Banking Environment and Reform Measures of Taipei,China During the Asian Financial Crisis

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Introduction

The recent crisis in East Asia arose from the large-scale shift of funds out of domestic financial markets, beginning in Thailand. The Thai crisis soon had spillover effects on emerging market economies with vulnerable external positions in eastern Europe and in Southeast Asia. As the Southeast Asian crisis deepened, the pressure began to spread to other economies in Asia, including Taipei,China.

To cushion the impact of the crisis, the central bank of Taipei,China, from early June until 17 October 1997, had used about US$ 10.5 billion to support the exchange rate. Then the central bank stopped its intervention and allowed the New Taiwan (NT) dollar to depreciate. The NT dollar dropped by roughly 18 percent, from NT$27.5 to NT$32.5 to the US dollar, over the same period.

Though all sectors in Taipei,China have been affected by the crisis to varying degrees, the economy performed well in 1997. The gross domestic product (GDP) grew by 6.7 percent, the highest annual growth rate in the last five years, while the inflation rate was only 0.9 percent, the lowest recorded in the last 10 years (Table 1). Equity prices suffered moderately from September to November 1997 as interest rates were raised to counter exchange-rate pressures. Since then, equity prices have been stable, and have registered some steady growth.

It is far from clear that the crisis has ended. Its causes are complex and will need to be thoroughly analyzed. While many have attributed the crisis to macroeconomic variables such as foreign debt, budget deficit, and foreign-exchange reserves, some academic experts believe that the weakness of the financial market played a major role. Krugman (1998), for instance, brought out the fact that the currency crisis in Asia was only part of a broader financial crisis that had very little to do with currencies or even monetary issues themselves. Nor did the crisis have much to do with traditional fiscal issues. McKinnon (1998) also believed that mismanaged

Table 1: Key Macroeconomic and Financial Indicators, 1988–1997

Year	GDP Growth Rate (%)	General Consumer Price Index	M2 Growth Rate (%)	Interbank Money Market Rate (%)	Stock Price Index (1966=100)	NT$/US$ (end of period)	Foreign Exchange Reserves (US$ million)	Savings Rate (%)	Foreign Debt (US$ million)	Unemployment Rate (%)	Current Account Balance (US$ million)
1988	7.84	1.28	21.16	4.88	5,202	28.17	73,897	na	na	na	10,195
1989	8.23	4.42	20.42	7.34	8,616	26.26	73,224	31.00	na	1.6	11,416
1990	5.39	4.12	12.85	10.49	6,775	27.11	72,441	29.33	na	1.7	10,925
1991	7.55	3.63	16.33	6.01	4,929	25.75	82,405	29.40	2,632	1.5	12,458
1992	6.76	4.47	19.94	6.88	4,272	25.40	82,306	28.29	(3,326)	1.5	8,547
1993	6.32	2.94	16.43	6.41	7,215	26.63	83,573	27.79	(265)	1.5	7,042
1994	6.54	4.09	16.29	6.13	6,253	26.24	92,454	26.11	2,633	1.6	6,498
1995	6.03	3.68	11.59	6.19	5,544	27.27	90,310	25.34	152	1.8	5,474
1996	5.67	3.07	9.23	5.44	6,001	27.49	88,038	24.86	3,311	2.6	11,027
1997	6.71	0.91	8.28	6.86	8,385	32.64	83,502	24.57	89[a]	2.7	7,051

na = not available, ( ) = negative values are enclosed in parentheses, GDP = gross domestic product.
[a] As of June.
Source: Central Bank of China (1998a).

banks were the fundamental cause of the crisis. Kane (1998) used a framework of regulatory competition to explain how longstanding financial weaknesses evolved into a countrywide economic crisis.

This study summarizes the structure of the banking system and financial markets in Taipei,China, and some recent issues in these sectors. From a detailed description of banking and nonbanking financial institutions in Taipei,China, in the next major section, the study goes on to report the developments in and current status of the foreign-exchange market and the currency risk relevant to banks; the most recent plan for bank supervision and examination; and the current banking practices and business environment in Taipei,China. The study ends with some suggested measures for overcoming fundamental weakness in the banking system.

