomu-juneki” ratios, are much higher and remain positive.

**Figure 6. Japan: Loss on Disposal of Bad Loans of All Japanese Banks**

(Units: billion yen)	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001 Sep
Loss on Disposal of Bad Loans	1,640	3,872	5,232	13,369 (11,067)	7,763 (6,210)	13,258 (10,819)	13,631 (10,440)	6,944 (5,398)	6,108 (4,290)	2,955 (2,046)
Net Transfer to Allowance for Loan Losses	945	1,146	1,402	7,087 (5,576)	3,447 (2,534)	8,403 (6,552)	8,118 (5,490)	2,531 (1,339)	2,732 (1,371)	1,491 (875)
Direct Write-offs	424	2,090	2,809	5,980 (5,490)	4,316 (3,676)	3,993 (3,501)	4,709 (4,268)	3,865 (3,609)	3,072 (2,650)	1,322 (1,059)
Write-offs of Loans	204	235	706	1,721 (1,568)	973 (850)	851 (791)	2,377 (2,255)	1,881 (1,734)	2,520 (2,201)	1,199 (958)
Loss on sales to the CCPC	219	1,855	2,103	2,526 (2,132)	1,133 (971)	1,043 (921)	359 (339)	278 (272)	163 (156)	57 (53)
Loss on sales through bulk sales etc.	0	0	0	1,733 (1,791)	2,210 (1,855)	2,099 (1,789)	1,973 (1,674)	1,706 (1,604)	389 (293)	67 (49)
The Others	271	636	1,022	302 (1)	0 (0)	863 (766)	804 (683)	548 (449)	304 (269)	142 (111)
Aggregate Loss on Disposal of Bad Loans from FY 1992	1,640	5,512	10,744	24,113 (21,811)	31,877 (28,021)	45,135 (38,840)	58,766 (49,280)	65,710 (54,678)	72,818 (58,967)	74,773 (61,013)
(Note)										
1. For FY 1992 to FY 1994, above data are composed of City Banks, Long-term Credit Banks and Trust Banks. Figures in (.) refer to the amount of City Banks, Long-term Credit Banks and Trust Banks.										
2. Hokkaido Takusyoku Bank, Tokuyo City Bank, Kyoto Kyoei Bank, Naniwa Bank, Fukutoku Bank and Midori Bank are excluded from FY 1997 onward. Kokumin Bank, Kofuku Bank and Tokyo Sowa Bank are excluded from FY 1998 onward. Namihaya Bank, and Niigata Chuo Bank are excluded from FY 1999 onward. Ishikawa Bank is excluded from FY 2001 Sept. Long-term Credit Bank of Japan (Shinsei Bank at present) is excluded from FY 1998. Nippon Credit Bank (Aozora bank at present) is excluded from FY 1998 and FY 1999.										
3. "Net Transfer to Allowance for Loan Losses" refer to the total amount of Net Transfer to Specific Allowance for Loan Loss and Net Transfer to General Allowance for Loan Loss, etc.										
4. "Loss on sales through Bulk Sales etc." refer to the total amount of Loss on Sales through Bulk Sales, Loss on Supports to subsidiary etc.										
5. "The Others" in Loss on Disposal of Bad Loans refer to the total amount of Allowance for expected losses brought by the Loans Sold to CCPC. Allowance for expected Losses brought by the Supports to Subsidiary etc.										

One difference between the two countries is that if we use a comparable definitions of non-performing loans,<sup>4</sup> the non-performing loan ratio of Japan's banks has remained fairly stable since the problem first surfaced and non-performing loan data began to be reported in 1992. Figure 7 shows that under the narrowest definition, the same definition currently in use in Taipei, China (loans to bankrupt borrowers plus past due loans), the ratio of non-performing loans to total loans for Japan's major banks has remained between 3-5% since fiscal year 1992 when non-performing loans were first reported in Japan.

<sup>4</sup> In order to be comparable with the definition of non-performing loans used in Taipei, China for most of the decade, we use the now outdated definition of non-performing loans for Japan as well: loans to bankrupt borrowers and loans which are past due by 6 months or more. This figure excludes a large category of loans that are overdue by 3-6 months.

**Figure 7. Japan: NPL/Loans\***

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Major Banks	3.23%	3.49%	3.29%	3.28%	3.34%	3.45%	4.81%	4.52%	3.86%
Regional I				2.03%	2.08%	2.29%	2.39%	3.81%	4.74%
Regional II				3.39%	2.95%	3.61%	2.92%	4.48%	5.76%
Regional (Total)				2.40%	2.31%	2.65%	2.52%	3.98%	4.99%
Credit Cooperatives						7.87%	6.72%	7.85%	11.10%
Shinkin Banks						4.57%	3.88%	6.25%	6.73%

\* NPL=Loans to bankrupt borrowers and past due loans

As in Taipei,China, banks in Japan were able to hide the true extent of their non-performing loan problem for several years before standard definitions of non-performing loans were introduced. Figure 8 shows the ratio of non-performing loans to total loans using the global standard definition of non-performing loans (loans to bankrupt borrowers, past due loans and loans past due by more than 3 months) that was introduced for most banks in fiscal year 1997. In addition, as in Taipei,China, the non-performing loan problem in Japan is much worse in the smallest financial institutions such as the shinkin banks and the credit cooperatives.

**Figure 8. Japan: NPL/Loans\***

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Major Banks						5.78%	6.39%	6.25%	6.15%
Regional I						3.74%	4.87%	5.64%	7.03%
Regional II						6.19%	5.40%	6.65%	8.23%
Regional (Total)						4.41%	5.00%	5.90%	7.33%
Credit Cooperatives							11.32%	13.86%	15.95%
Shinkin Banks							6.68%	8.85%	9.42%

\* NPL=Global standard definition, including loans past due by more than 3 months

Non-performing loan reporting requirements for the credit cooperatives were not introduced until fiscal year 1997 in Japan, but even before then, early warning signs of a systemic problem appeared as several small credit cooperatives and shinkin banks

failed between 1992 to 1997 (see figure 9). As was the case in Taipei, China, in most cases mergers were arranged between the troubled cooperatives and healthier banks. However, for some of the larger failures the deposit insurance corporation established new banks—Tokyo-Kyodo Bank and Midori Bank are examples—to take over the failed institutions.

**Figure 9. Japan: List of Failed Credit Cooperatives and Shinkins**

Kamaishi <i>Shinkin</i> Bank (93)
Osaka Fumin Credit Cooperative (93)
Credit Cooperative Gifu Shogin (95)
Tokyo Kyowa Credit Cooperative /
Anzen Credit Cooperative (95)
Yuai Credit Cooperative (95)
Hyogo Bank (96)
Cosmo Credit Cooperative (96)
Fukui-Ken Dai-ichi Credit Cooperative (96)
Taiheiyo Bank (96)
Sanyo Credit Cooperative (96)
Kenmin Daiwa Credit Cooperative (96)
Osaka Credit Cooperative (97)
Kizu Credit Cooperative (97)
Sanpuku Credit Cooperative (97)
Hanshin Labor Credit Cooperative (97)
Kitakyushu Credit Cooperative (97)
Kangawa-Ken Credit Cooperative (97)

The next warning sign in Japan came when the jusen home mortgage companies failed. In December 1995 the government announced a controversial resolution scheme under which agricultural cooperatives, which had provided 40% of the loans to the failed jusen, were asked to write off 10% of their loans. To recover the shortfall of funds, other financial institutions (including the founding banks, which were asked to provide 100% loan forgiveness) wrote off a substantial amount of loans and 680 billion yen of public funds were used (see Yoshitomi and Nagata (1997) for details).

In 1997 the weakness in Japan's financial sector developed into a full-blown banking crisis. The first to fall was Sanyo Securities, a mid-sized securities company that folded on November 3, 1997. The next failure was even larger. Hokkaido Takushoku Bank failed on November 17, 1997,<sup>5</sup> costing the DIC 3,411.3 billion yen, more than the 2,514 billion yen that had been used in all the DIC's previous history. One week later, on November 24, 1997, Yamaichi Securities, one of Japan's oldest and largest brokerage firms, followed suit. Only two days later, Tokuyo City Bank, a small regional bank, collapsed on November 26, 1997. The following year, two other "top 20" banks were nationalized. The Long-Term Credit Bank of Japan was placed under state stewardship on October 23, 1998 and Nippon Credit Bank followed on December 13 of the same year.

Many of these institutions had previously been considered "too big to close". The three banks were ranked among the nations "top 20" banks, which dominated the lending markets, and Yamaichi was one of the top 4 securities houses, which had

<sup>5</sup> Actual grant and asset purchase by the DIC took place in October of 1998.

previously accounted for over 70% of the securities business. These failures marked the end of the traditional “convoy system” safety net. The news led to a sell off of bank shares on the stock market and the emergence of the so-called “Japan Premium” in overseas lending markets.

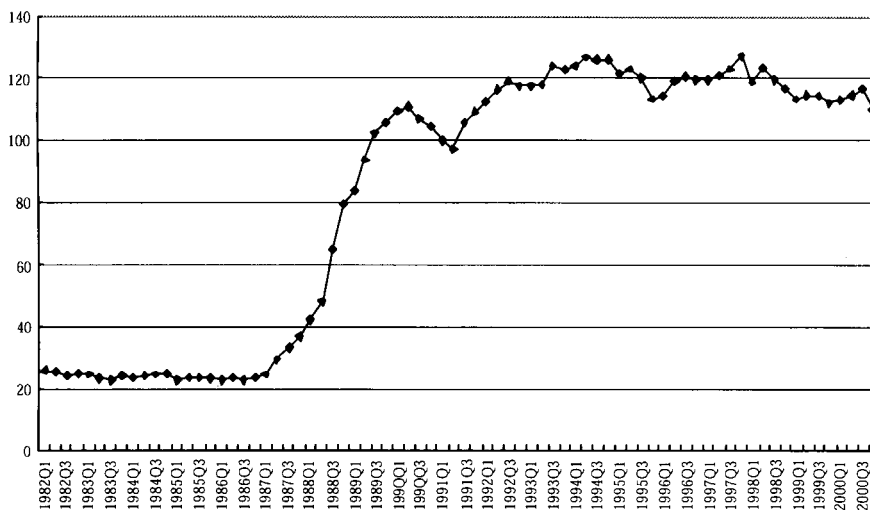
### 3. Causes of the Banking Sector Problems

This section explores two common factors that triggered the banking sector problems in Japan and Taipei,China. First, both economies experienced extraordinary rises in asset markets, followed by dramatic declines. Second, the financial sector in both Japan and Taipei,China experienced rapid financial liberalization, resulting in what has been called “overbanking”.

#### 3.1. Asset Bubbles

Asset prices skyrocketed in both Japan and in Taipei,China in the late 1980s.<sup>6</sup> In Taipei,China, housing prices more than quadrupled between 1987 and 1990<sup>7</sup> (see figure 10). During the same period, the TAIEX soared from 637 points in July 1985 to 12,054 points in January 1990. After peaking in January 1990, the TAIEX began to fall, and hit as low as 2,705 in September 1990. Since this initial fall, the market has been extremely volatile, rising and crashing again in 1997 and again 2000 (see figure 11).

**Figure 10. Taipei,China: Housing Price Index 1982-2000**

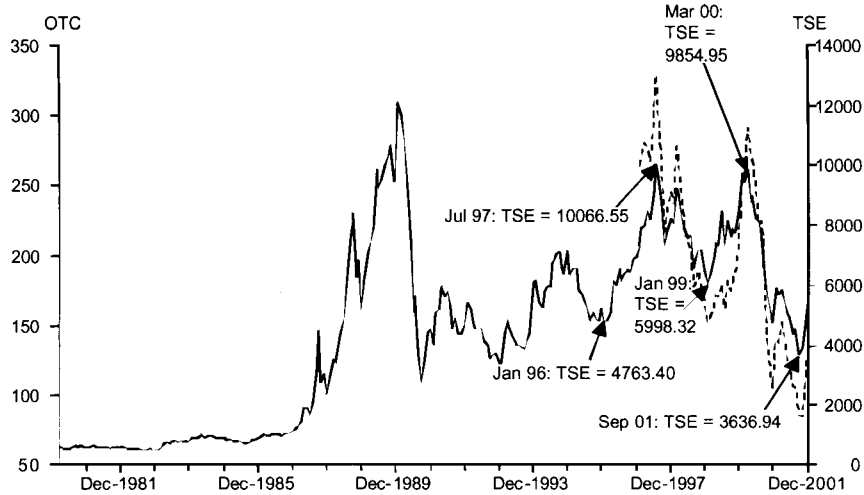


<sup>6</sup> Yin (2001) provides a description of how financial regulation and macroeconomic policies contributed to the asset bubble in Taipei,China.

<sup>7</sup> Real estate prices in Taipei,China have not collapsed as yet (c.f. Japan), partially due to government intervention in the market. However, the effectiveness of these so-called “hot air” policies is declining and real estate prices in certain areas have seen significant drops. For example, the real estate prices in south and central Taipei,China are now 50-60% of their peak (Yin (2001)).

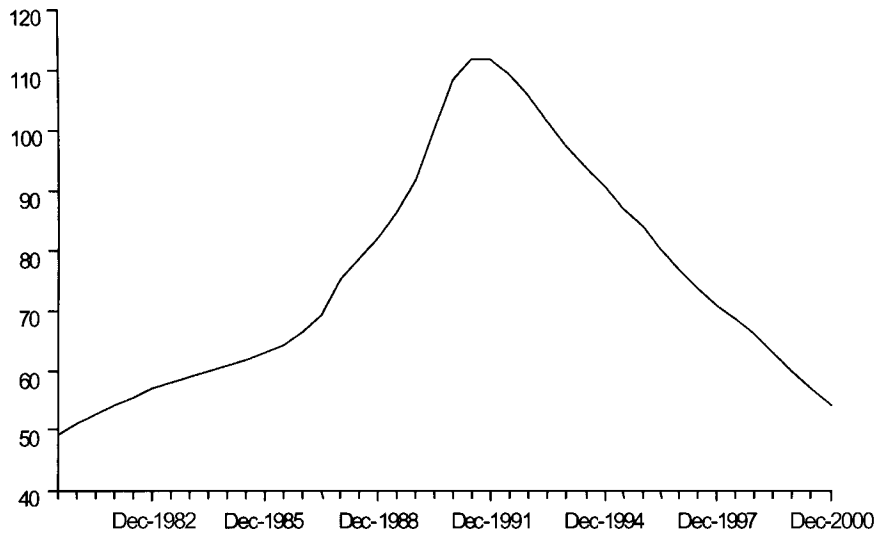


**Figure 11. Taipei,China: Taiwan Stock Exchange 1980-2000**

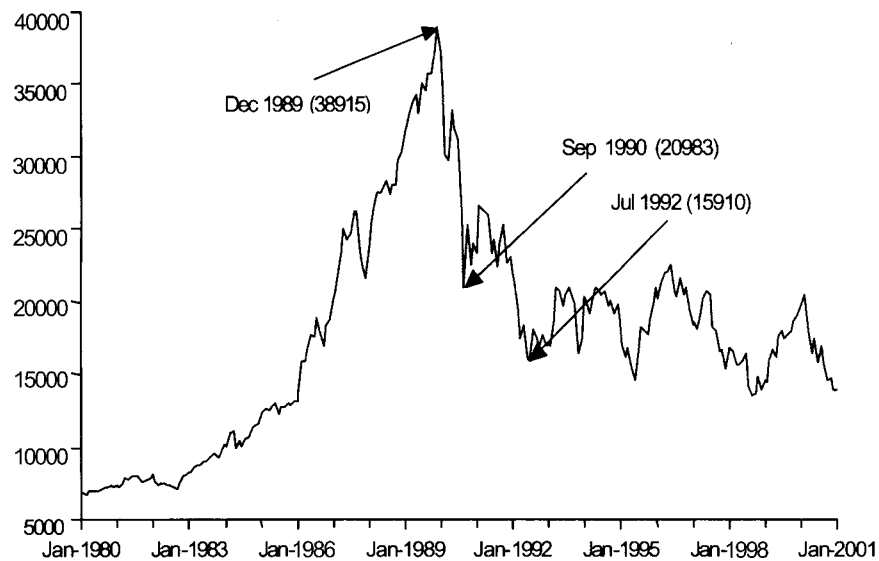


In Japan, fluctuations in land and equity prices were less volatile, but the market collapse was more decisive. Commercial land prices doubled between the first half of 1980 and late 1991 when they peaked (figure 12). Since 1991, commercial land prices have fallen continuously and thus far have lost approximately 60% of their peak value. The rise in the stock market was even more impressive. Rising from 6,768 points in January of 1980, the Nikkei 225 index rose almost 500 % to peak at 38,915 at the end of 1989. In January of 1990 the Nikkei began to fall, and by September had lost almost half its peak value. After recovering slightly, it began another descent in early 1991 and by July 1992 had fallen another 25% (figure 13).

**Figure 12. Japan: Commercial Land Prices 1980-2000**



**Figure 13. Japan: NIKKEI 225 Stock Average 1980-2000**



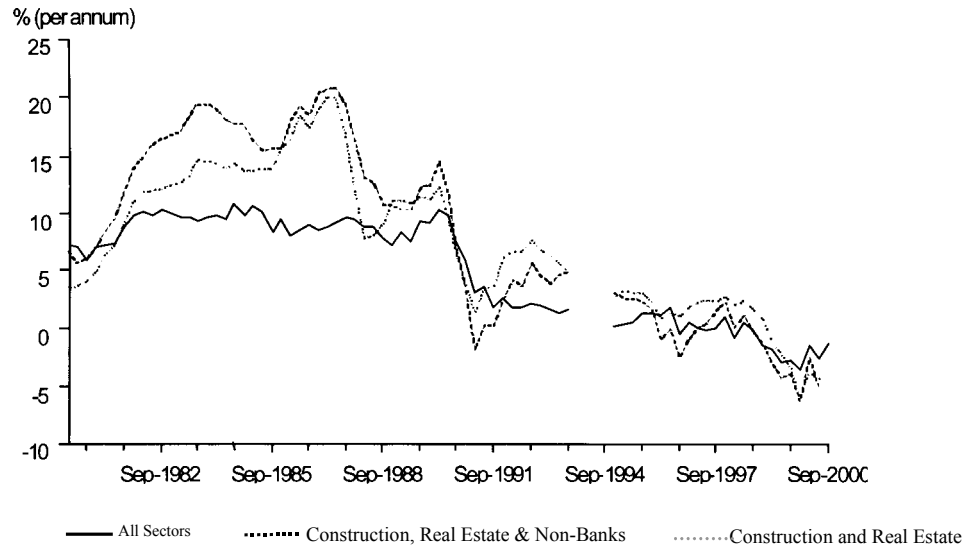
### *3.1.1. Asset Bubbles and the Banking Sector*

The decline in equity and real estate prices greatly affected the banking sector in both Japan and Taipei, China. In Japan, new bank loans in the 1980s<sup>8</sup> were disproportionately concentrated in three sectors: construction, real estate and the non-bank financial sector<sup>9</sup> (see figure 14). Thus, bank loan portfolios shifted substantially in the 1980s. At the start of the decade manufacturing firms had constituted almost 1/3 of outstanding bank loans. That share had dropped to less than 20% by 1990. Lending to the construction, real estate and non-bank financial services sectors had meanwhile grown to fill the gap and by the early 1990s the share of those three sectors in total lending was equal to that of the manufacturing sector (see figure 15). Most loans to Japan's construction, real estate and non-bank financial sector went directly or indirectly toward property deals. Therefore, the collapse in land prices threatened the viability of the banks' main borrowers.