Financial Institutions

Besides the Central Bank of China (CBC), the banking system consists of five major subgroups: (i) domestic commercial banks, (ii) local branches of foreign banks, (iii) medium- and-small-scale business banks, (iv) credit cooperatives, and (v) credit departments of farmers' and fishermen's associations (Table 2). A flexible definition of banking businesses is contained in the recently revised Banking Law of 17 July 1989. At the discretion of the Ministry of Finance (MOF), commercial banks can now accept savings deposits, and savings banks can offer checking accounts. Both of these activities were limited previously. However, another provision strictly prohibits unlicensed organizations from taking deposits.

New privately owned banks opened in 1990, paving the way for banking liberalization. Bank regulators have become better able to deal with unlicensed or underground financial institutions and insolvencies, and MOF has been authorized to allow banks to expand their business activities. While MOF determines the extent and timing of bank expansion, CBC approves the establishment of businesses concerned with foreign-exchange transactions and overseas branches by domestic banks. The Banking Law has set criteria for setting up banks and

Table 2: Structure of Financial Institutions, 1998

Financial Institutions	Monetary Institutions	Central Bank (1)	
		Depository Banks	Domestic Banks (39 [1,685])
			Local Branches of Foreign Banks (45 [69])
			Medium- and Small-Business Banks (8 [491])
			Credit Cooperative Associations (60 [478])
			Credit Departments of Farmers' Assns (287 [946])
			Credit Departments of Fishermen's Assns (27 [48])
	Other Financial Institutions		Central Deposit Insurance Corporation (1)
			Postal Savings Offices (1,279 [251])
			Investment and Trust Companies (5 [61])
			Life Insurance Companies (30 [103])
			Property and Casualty Insurance Companies (25 [130])
			Bills Finance Companies (14 [35])
			Securities Finance Companies (4 [2])
			Offshore Banking Units (72)

Figures in parentheses represent the number of institutions. Figures in brackets within the parentheses represent the number of domestic offices.
Source: Central Bank of China (1998b).

qualifications for bankers-in-charge. A minimum initial capitalization of NT$10 billion is required. No single individual stockholder may hold more than 5 percent of the total issued stocks of any registered bank; a corporate stockholder is limited to a maximum of 15 percent. The law requires each bank to maintain a ratio of core and supplementary capital to weighted risk assets of at least 8 percent, similar to the risk-based capital standards set by the Bank for International Settlements (BIS). It also enforces strict supervision over banks, with heavy penalties against offenders.

MOF formulates financial regulatory policies and licenses financial institutions while CBC implements monetary and financial regulatory policies such as reserve requirements or banking supervision. To protect the interests of depositors and to help promote sound banking business, the Central Deposit Insurance Corporation (CDIC), a specialized agency established in 1985, examines and monitors all deposit-taking institutions.

MOF and the central bank have introduced an early-warning financial monitoring system to strengthen banking supervision. Moreover, CDIC is empowered to take over the management of any bank that has violated regulations and to order the bank to stop operating. Taipei,China has been moving toward private bank ownership and greater foreign banking participation to increase competition in and to modernize an industry long dominated by government-owned banks. Banking supervision is also being reinforced to ensure financial soundness and an orderly banking system.

Interest rates and foreign-exchange rates are administered by CBC, and this has led to difficulties in controlling the money supply. Open-market operations have mopped up some of the excess liquidity, but the answer may lie in financial reforms to attract capital resources away from speculative investment. Interest rates on loans and deposits are now set by the banks themselves, on a customer-by-customer basis.

Banking Institutions

THE CENTRAL BANK

Founded in Canton in 1924, CBC relocated to Taipei in 1949. Most central banking functions were delegated to the Bank of Taiwan from 1949 until 1 July 1961, when CBC took back these responsibilities. Under the Central Bank Act, CBC issues currency, regulates interest rates, determines reserve ratios against deposits, provides facilities to banking institutions as lender of last resort, supervises financial institutions and their operations, acts as fiscal agent of the central government, manages official foreign-exchange reserves, collects financial data, and conducts economic research.

Since 1961, CBC's three basic objectives have been to stabilize the internal and external value of the currency, to promote financial stability, and to provide sound guidance to banking institutions. All three objectives are aimed at fostering economic growth.

CBC uses various tools, namely, the rediscount rate, reserve ratio requirements, the exchange rate, open-market operations, and selective credit controls to regulate domestic credit, sterilize foreign-exchange transactions, and, even more importantly, direct controls on the inflow or outflow of foreign exchange. It has stressed the control of monetary aggregates since 1979, and has gradually freed interest rates to market determination. A floating exchange-rate regime has replaced fixed exchange rates in the meantime, in order to enhance CBC's ability to control the money supply.