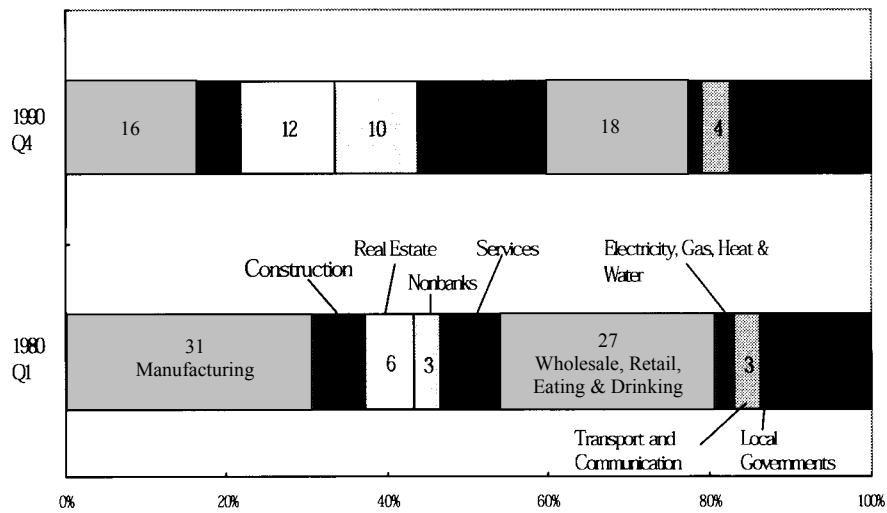
<sup>8</sup> Note that the rise in lending began even before the Plaza Accord of 1985.

<sup>9</sup> Finance and insurance.

**Figure 14. Japan: Growth Rate of Loans Outstanding by Sector 1980-2000**



**Figure 15. Japan: Outstanding Loans-Share by Sector 1980 & 1990**

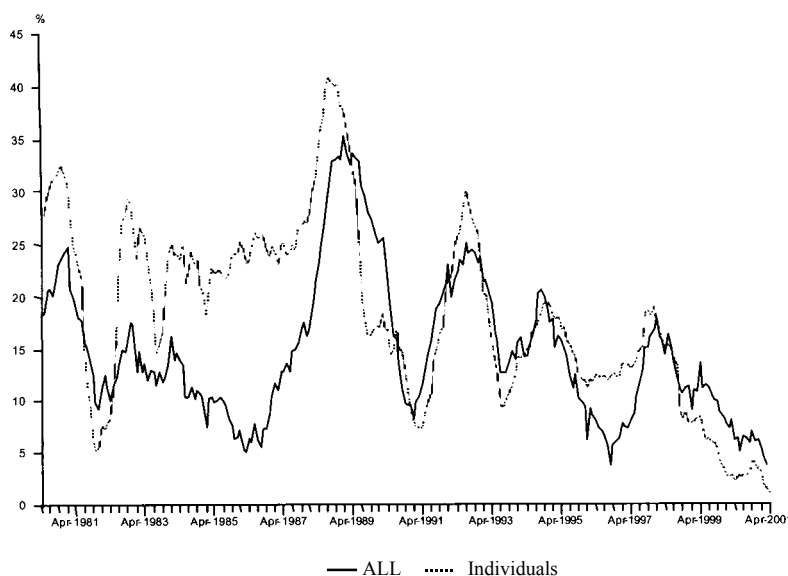


In Taipei, China, a parallel phenomenon was occurring. As the housing market boomed in the 1980s, bank loans to individuals drew double digit loan growth rates (figure 16). In March 1980 20% of total bank lending was to individuals.<sup>10</sup> By March

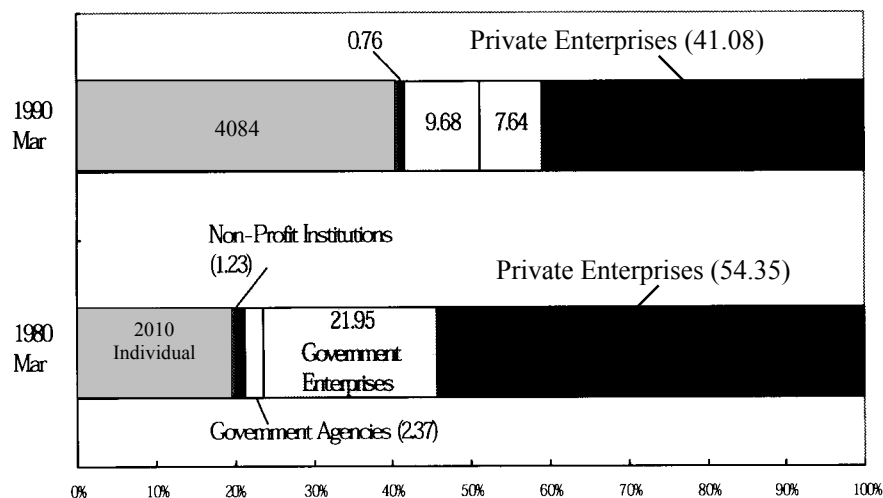
<sup>10</sup> Lending to individuals is not entirely housing loans. The category includes real estate, movable properties, business investments and current operations. However, most loan to individuals (64.45%) are made to finance real estate. (Data from CEIC)

1990, the share of lending going to individuals had more than doubled<sup>11</sup> (figure 17). As a result, loans to individuals make up a large share—44%—of the non-performing loans held by banks<sup>12</sup> (figure 18).

**Figure 16. Taipei,China: Growth Rate of Loans Outstanding 1980-2001**



**Figure 17. Taipei,China: Outstanding Loans-Share by Sector 1980 & 1990**



<sup>11</sup> Overall, including loans to individuals and various industrial sectors, 36.2% of loans are made to finance real estate deals. Since real estate loans to individuals make up 25.4%, the remaining 10.79% are lending to private or government enterprises in order to finance real estate.

<sup>12</sup> Other sectors that stand out relative to the share they hold in the overall loan portfolio are construction, commerce and the finance, insurance and real estate sector. Thus, within loans to private enterprises, the composition of non-performing loans by sector is similar to that of Japanese banks.

**Figure 18. Taipei,China: Composition of NPL by Sector 2001**

Industry	
<b>Private Enterprises</b>	<b>55.40%</b>
Agricultural,Forestry,Fishing & Animal Husbandry	0.45%
Mining & Quarrying	0.11%
Manufacturing	20.52%
Electricity, Gas & Water Supply	0.04%
Construction	7.23%
Commerce Sector	14.08%
Transport, Storage & Communication	0.59%
Finance , Insurance & Real Estate	9.49%
Business & Individual Services	0.00%
Others	2.89%
<b>Government Enterprises</b>	<b>0.10%</b>
<b>Government Agencies</b>	<b>0.00%</b>
<b>Non-Profit Institutions</b>	<b>0.07%</b>
<b>Individuals</b>	<b>43.48%</b>
<b>Financial Institutions</b>	<b>0.41%</b>
<b>Others</b>	<b>0.54%</b>
<b>Total</b>	<b>100.00%</b>

Even loans other than housing loans are often backed by real estate collateral in Japan and in Taipei,China. Thus, the decline in land prices significantly eroded the value of the collateral backing these loans. Collateral based lending has historically been used by banks in both markets as insurance against incomplete monitoring. In Japan, as banks turned increasingly to new, unknown lenders in the 1980s, it seemed prudent to back up loans with collateral. These lending conditions appeared favorable to the banks as land prices soared in the late 1980s, but when many of these companies were forced to default on their loans in the 1990s, the collateral held little value.

The collapse in the equity markets also hurt the banking sector in both countries. Although banks in both Japan and Taipei,China are prohibited from holding more than 5% of the outstanding shares of any one company,<sup>13</sup> in Japan there are no restrictions on the total amount of stocks banks may own. When Japan's stock market collapsed in 1990, almost half of the total number of corporate shares outstanding were held by financial institutions. Currently, banks in both Japan and in Taipei,China hold about 10% of their total assets as non-government securities (see figures 19 and 20). Even in Taipei,China, where the total amount of stock banks and insurance companies may hold in public companies is limited, the fall in the stock market hurt the banks directly by reducing the value of equities held in the banks' trading, or short-term investment account.

<sup>13</sup> This law is very difficult to enforce in Taipei,China, due to the family ownership structure.

**Figure 19. Japan: Composition of Balance Sheet by Bank Type\***

(Units: % of total assets or liabilities)	Assets		Liabilities			
	Loans	Securities (Govt. Securities)	Deposits	Certificate of Deposit	Bank Debentures Issued	Due to Trust Accounts
<b>City Banks</b>	59.38	20.39 (9.34)	61.2	8.8	1.12	0.19
<b>Trust Banks</b>	50.64	30.41 (11.88)	49.48	3.57		26.67
<b>Long Term Credit Banks</b>	58.24	21.95 (10.80)	13.74	3.53	54.91	
<b>Regional I Banks</b>	66.85	21.89 (11.41)	92.99	0.31		
<b>Regional II Banks</b>	76.26	16.91 (7.37)	92.53	0.92		

\* As of September 2000

**Figure 20. Taipei,China: Composition of Balance Sheet by Bank Type\***

(Units: % of total assets or liabilities)	Assets		Liabilities		
	Loans	Securities (Govt. Securities)	Deposits	Certificate of Deposit	Bank Debentures Issued
<b>Domestic Banks</b>	63.2	12.03 (2.11)	64.44	1.4	10.75
<b>Medium Business Banks</b>	68.31	8.03 (2.04)	72.53	0.56	1.5
<b>Credit Cooperative Association</b>	52.61	3.14 (0.68)	95.33		
<b>Credit Dept of FFA</b>	48.15	1.06 (0.02)	87.29		
<b>Foreign Banks</b>	39.64	7.99 (0.45)	43.32	2.31	

\* As of September 2000

The fall in equity prices also hurt the banks' capital stock. Although equities held in the investment or long-term account are not valued at market value,<sup>14</sup> banks in both Japan and in Taipei,China are allowed to count up to 45% of the unrealized gains on these stocks, the difference between the book value and market value, as Tier II capital. Thus, the fall in equity prices reduced the banks' capital to asset ratios, contributing to a "capital crunch" which reduced aggregate lending.

There is one additional way in which the equity markets affect the health of the banking sector in Taipei,China. In Taipei,China, so-called "leveraged stock purchases" are common, meaning that companies use bank loans to speculate in stocks. Thus the level of the equity market is directly related to the asset quality of the banking sector even for loans that are not going directly to finance property deals.

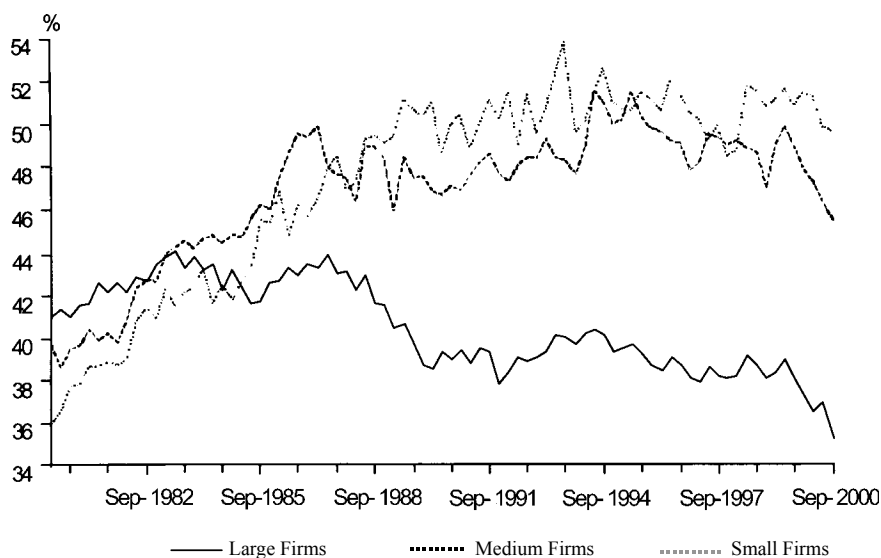
<sup>14</sup> In Japan market value accounting will be used in valuing all securities, in the trading account and investment account, as of fiscal year 2001.

### 3.2. Financial Liberalization

Even before being hit by the additional burden of macroeconomic events, such as the asset bubble in equity and land prices, banks in both Japan and Taipei, China were forced to adjust to a rapidly changing environment as a result of financial liberalization in the 1980s.

In Japan, the soaring stock market, combined with deregulation of the Japanese bond market,<sup>15</sup> and the establishment of a commercial paper market in 1987 provided Japanese firms, or at least large listed firms, viable, and in many cases less expensive, alternatives to bank financing. The banks traditional clients, large manufacturing firms, began to turn to these new sources of funding. Figure 21 shows the shift in financing by Japanese firms. Large firms decreased their reliance on bank loans (borrowings) for funding, while small firms increased their percentage of bank loan financing from about a third of total liabilities to over half. Meanwhile, the percentage of bonds in total liabilities for large firms more than doubled in the 1980s, while the percentage of bond financing for small and medium firms remained flat at less than 1%.

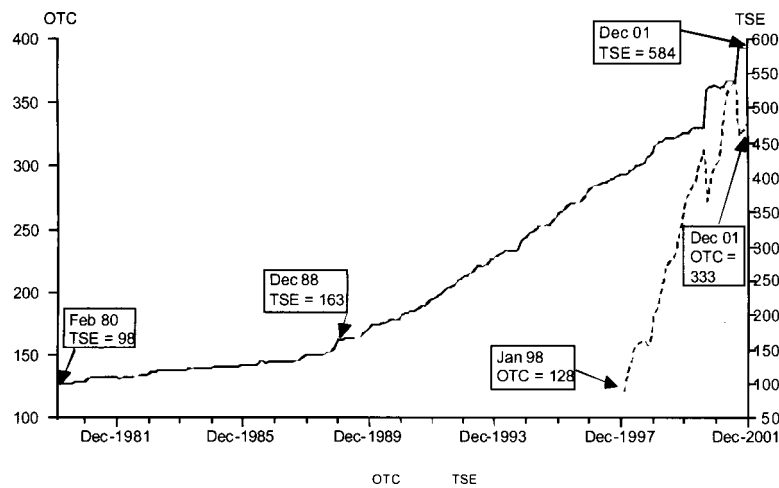
**Figure 21. Japan: Borrowings/Total Liabilities by Firm Size 1980-2000**



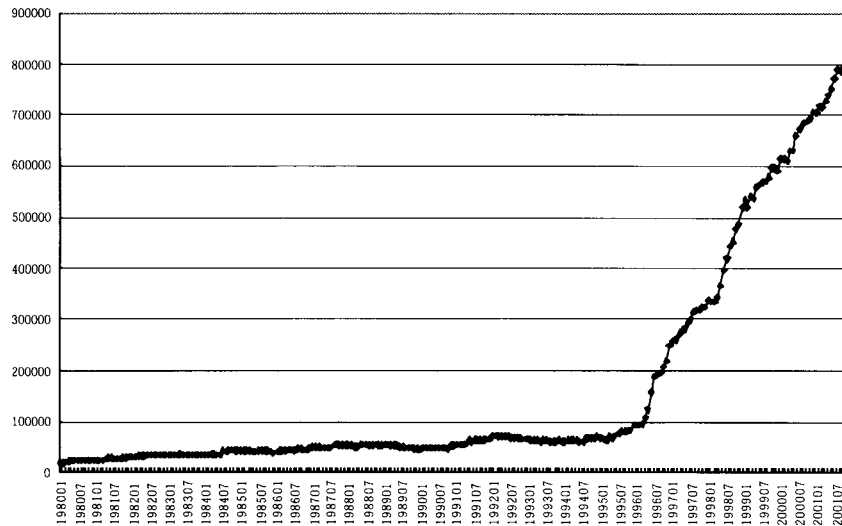
<sup>15</sup> Until the mid-1970s, firms seeking to issue bonds had to secure approval from a body known as the Bond Issuance Committee (BIC), which determined who would be allowed to issue bonds and how much each issuer could raise. In 1980, international capital flows in and out of Japan were freed with reform of the Foreign Exchange and Trade Control Act and many large firms began to list abroad. Restrictions on access to the domestic corporate bond market were gradually removed and by the late 1980s firms could avoid the bond issuance criteria if they were rated (Hoshi and Kashyap (1999)). According to Hoshi (2000), by 1990 when all accounting criteria for bond issuance were removed, the number of firms permitted to issue unsecured domestic bonds had grown from 2 to over 500.

Financial liberalization in Taipei, China came later, beginning with a revision of the securities transaction law in 1988 permitting new entrants into the brokerage business. The number of brokerage houses and trading accounts expanded and since that time the number of companies listed on the TSE has increased from 163 to almost 600. In addition, in July 1994 an over-the-counter stock exchange (OTC) was established. The number of companies listed on the OTC has more than doubled in just 4 years (figure 22). Corporate bond financing also grew in importance in the mid-1990s. The number of outstanding corporate bond issues took off (figure 23) and by 1997, corporate bonds constituted 32% of long-term debts, up from 5% in 1991 (Ding and Yeh 2001).

**Figure 22. Taipei, China: Number of Companies Listed on the TSE and OTC 1980-2001**



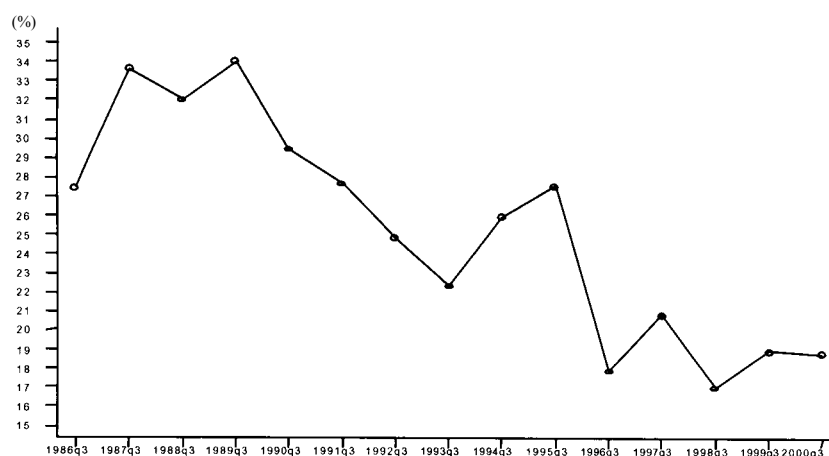
**Figure 23. Taipei, China: Outstanding Corporate Bond Issues 1980-2001**





As a result of this liberalization, throughout the 1990s private enterprises in Taipei,China followed the route of large Japanese firms in the 1980s: reducing their reliance on indirect financing from banks. Figure 24 shows the ratio of short-term borrowing to total liabilities for about 350 manufacturing firms in Taipei,China between 1980-2000. Similar to the pattern we saw for Japan in the 1980s, these manufacturing firms have reduced their reliance on indirect financing continuously since 1990.