By requiring banks to keep reserves against their deposits, CBC can influence credit creation by the banking system. However, the reserve requirement is a powerful policy instrument that has been used only occasionally. Since 1985, Treasury bills, negotiable certificates of deposit (NCDs), and savings bonds have become the most important policy instruments of CBC to absorb the surplus liquidity of banks. In addition, CBC has been acquiring more bills with varied maturities under repurchase agreements. This move has made the open-market operations of CBC more active and flexible. Finally, its selective credit controls allow CBC to impose maximum loan ratios on collateral for secured loans, prescribe the down payment and period of banking credit for the investment of productive assets and the consumption of durable goods, and regulate banks' dealings in securities.

DOMESTIC COMMERCIAL BANKS

Six years before the deregulation of bank charters, Taipei,China had only 20 domestic commercial banks (DCBs). As of 1998, there were 36 DCBs, with well-distributed networks throughout the island. These form the backbone of Taipei,China's financial sector. In December 1997, DCBs held 47.4 percent of the total financial assets in the sector, 53.8 percent of deposits, and 69.7 percent of loans. These shares have been increasing over the past 10 years. On the other hand, the postal savings system (PSS), whose assets were more than 10 percent of the total in the 1980s, held only 8.9 percent as of end-1997 (Table 3).

Banks in Taipei,China operate under a branch banking system. Aside from commercial banking, most domestic banks operate an additional savings department or trust department with separate capital as required by law.

Of the 20 "old" domestic banks (those established before 1991), 12 are owned by the government. This was designed to reinforce the public's confidence in the banking system and facilitate the implementation of monetary policy and the government's strategic policy. Other banks, such as the Bank of Taiwan, act as fiscal agents of provincial governments. Likewise, the city banks of Taipei and Kaohsiung act as the fiscal agents of their local governments, and handle bond flotation. Shares of three major commercial banks—First, Chang Hwa, and Hua-Nan—are listed in the stock markets and, before 1998, were mainly held by the provincial governments. These banks provide extensive commercial banking facilities throughout the island. After banking was deregulated, the government authorized these three commercial banks to go public, paving the way for their privatization. The four privately owned commercial banks, except the International Commercial Bank of China (ICBC), are relatively small in scale compared with the state banks. ICBC, a stock market–listed

Table 3: Market Share of Financial Institutions, 1997

Item	No. of Units (branches)	% of Total Branches	Assets (NT$ million)	Share of Total Assets (%)	Asset Growth Rate (%) 1987–1997	Share of Deposits Market (%)	Share of Loans Market (%)
Central Bank of China	1	0.02	3,360,411	11.6	21.37	_[a]	_[a]
Domestic commercial banks	36 (1685)	31.32	13,682,807	47.4	274.24	53.8	69.7
Local branches of foreign banks	45 (69)	1.28	975,327	3.4	214.85	2.4	3.1
Medium business banks	8 (491)	9.13	1,843,509	6.4	402.58	9.0	9.5
Credit cooperative associations	64 (505)	9.39	1,334,437	4.6	175.43	8.1	5.5
Farmers' and fishermen's associations' credit department	314 (991)	18.42	1,529,439	5.3	259.94	8.3	6.3
Investment and trust companies	5 (61)	1.13	488,637	1.7	139.8	0.2	1.8
Postal savings system	1 (1276)	23.72	2,558,903	8.9	174.49	15.1	
Life insurance companies	30 (103)	1.91	1,749,378	6.1	822.5	2.9	4.1
Property and casualty insurance companies	26 (127)	2.36	113,143	0.4	1,127.01	.03	
Offshore banks	71	1.32	1,252,019	4.2	0.14	_[a]	_[a]
Total	**5,380**	**100.00**	**28,888,010**	**100.0**	**298.34**	**100.0**	**100.0**

[a] Data omitted because the CBC is not permitted to function as a commercial bank and offshore banking units serve both residents and nonresidents. Offshore banking began in July 1984.
Source : Central Bank of China (1998a).

bank, has operated since 1971 as a specialized foreign-exchange bank with authority from CBC. As of end-1997, about 79 percent of the assets of domestic banks were in the form of loans and advances, of which about 68 percent were made to private enterprises (Table 4). Of the total loans, less than 1 percent are in the form of discounts or advances to importers, 36 percent in short-term loans and overdrafts, and the remaining 63 percent in medium- and long-term loans. A salient feature of domestic banking credits is that 63 percent of the banks' advances are officially secured loans, while much of the unsecured, particularly short-term, loans use postdated checks as credit collateral to obtain overdrafts. In terms of funding, passbook and time deposits compose 68 percent of the banks' assets and liabilities.