**Figure 24. Taipei,China: Borrowing/Total Liabilities Manufacturing Firms 1980-2000**



### 3.2.1. Taipei,China's Banking Law of 1989

Perhaps even more significant for the banking sector of Taipei,China was the deregulation of the industry itself in 1992. A revision to the Banking Law in 1989 privatized the banking sector and in June of 1991 15 new banks were permitted to begin operations, almost doubling the number of banks in Taipei,China.<sup>16</sup>

Financial institutions in Taipei,China include commercial banks,<sup>17</sup> medium business banks<sup>18</sup> and cooperative financial institutions.<sup>19</sup> Following Lee (2001), commercial banks in Taipei,China can be further categorized as old banks, new

<sup>16</sup> Prior to 1991, there were only 20 banks in operation in Taipei,China.

<sup>17</sup> Commercial banks dominate the financial sector, accounting for more than 80% of all loans made in fiscal year 2000.

<sup>18</sup> Taipei,China's medium business banks were established in 1978-1979 from mutual loan and savings companies with the purpose of extending medium and long-term credit to small and medium scale enterprises (SMEs). Loans to SMEs must comprise at least 70% of the total loans made by these banks. These banks are privately owned, but they are restricted to a particular region, so competition among them is limited. The number of medium business banks has remained constant, but their role in the financial system is declining. In fiscal year 2000, about 5.58% of total loans were made by medium business banks.

<sup>19</sup> These include credit cooperatives, credit departments of farmers' and fishermen's association and religious mutual savings associations (Lee (2001)). Combined, these institutions comprise about 10% of total assets in the banking sector.

commercial banks, industrial banks and converted banks<sup>20</sup> (see appendix A for a detailed list of banks in each category). Almost all of the old banks are government banks. Although the government has reduced its shareholdings in these banks and now owns less than a majority share in most of the old banks, government holdings are still quite large and the banks are largely viewed as government controlled. The new commercial banks are those banks that were allowed to begin operation in the 1990s. These new banks are privately owned and are in most cases affiliated with a particular family conglomerate. Although the old government banks continue to dominate the banking sector, accounting for more than 60% of total bank assets, the new commercial banks quickly established a sizable market share. By 1993, just 2 years after having been established, the new commercial banks accounted for 22% of total banks assets (figure 25). That share has grown slightly, and currently the new banks account for a quarter of total bank assets.

**Figure 25. Taipei,China: Share of Total Asset of Domestic Banks by Type 1993-2001**

	1993	1994	1995	1996	1997	1998	1999	2000
<b>New</b>	22.92%	26.33%	23.80%	21.56%	23.88%	25.04%	24.07%	24.52%
<b>Old</b>	65.58%	63.90%	69.40%	72.69%	65.72%	63.95%	64.25%	64.04%
<b>Converted</b>	0.00%	0.00%	0.00%	0.00%	1.09%	1.90%	2.59%	2.65%
<b>Industrial</b>	0.51%	0.50%	0.37%	0.33%	3.45%	3.68%	3.92%	3.84%
<b>SME</b>	10.99%	9.27%	6.42%	5.42%	5.85%	5.43%	5.17%	4.96%
<b>Total</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

By most measures of performance, the new banks at first out-performed the old government banks. The average return on assets of the new banks quickly out-performed the old banks and non-performing loan ratios were lower in the first several years for the new banks. However, when conditions in the banking sector began to decline in 1997, the performance of the new banks suffered more. Non-performing loan ratios for the new banks now exceed those of the old banks and ROA ratios have already turned negative (figures 26 and 27).

<sup>20</sup> Many of these banks originally had very specific purposes. For example, the Central Trust of China (100% government owned) is responsible for cooperating with the government in its purchasing, trade, banking, trust, insurance, storage, freight and other needs. Taiwan Cooperative Bank (60% government owned) is designated to supervise the operations of credit cooperatives and along with the Farmers Bank of China (60% owned by the Ministry of Finance), specializes in agricultural financing. In addition to these central government owned banks, there are two municipal government owned banks—the Bank of Kaohsiung and Taipei Bank, as well as six provincial government controlled banks—the Bank of Taiwan, Chang Hwa Commercial Bank, First Commercial Bank, Hua Nan Commercial Bank, the Land Bank of Taiwan and the International Commercial Bank of China (Shea (1995)).

**Figure 26. Taipei,China: Return on Assets of Domestic Banks by Type 1993-2001**

	1993	1994	1995	1996	1997	1998	1999	2000
<b>New</b>	0.84	0.91	0.67	0.73	0.91	0.27	0.27	-0.12
<b>Old</b>	0.81	0.69	0.49	0.57	0.69	0.67	0.44	0.38
<b>Converted</b>					0.97	0.66	0.35	-0.52
<b>Industrial</b>	5.09	10.34	11.50	12.04	6.37	4.64	3.84	3.40
<b>SME</b>	0.44	0.57	0.53	0.53	0.58	0.33	-0.21	0.03

**Figure 27. Taipei,China: Non-Performing Loans of Domestic Banks by Type 1993-2001**

	1993	1994	1995	1996	1997	1998	1999	2000
<b>New</b>	1.96	2.27	2.74	3.63	3.74	3.98	5.15	6.68
<b>Old</b>	2.26	2.58	3.75	4.94	4.82	4.80	5.15	5.17
<b>Converted</b>					2.47	2.43	3.59	6.44
<b>Industrial</b>	0.60	0.67	2.12	3.46	1.82	1.51	1.90	1.55
<b>SME</b>					9.37	10.46	7.60	8.91

As in Japan, Taipei,China's financial sector now suffers from the problem of "overbanking" and a lack of exit from the sector. One problem is that when the banking sector was allowed to expand in Taipei,China, supervisory resources were not increased. Thus, both the frequency and quality of bank supervision suffered. Hoshi and Kashyap's 1999 prediction of a "massive contraction in the size of the Japanese banking sector" holds equally for Taipei,China.

#### **4. Policy Response**

##### **4.1. Japan**

In Japan, the failure of Hokkaido Takushoku Bank, one of the "top 20" banks, prompted the Diet to respond to the banking sector problems that had accumulated in the 1990s. In February 1998 the Financial Revitalization Plan was enacted, passing two amendments to the deposit insurance law. The Financial Revitalization Plan formed the Resolution and Collection Corporation<sup>21</sup> (RCC) and gave it an expanded mandate to purchase bad loans from solvent financial institutions as well as failed banks. The Plan also established the Financial Revitalization Committee to oversee bank restructuring. Restructuring followed one of two courses: the bridge bank scheme or nationalization. Under the bridge bank scheme, the troubled bank was operated by public administrators as a bridge bank until a successor bank could be found. This system was used in the closing of several regional and regional II banks that failed in 1999. The nationalization

<sup>21</sup> The RCC merged the Housing Loan Administration Corporation (HLAC), which had been resolving the remaining bad debts of the jusen home mortgage lenders and the Resolution and Collection Bank (RCB), which had been overseeing the liquidation of assets from failed credit cooperatives.

scheme was used for larger failures such as the Long-Term Credit Bank of Japan and Nippon Credit Bank. In these cases the banks were temporarily nationalized until they were ready to resume business as new banks (Shinsei Bank and Aozora Bank, respectively).

In addition to changing the legal structure, the Plan also authorized 60 trillion yen, the equivalent of about 12% of GDP, to revitalize the banking system. This 60 trillion yen was earmarked for three separate accounts within the deposit insurance corporation. The largest account, receiving 25 trillion yen, was the early strengthening account, which was used to finance two capital injections into the banking sector. The first use of the early strengthening account funds came in March 1998, when a total of 1.8 trillion yen was injected into the banking system in the form of purchases of preferred stock, subordinated debt or as a subordinated loan. Banks were reluctant to apply for the funds for fear of the troubled message it would send to the markets, so all 19 of the major banks were pressured to apply for the same amount of capital: 100 billion yen. Some of the regional banks applied for smaller capital injections.

Even with this capital injection, many of the major banks would have had trouble meeting the 8% capital to asset ratio required for international banks under the Basel Accord, so the Ministry of Finance relaxed some of the banks' accounting standards as well. First, banks were given the option of using fair value, the lower of book or market value, or book value in reporting their security holdings. This meant that banks did not necessarily have to report losses on securities held in their trading account on their balance sheets. Secondly, banks were allowed to revalue land holdings on their balance sheet from cost to market value. Although land prices had dropped significantly from their peak, most of the land held on banks' balance sheets still carried a market value well above that of historical cost.

At the beginning of fiscal year 1998, the policy responses taken in Japan began to change. Many of the policies implemented in fiscal year 1997 could be viewed as largely cosmetic. Accounting standards were relaxed and capital injections given unconditionally to make it easier for all banks to meet the necessary capital adequacy requirements. In April 1998, this trend changed with the passage of the Law to Ensure the Soundness of the Financial Institutions. This law was equivalent to the Prompt Corrective Action measures in force in the United States since the late 1980s. The law had two main components. First, a self-assessment process whereby banks value assets according to the condition of the borrowers and the collateral securing the loan were defined. These self assessments were made subject to external review by auditors and bank examiners. Second, capital thresholds were established under which regulators could order banks to take remedial action ranging from a forced reduction in the number of branches to liquidation.

In June 1998, another important change was implemented. The Financial Supervisory Agency (FSA) was established. The FSA took over the supervision of banks, securities firms and insurance companies from the Ministry of Finance as well as the supervision of shinkin banks from the regional financial bureaus and the credit cooperatives from the prefectural governments. In the autumn of 1998, the FSA conducted full-scale on-site examinations of the major banks and found that non-performing loans had been significantly understated. In the following year,

examinations of the regional banks were carried out. The FSA recommended the merger and closure of several banks and ordered 4 others to increase their capital ratios.

In March 1999, 14 of the major banks, as well as Yokohama Bank, received a second round of capital injections. This second capital injection totalled 7.5 trillion yen, 4 times that of the first capital injection. Unlike the capital injection of 1998, the amount of capital varied by bank to reflect individual conditions and the banks were required to submit a restructuring plan, including raising new capital from the private sector, in order to qualify. In addition, consolidated accounting was introduced in fiscal year 1998. Prior to this change, banks had been required to consolidate in their financial reporting only those subsidiaries or affiliates in which they held more than a 50% or 20% stake, respectively. Under the new law, affiliation was importantly determined by influence as well as share holdings. Consolidated reporting requirements applied to non-performing loan estimates as well. Prior to this change in consolidated accounting requirements, banks had been able to set up “related companies”, that were neither subsidiaries nor affiliates, and transfer their non-performing loans to these related companies at above market value so as to clean up their balance sheets.

Fiscal year 2000 was the year of consolidation in Japan’s banking sector. After the completed formation of the Mizuho financial group,<sup>22</sup> the Sumitomi-Mitsui Banking Corporation,<sup>23</sup> and the UFJ group,<sup>24</sup> the world’s three largest financial institutions will be Japanese. In addition, Tokyo-Mitsubishi Bank and Mitsubishi Trust are forming the Mitsubishi-Tokyo Financial Group, which will be the world’s 5th largest financial group. These mergers will consolidate Japan’s banking sector even more than previously. For example, of the original 10 city banks, only about half will remain: these four groups as well as Daiwa Bank and Asahi Bank.

#### **4.2. Taipei,China**

One notable difference in the policy responses taken in Japan and Taipei,China is that the government of Taipei,China has been very active in intervening in asset markets: both the stock market and the real estate market. For example, government authorities pooled the resources of the labor retirement fund, labor health insurance fund, the civil retirement fund and the postal savings system to form a stock market stabilization fund. For the real estate market, the central bank has several times instituted preferential loans to first-time home buyers in order to prop up the real estate market. The market has thus far not collapsed, but this policy has become less effective with each attempt.

As the NPL problem became apparent, the Executive Yuan in October 2000 introduced a 6-month loan roll-over to troubled industries (the traditional, or non-IT, industries). This roll-over was later extended to all businesses and banks were apparently pressured by various means to comply (Yin 2001). When the unemployment rate rose and individuals began to default on their mortgages, the 6-month loan roll-over was

---

<sup>22</sup> Formed by Dai-Ichi Kangyo Bank, Fuji Bank and the Industrial Bank of Japan, Mizuho will become the world’s largest financial institution measured in terms of assets.

<sup>23</sup> Formed by the merger of Sumitomo Bank and Sakura Bank, SMBC will become the world’s second largest financial institution.

<sup>24</sup> Formed by Sanwa Bank, Tokai Bank and Toyo Trust, UFJ will become the world’s third largest financial institution.

extended to mortgages as well.<sup>25</sup> These early policy responses may have in fact exacerbated the NPL problem, but in fiscal year 2001 regulatory authorities took more appropriate measures to address the problem. First, official NPL figures were complemented with “loans under surveillance”, which provided an estimate of NPLs in line with global standards. This change increased the overall estimated NPL ratio from less than 8% to 11.5%. In addition, the business tax on financial institutions was lowered from 5% to 2%, and banks were required to use the resulting tax savings to write off bad loans.<sup>26</sup>

In June 2001, a series of new legislation directed at improving the condition of the banking sector was passed (Lee 2001). To encourage mergers and acquisitions in the financial sector, the banking law was amended to raise the ceiling on individual ownership of a bank from 15% to 25%. The Financial Institutions Merger Law and the Financial Holding Company Act were passed, allowing universal banking and promoting further concentration in the financial sector through tax and non-tax incentives. The Financial Reconstruction Fund Setup and Management Act established the Financial Reconstruction Committee for a 3-year period, to be extended by one additional year if necessary. This authorizes the CDIC to handle failed financial institutions, funded by the remaining 2% business tax on the financial industry. An amendment to the Central Deposit Insurance Act provides depositors with unlimited deposit insurance for the period of financial restructuring.

More recently, even more aggressive measures have been introduced. The reconstruction fund will be expanded from its original NT\$14 billion to NT\$900 billion. The Cabinet’s Financial Reform Committee has stated that all government-run banks—the Bank of Taiwan, Land Bank of Taiwan, Taiwan Cooperative Bank and Central Trust of China—will be transformed into private banks. According to press reports, the government will push for alliances with foreign partners for these banks. President Chen Shui-bian recently announced a “2-5-8 Scheme”: a 2-year plan to cut the banks’ non-performing loan ratio to under 5% and reach a goal of 8% capital adequacy ratio in line with the requirements of the Bank for International Settlements.

## **5. Similarities and Differences**

The analysis above has revealed many similarities in the institutional structure of the banking sector, the nature of the banking sector problems and the policy responses taken in Japan and Taipei,China.

First, in terms of institutional structure, the banking sector in both Japan and in Taipei,China is extremely concentrated. As pointed out above, in Taipei,China, the 15 old government banks dominate the banking sector, accounting for over 60% of loans, deposits and total assets of all commercial banks. Almost half of total bank loans (44% as of fiscal year 2001) are made by just 6 of these old government banks: the Bank of Taiwan, Taiwan Cooperative Bank, the Land Bank of Taiwan, First Commercial Bank, Hua Nan Commercial Bank and Chang Hwa Commercial Bank. Although there are no government-controlled commercial banks in Japan, the banking sector is heavily

---

<sup>25</sup> Note that none of these loan roll overs is counted as non-performing loans.

<sup>26</sup> Dr. Tien-Mu Huang of the Ministry of Finance estimates that this will result in the write off of 536.7 billion NT dollars of bad loans over three years.

concentrated in Japan as well. In Japan, the banking sector is dominated by the major city, trust and long-term credit banks. After the recent wave of mergers, these major banks number only 10.<sup>27</sup> Although accounting for less than 10% of the total banks in Japan in terms of number, these major banks account for almost half of total loans (47%) made in Japan.

However, in both Japan and Taipei,China, the banking sector problems began in the smallest financial institutions, such as the credit cooperatives. These smaller financial institutions only account for a limited percentage of the market: 8.96% of total loans in Taipei,China and roughly 15% of total loans in Japan in fiscal year 2000. But because of the strong connection between these smaller financial institutions and the large banks and because healthy banks were asked to take over the sick credit cooperatives as part of the “convoy system” operating in both countries, the weakness of these smaller financial institutions eventually spread to the larger banks in Japan and is expected to soon do so in Taipei,China as well.

Looking at the nature of the banking problems in Japan and Taipei,China, it is clear that in both cases the problems are mostly internal. Both Japan and Taipei,China have flexible exchange rates and a large stock of foreign reserves. So although both countries may at the moment be vulnerable to a banking crisis, the nature of the crisis is very different from that which hit the rest of Asia in 1997.

The causes of the banking sector problems in both Japan and Taipei,China can be identified as poor asset market performance combined with financial liberalization. There are strong links between the performance of asset markets and the health of the banking sector in both countries. Dropping real estate prices hurt the viability of the banks’ main customers as well as eroding the value of collateral backing other types of loans as well. The collapse in the stock market hurt the banks in both Japan and in Taipei,China directly, by reducing the market value of the short-term investment securities held on their balance sheets, as well as indirectly, by eroding unrealized gains on long-term investments which can be used toward Tier II regulatory capital. The impact of equity markets on the banking sector in Taipei,China, may be even larger than Japan since banks in Taipei,China are also allowed to use stocks as collateral and because many loans go to finance “leveraged stock purchases”.

In addition to facing pressure from asset markets, banks in both Japan and in Taipei,China were strongly affected by financial liberalization. Deregulation of the stock and bond markets allowed firms in both countries to turn increasingly to direct financing rather than relying upon bank loans. Thus, banks lost many of their long-standing customers. In Taipei,China, additional pressure came from increased competition as the banking sector was opened to new entrants in the 1990s.

Of course, some qualifications to these similarities must be made. One important difference between the banking sector in Taipei,China and in Japan is the corporate governance structure. In Taipei,China, corporate governance can be characterized as family-based business groups. A 1998 study by Ko and Yeh shows that for 1994-1995, family groups controlled 78% of listed companies on the TAIEX. This study shows that in most cases (57%), the largest family holds more than half the board

---

<sup>27</sup> Asahi Bank, Daiwa Bank, Shinsei Bank, Nippon Trust, Yasuda Trust, the Mitsubishi-Tokyo Financial Group, the Mizuho Financial Group, the Sumitomo-Mitsui Banking Corporation, the UFJ Financial Group and the Chuo-Mitsui Trust and Banking Corporation.

seats and on average, the largest family controls 27% of the outstanding shares. In addition to their personal shares, large shareholders may use holding companies, nominee accounts and cross-shareholding of affiliated companies to increase their control. This concentration of shareholding blurs the separation between ownership and management and decision making is often made by the controlling family. Unlike in Japan, the banking sector in Taipei,China plays a minor role in corporate governance.<sup>28</sup>

This is mainly due to a 5% regulatory limit on the amount of shares that banks and insurance companies may invest in any one public company and also on the total amount that banks and insurance companies may invest in publicly-listed companies.<sup>29</sup> This is quite different from the traditional “main bank” system in Japan, under which the major banks play an important role in corporate governance.<sup>30</sup>

Another difference in the institutional characteristics of the banking sector as between Taipei,China and Japan is the extent of government involvement. As pointed out above, in Taipei,China, the 15 old government banks dominate the banking sector, accounting for over 60% of loans, deposits and total assets of all commercial banks. In Japan, there are no government-owned commercial banks.