Table 4: Consolidated Assets and Liabilities of Depository Banks, 1997

Item	Amount (NT$ million)	%
Assets		
Foreign assets	550	3.46
Loans and discounts	12,541	78.95
Government agencies	1,373	8.64
Government enterprises	391	2.46
Private enterprises and others	10,778	67.85
Portfolio investment	1,554	9.78
Government securities	349	2.20
Securities		
Government enterprises	46	0.29
Private enterprises	1,042	6.56
Financial institutions	118	0.74
Claims on financial institutions	1,031	6.44
Central Bank of China	1,004	6.32
Other financial institutions	27	0.17
Real estate	46	0.29
Cash in vault	162	1.02
Total assets (net)	**15,885**	**100.00**
Liabilities and net worth		
Foreign liabilities	489	3.08
Deposits held by firms and individuals	12,089	76.10
Checking accounts	308	1.94
Passbook deposits	892	5.62
Passbook savings deposits	2,004	12.62
Time deposits	2,737	17.23
Certificates of deposit	439	2.76
Time savings deposits	5,139	32.35
Foreign currency deposits	570	3.59
Government deposits	697	4.39
Due to other financial institutions	2,736	17.22
Central Bank of China	320	2.01
Other financial institutions	1,363	8.58
Postal savings system	1,053	6.63
Bank debentures issued	69	0.43
Net worth	228	1.44
Other items	(423)	(2.66)
Total liabilities and net worth (net)	**15,885**	**100.00**

( ) = negative values are enclosed in parentheses.
Source: Central Bank of China (1998a).

Banking entry was not deregulated until 1991. Before that time, state-owned banks were not profit-maximizing firms. They were conservative, and had been doing business only with well-known or established enterprises with sufficient collateral. Small and medium businesses and households were not competitive in obtaining financing through chartered banks, and relied on "underground" financing from informal and illegal financial associations. Deregulation of banking entry and related laws has brought most financing from the underground back to normal channels, and underground financing is now of negligible amount (Hsu 1993; Lee and Chen 1994).

FOREIGN BANK BRANCHES

Foreign banks, inconsequential in the 1960s, became a significant force in the domestic financial system in the 1980s. A foreign bank that intends to set up a branch or representative office in Taipei,China must be a reputable international bank with total assets ranking among the world's top 500 in the year prior to application. As of December 1997, 45 foreign banks had established branch operations and together had 69 domestic offices. At the start, these banks were authorized only to handle foreign-exchange transactions and lend to customers. The newly revised Banking Law, however, authorizes foreign banks to operate in exactly the same way as DCBs. Taipei,China's banking industry has been steadily opening up to greater participation by foreign banks, to increase competition in and modernize an industry long dominated by domestic banks.

SPECIALIZED COMMERCIAL BANKS

The government, starting in the early 1920s, established specialized banks and special funds to subsidize or promote strategic industries or favored groups. There are three types of specialized banks: specialized commercial banks, medium- and small-business banks, and community financial institutions.

Specialized commercial banks are designed to help specific industries. The Chao Tong Bank, one of the largest banks in Taipei,China, is chartered as a development bank to upgrade domestic industries and foster the development of strategic industries. The Farmers Bank of China finances agricultural development and promotes rural construction. The Land Bank of Taiwan extends loans to assist the government in carrying out its land and agricultural policies. The Export-Import Bank of China, founded in January 1979, is engaged in risk financing of export-import activities, including guarantees related to plant, equipment, and overseas construction projects; export insurance; country-risk surveys; and credit investigations. These banks mainly extend medium-term (up to seven years) and long-term loans (more than seven years). The other specialized commercial bank, the Central Trust Bank of China, is in the trust and insurance business, serving as agent for government procurements, and also performs regular trading business for both public and private enterprises.