The sectoral structure of bank lending is also different in Japan and Taipei,China. Over 40% of the loan portfolio of banks in Taipei,China is made up of loans to individuals, primarily residential real estate loans. An even larger percentage, 45%, of the non-performing loans held by banks in Taipei,China are loans to individuals. This is very different from the sectoral composition of bank lending in Japan, where loans to individuals only comprise about 17% of total loans. Although banks in Japan also have a heavy exposure to real estate lending, most of these loans are commercial property deals.

In terms of policy response, there are even more differences in evidence. The government has intervened in the market much more in Taipei,China than in Japan. This intervention has come in the form of loan relief programs and “price keeping operations” in the real estate and stock markets. The government-owned pension fund and postal savings system have been used in these efforts.

Taipei,China has still not experienced a major bank failure. Perhaps because of this, some of the policies used in dealing with Japan’s banking crisis in 1997 have not yet been implemented in Taipei,China. One important policy taken in Japan was the 1997 and 1998 capital injections into the banking sector. Although this has been discussed in Taipei,China, it has not yet been implemented, perhaps because policy makers do not believe the banking sector problems have come to that point. In addition, Taipei,China has not yet instituted a central regulatory authority such as the Financial Supervisory Agency (FSA), which was established in June of 1998. Again, this is apparently under discussion in Taipei,China, but did not pass in the June 2001 legislative package.

Several recently-passed measures such as legislation to encourage the establishment of asset management companies, mergers and consolidation among banks, and reductions in non-performing loan ratios look promising, but how these plans are

---

<sup>28</sup> According to data reported by Ko and Yeh (October 1998), domestic banks in Taipei,China only held 4.91% of listed shares in 1998.

<sup>29</sup> Originally, this limit was set at 15% of a bank’s net worth, but in response to the poor performance of the equity market in recent years the government has raised the limit to 20% and most recently 25%.

<sup>30</sup> Although regulations also limit the amount of shares a bank in Japan may hold in any one company to 5%, there is no limit on the total number of shares to be held by financial institutions.



actually implemented and how actively the banks choose to make use of these options remains to be seen.

## 6. Lessons from the Japanese Experience

Although the banking sector problems being faced in Taipei, China are of course not identical to those in Japan, the similarities are striking and there is much to be learned from Japan's experience.

First, a review of the chronology of Japan's banking crisis reveals that early warning signs of a banking crisis in Japan came in the form of failures of small regional banks and credit cooperatives. However, because these problems were manageable under the deposit insurance system, they did not generate public concern. Even in 1995 when the *jusen* failures brought the banking sector problems into the public eye, the fact that the largest banks were only indirectly involved prevented recognition of serious systemic risk.

Public opposition to the *jusen* resolution scheme backfired later by making it politically difficult for policy makers to appropriate public funds in order to address the banking crisis after it erupted on a grand scale in 1997. In Taipei, China, this problem may have been avoided by funding the financial reconstruction fund with a business tax on banks. However, as mentioned above, this approach continues the practice of forcing healthy banks to absorb (indirectly in this case) the losses of unhealthy financial institutions, which can be damaging to the banking sector in the long run.

Public opposition to the injection of any public funds into the banking sector was certainly a contributing factor to the length of the banking crisis in Japan. However, the most significant reason for the regulatory forbearance that many economists blame for prolonging Japan's banking sector distress<sup>31</sup>, was that authorities and bank managers hoped that a macroeconomic recovery would lift and save the banking sector. This hope has proven to be unfounded and policy makers in Taipei, China should adjust their expectations by observing Japan's experience in this regard. During Japan's brief economic recovery in fiscal year 1995-1996, when GDP, investment and consumption grew and the stock market recovered slightly, land prices continued to fall and the banks saw no reduction in the amount of non-performing loans on their books (see figure 28). Thus, hopes that the banking sector could "grow out of the problem" were dashed.

**Figure 28. Japan: Growth Rates of Key Economic Variables**

(Units: %)	FY 1995	FY 1996
Real GDP	2.91	4.55
Real Consumption	3.22	2.68
Real Investment	4.95	9.06
Commercial Land Price Index	-7.1	-8.45
Defaulted Loans	21.8	9.08

<sup>31</sup> See, for example, Kanaya and Woo (2000).

When Japan's Ministry of Finance abandoned the "Too Big to Close" doctrine in November 1997, the need for a transfer of public funds into the banking sector was evident. However, as discussed above, public sentiment after the jusen bailout in 1995 had made any discussion of the injection of public funds into the banking sector politically taboo, delaying any response by the government. The government finally did manage to take action at the close of fiscal year 1997, but the amount of the initial capital injection was too small to fully resolve the problem. Additionally, capital was given unconditionally and uniformly to all banks. To compensate for insufficient capital injection, authorities turned instead to relaxing accounting standards so that the banks would be able to meet the required 8% capital adequacy standard. This is another negative lesson for authorities in Taipei,China.

However, the experience of Japan can set some good examples as well. By fiscal year 1999, the regulatory environment in Japan had changed significantly. Line-by-line consolidated reporting was introduced, non-performing loan definitions were expanded and reporting requirements tightened. Additionally, prompt corrective action, which imposed penalties on under-capitalized banks, was introduced. A second capital injection, four times larger than the first, was made. This round of capital was properly allocated based on the varying conditions of individual banks and in order to qualify banks had to submit a restructuring plan. As a result, loan write-offs increased dramatically at the close of fiscal year 1999. Equally important, a centralized regulatory authority, the Financial Supervisory Agency, was established to implement these regulatory changes and to take over supervision of all financial institutions.

Given the similarities in Taipei,China, there is much to be learned from a careful analysis of Japan's banking crisis. The most relevant lessons to be learned from Japan's mixed experience are summed up below. First, the failure of small regional banks and credit cooperatives in Taipei,China should serve as a warning sign of a brewing systemic crisis. Second, authorities in Taipei,China should quickly implement consolidated, mark-to-market accounting so that the true magnitude of the problem is made public. Third, a centralized regulatory authority needs to be established to implement these new regulations and to consolidate supervision of the financial industry. Perhaps most importantly, policy makers in Taipei,China should learn from Japan's negative experience with regulatory forbearance and not delay in the hope of a macroeconomic recovery to grow banks out of their problems.

Failure to deal quickly and decisively with problems in the banking sector leads banks to become more risk averse, shifting their portfolios away from loans and into safer assets such as government bonds, which means that even viable firms do not have access to bank credit. The resulting "credit crunch" exacerbates macroeconomic problems. In Japan, expectation that banking sector could "grow out" of its problems proved to be unfounded and has only prolonged resolution of the problems. Policy makers in Taipei,China should be well advised not to follow this example.

## Appendix

### A. List of Financial Institutions in Taipei, China<sup>32</sup>

#### 1. Old Banks (15)

Bank of Taiwan<sup>33</sup> (Provincial Government)  
Export-Import Bank (Government)  
Farmers Bank of Taiwan (Government)  
Hua Nan Commercial Bank Ltd. (Provincial Government)  
International Commercial Bank of China (Provincial Government)  
Land Bank of Taiwan (Provincial Government)  
Taiwan Co-operative Bank<sup>34</sup> (Government)  
Bank of Kaosiung (Municipal Government)  
Central Trust of China (Government)  
Chang Hwa Commercial Bank Ltd. (Provincial Government)  
Overseas Chinese Bank (Overseas Chinese and Government)  
Shanghai Commercial and Savings Bank Ltd. (Rong Family)  
Taipei Bank (Municipal Government)  
First Commercial Bank<sup>35</sup> (Provincial Government)  
United World Chinese Commercial Bank (Various Government Banks)

#### 2. New Commercial Banks (21)

Asia Pacific Bank (Diversified)  
Bank Sinopac (RUNTEX Group<sup>36</sup>)  
Bao-Dao Commercial Bank (Jih Sun Group<sup>37</sup>)  
Chinfon Commercial Bank (Sanyang Group<sup>38</sup>)  
Chinatrust Commercial Bank (Chinatrust Group<sup>39</sup>)  
Grand Commercial Bank (President's Group<sup>40</sup>)  
Pan Asia Bank (KMT and Nice Industry)  
Taishin International Bank (Shin Kong Group<sup>41</sup>)  
Union Bank of Taiwan (Union's Group - Sanchung Group<sup>42</sup>)  
The Chinese Bank (Rebar's Group<sup>43</sup>)

---

<sup>32</sup> Classifications as well as notes on ownership from Lee (2001).

<sup>33</sup> Proposed merger between Bank of Taiwan, Land Bank of Taiwan and Central Trust of China.

<sup>34</sup> Proposed merger between Taiwan Co-operative Bank and Chinfon Bank.

<sup>35</sup> Proposed merger between First Commercial Bank, Pan Asia and Dah-An Bank.

<sup>36</sup> Yin Family. Closely related to KMT.

<sup>37</sup> Chen Family.

<sup>38</sup> Huang Family.

<sup>39</sup> Koo Family.

<sup>40</sup> Kao and Ho Families.

<sup>41</sup> Wu Family.

<sup>42</sup> Lin Family.

<sup>43</sup> Wang Family.

Chung Shing Bank (Hua Eng Group<sup>44</sup>)  
Cosmos Bank (Prince Group<sup>45</sup>)  
Da Chong Bank (Sanyang, Industry, Formosa Plastic, Chan Family)  
Dah An Commercial Bank (Walsin Lihwa Corporation, Yi-Mei Food<sup>46</sup>)  
E. Sun Commercial Bank (Cathay's Insurance<sup>47</sup>)  
En Tie Commercial Bank (En-Tie Group, Sanchung Group<sup>48</sup>)  
Far Eastern International Bank (Far Eastern Group<sup>49</sup>)  
Fubon Commercial Bank (Tsai Family)  
Hsinchu International Bank (Wu Family)  
International Bank of Taipei (Loc Family, Shin Kong Group, YFY Group, Lien Family<sup>50</sup>)  
Taichung Business Bank (Everfortune Group, Tsai Family<sup>51</sup>)

### **3. Industrial Banks (3)**

Chiao Tung Bank (Government)  
China Development Industrial Bank<sup>52</sup> (KMT influential)  
Industrial Bank of Taiwan<sup>53</sup> (Loc Family and various hi-tech firms)

### **4. Converted Banks**

Cathay United Bank<sup>54</sup> (Cathay Group, Tsai Family)  
Bank of Panshin<sup>55</sup> (Diversified)  
COTA Commercial Bank<sup>56</sup> (Diversified)  
Hwatai Bank<sup>57</sup> (Diversified)  
Kao Shin Commercial Bank<sup>58</sup> (Diversified)  
Lucky Bank<sup>59</sup> (Diversified)  
Makoto Bank<sup>60</sup> (Diversified, Chairman Lin)  
Sunny Bank<sup>61</sup> (Diversified, Chairman Chen)  
United Credit Commercial Bank<sup>62</sup> (Diversified)

---

<sup>44</sup> Wang Family. Under government supervision.

<sup>45</sup> Hsu Family.

<sup>46</sup> Jiaw and Kao Families.

<sup>47</sup> President Huang.

<sup>48</sup> Lin Group.

<sup>49</sup> Hsu Family. DBS interested in take-over.

<sup>50</sup> Lien Family is influential.

<sup>51</sup> Tsai Family is influential.

<sup>52</sup> From China Development Corporation.

<sup>53</sup> Newly established.

<sup>54</sup> Converted from Taiwan First Investment and Trust Companies.

<sup>55</sup> From Panchiao Credit Cooperative.

<sup>56</sup> <sup>56</sup> <sup>5</sup> From Taichung Third Credit Cooperative.

<sup>57</sup> From Taipei Second Credit Cooperative.

<sup>58</sup> From Kaosiung First Credit Cooperative.

<sup>59</sup> From Taichung Seventh Credit Cooperative.

<sup>60</sup> From Taipei Third Credit Cooperative.

<sup>61</sup> From Yang Ming Shan Credit Cooperative.

<sup>62</sup> Formed July 1, 2000 by Taichung Sixth Credit Cooperative and Pingdong First Credit Cooperative.

## 5. SME Banks (5)

Taiwan Business Bank (Government)

Tainan Business Bank (Chen Family)

Kaohsiung Business Bank (KMT)

Enterprise Bank of Hualien (Sino-Japan International Group<sup>63</sup>)

Taitung Business Bank (Full Long Group<sup>64</sup>)

---

<sup>63</sup> Lin Family.

<sup>64</sup> Yew Family.

## **B. List of Financial Institutions in Japan: The Original “Top 20” Banks**

### **1. City Banks (10)**

Bank of Tokyo-Mitsubishi<sup>65</sup>  
Dai-Ichi Kangyo Bank (DKB)<sup>66</sup>  
Fuji Bank  
Sakura Bank<sup>67</sup>  
Sanwa Bank<sup>68</sup>  
Sumitomo Bank  
Asahi Bank  
Tokai Bank  
Daiwa Bank  
Hokkaido Bank Takushoku Bank (now bankrupt)

### **2. Trust Banks (7)**

Yasuda Trust & Banking Co.  
Mitsubishi Trust & Banking Corporation  
Mitsui Trust & Banking Company<sup>69</sup>  
Toyo Trust and Banking Co.  
Chuo Trust & Banking Co.  
Nippon Trust Bank

### **3. Long-Term Credit Banks (3)**

Industrial Bank of Japan  
Nippon Credit Bank (now Aozora Bank)  
The Long-Term Credit Bank of Japan (now Shinsei Bank)

---

<sup>65</sup> In fiscal year 2001 Tokyo-Mitsubishi Bank and Mitsubishi Trust and Banking Company formed the Mitsubishi Tokyo Financial Group.

<sup>66</sup> In fiscal year 2001 Dai-Ichi Kangyo Bank, Fuji Bank and the Industrial Bank of Japan formed the Mizuho Financial Group.

<sup>67</sup> In fiscal year 2001 Sumitomo Bank and Sakura Bank formed the Sumitomo Mitsui Banking Corporation (SMBC).

<sup>68</sup> In fiscal year 2001 Sanwa Bank, Tokai Bank and Toyo Trust and Banking Corporation formed the UFJ (United Financial Japan) Financial Group.

<sup>69</sup> Mitsui Trust and Banking Company and Chuo Trust and Banking Company merged to form the Chuo-Mitsui Trust and Banking Corporation.

## References

- ADB (1998): "Asian Development Outlook 1998," Asian Development Bank.
- Cavey, P. (2002): "Sinking Japanese Style?: The Future of Taiwan's Banks," in CLSA Emerging Markets Sector Outlook March 2002-Banks: Taiwan.
- Ding, K., C. K. C. L., and Y. Yeh (2001): "Corporate Governance in Chinese Taipei," in Corporate Governance in Asia: A Comparative Perspective, OECD.
- Hoshi, T., and A. Kashyap (1999): "The Japanese Banking Crisis: Where Did It Come From and How Will It End?" NBER Macroeconomies Annual, 14, 129, 201.
- Kanaya, A., and D. Woo (2000): "The Japanese Banking Crisis of the 1990s: Sources and Lessons," IMF Working Paper, 00-07.
- Ko, C., Y. S., and H. Yeh (October 1998): "Auditor Choice in the Asian Emerging Market for the Conglomerates and Family-Controlled Companies," in the 10th Asian-Pacific Conference on International Accounting Issues. California State University-Fresno, Maui, Hawaii.
- Lee, T. (2001): "Banking Crisis, Reform and Policy Response in Taiwan," Mimeo., National Chengchi University, Taipei, China.
- Shea, J. (1995): "Financial Development and Policies in Taipei, China," in S. N. Zahid (eds), Financial Sector Development in Asia, Asian Development Bank.
- Yin, N. (2001): "Taiwan Financial Crisis?," Mimeo., National Chengchi University, Taipei, China.
- Yoshitomi, M., and T. Nagata (1997): "Furyousaikenmondai to Ginko Kiki [Non-performing Loan Problems and Banking Crisis]," Mimeo., Long-Term Credit Bank Research Institute.
- Yoshitomi, M., and K. Ohno (1999): "Capital-Account Crisis and Credit Contraction," ADB Institute Working Paper No.2.  
[Download at [www.adbi.org/publications/wp/wp9905.htm](http://www.adbi.org/publications/wp/wp9905.htm)]
- Yoshitomi, M., and S. Shirai (2000): "Technical Background Paper for Policy Recommendations for Preventing Another Capital Account Crisis," Tokyo: Asian Development Bank Institute.  
[Download at [www.adbi.org/PDF/APF/APFtech1.pdf](http://www.adbi.org/PDF/APF/APFtech1.pdf)]

## RESEARCH PAPER SERIES

- *Road from State to Market—Assessing the Gradual Approach to Banking Sector Reforms in India—*  
February 2002 Code: 32-2002 by Sayuri Shirai
- *Growth and Poverty: Lessons from the East Asian Miracle Revisited*  
February 2002 Code: 33-2002 by M. G. Quibria
- *Did East-Asian Developing Economies Lose Export Competitiveness in the Pre-Crisis 1990s?  
Assessing East-Asian Export Performance from 1980 to 1996*  
March 2002 Code: 34-2002
- *A New Approach to Modeling the Impacts of Financial Crises on Income Distribution and Poverty*  
March 2002 Code: 35-2002 by Iwan J. Azis
- *Increasing Incomes for the Poor and Economic Growth: Toward a Simple Taxonomy for Policies*  
April 2002 Code: 36-2002 by Jere R. Behrman
- *The Role of the Global Economy in Financing Old Age: The Case of Singapore*  
May 2002 Code: 37-2002 by Mukul G. Asher
- *Have India's Financial Market Reforms Changed Firms' Corporate Financing Patterns?*  
June 2002 Code: 38-2002 by Sayuri Shirai
- *Measuring the Extent and Implications of Director Interlocking  
in the Pre-war Japanese Banking Industry*  
July 2002 Code: 39-2002 by Tetsuji Okazaki and Kazuki Yokoyama
- *Exchange Rate Co-movements and Business Cycle Synchronization  
between Japan and Korea*  
August 2002 Code: 40-2002 by Sammo Kang, Yunjong Wang and Deok Ryong Yoon
- *Is the Equity Market Really Developed in the People's Republic of China?*  
September 2002 Code: 41-2002 by Sayuri Shirai
- *Taipei, China's Banking Problems: Lessons from the Japanese Experience*  
September 2002 Code: 42-2002 by Heather Montgomery
- *Banks' Lending Behavior and Firms' Corporate Financing Pattern  
in the People's Republic of China*  
September 2002 Code: 43-2002 by Sayuri Shirai

### HOW TO CONTACT US?

Asian Development Bank Institute  
Kasumigaseki Building 8F  
3-2-5 Kasumigaseki, Chiyoda-ku,  
Tokyo 100-6008 Japan

Tel: +81 (03) 3593-5500  
Fax: +81 (03) 3593-5571  
E-mail: [info@adbi.org](mailto:info@adbi.org)  
[www.adbi.org](http://www.adbi.org)

*Papers are also available online at the ADBI Internet site:  
<http://www.adbi.org/publications/>*