MEDIUM- AND SMALL-BUSINESS BANKS

Medium and small enterprises largely constitute the general business structure in Taipei,China. Thus, they are considered the major driving force of economic growth. The industrial organization of the economy is unique in that few enterprises can be considered "large" even by international standards. While specialized commercial banks cater to large enterprises, medium- and small-business banks serve medium and small enterprises.

There are now eight medium- and small-business banks (commonly known as business banks) with 491 offices in the island. Though they are designed and required by law to provide loans to medium and small enterprises, their businesses have become similar to those of commercial banks. Currently, their assets compose 6.4 percent of the market. These banks grew out of the country's longstanding mutual loans and savings companies, which themselves originated from the old private mutual credit unions. The Medium and Small Business Bank of Taiwan is owned by the provincial government, while the rest are private banks listed on the Taiwan Stock Exchange. Traditionally, medium- and small-business banks have played an important role in financing local small businesses by extending medium- and long-term credit to improve machinery and equipment, financial structure, and management and business operations. Legally, they are not allowed to conduct banking business outside the geographic area where they are based.

COMMUNITY FINANCIAL INSTITUTIONS

Community financial institutions are credit groups that serve specific development sectors. There are two types of credit groups: credit cooperatives and credit departments of farmers' and fishermen's associations. Credit cooperatives were established under the Cooperatives Law; farmers' associations, under the Farmers' Association Law; and fishermen's associations, under the Fishery Association Law. As of December 1997, there were 64 credit cooperatives with 505 branches, mainly in the urban areas, and 314 credit departments of farmers' and fishermen's associations with 991 branches in the townships. These institutions are limited to accepting deposits from and granting loans to their members. Medium- and small-business banks, credit cooperative associations, and credit departments of farmers' and fishermen's associations together make up the local deposit-taking institutions, with a service network that spans the island, especially its small towns, suburbs, and rural areas.

The Cooperative Bank of Taiwan was established in 1946. Sixty percent of its capital is owned by the provincial government, and the remainder, by various cooperatives. Besides its commercial banking activities, it acts as a central bank for cooperatives. It takes deposits from and offers credit to both credit cooperatives and the credit departments of farmers' and fishermen's associations, and directs the operations of these institutions. However, the authority to examine and monitor the institutions was shifted in 1997 to CDIC. The Cooperative Bank of Taiwan is also a specialized bank for the real estate, farming, and fishing industries, and it executes strategic loans funded by related government agencies. The general business practices of the Cooperative Bank of Taiwan, like those of other banks, are regulated by the Banking Law. The law allows the individual customer to borrow up to 3 percent of the bank's net worth, and the institutional customer, up to 15 percent.

As shown in Table 3, credit cooperatives accounted for 4.6 percent of the total assets of all financial institutions, 8.1 percent of deposits, and 5.5 percent of loans at the end of 1997. The credit departments of farmers' and fishermen's associations accounted for 5.3 percent of total assets, 8.3 percent of deposits, and 6.3 percent of loans during the same year.

The community financial institution sector, presents major issues for the banking industry. These institutions are protected by regulations and subsidized by law, and their profits are not taxed. Most importantly, they are often run by elected members rather than professional managers. These community financial institutions are deep-rooted in local politics and unions (farmers' and fishermen's associations) and play a critical role in elections. Regulators, constrained by local politics, have long been unable to resolve the problem of widespread insolvencies in the sector. Insolvent community financial institutions continued to operate as usual because of their strong links to local politics. In 1995 and 1996, however, there were 20 bank runs, 18 of them against the credit departments of farmers' and fishermen's associations (the other two were against credit cooperatives). Even now, regulators admit that more than 50 cases of insolvency involving community financial institutions are still unresolved. Fortunately, community financial institutions occupy only about 5 percent of the banking market in Taipei,China, and have never affected the backbone of the banking system.

SPECIAL FUNDS

In addition to specialized banks, special funds have been set up to assist specific lines of business. Currently, these special funds comprise three major government-assisted funds. The first is the Small and Medium Business Credit Guarantee Fund (SMBCGF), which was formally inaugurated on 9 July 1974. SMBCGF plays a pivotal role in providing small- and medium-size businesses with credit guarantees to help them gain access to financing. The Farmers Credit Guarantee Fund (FCGF), an independent nonprofit financial institution supervised by MOF, provides the same service to farmers and fishermen. In general, fund guarantees are limited to debts not protected by collateral. The FCGF is financed mainly by the government and banking institutions and to a lesser extent from retained surplus of the previous year. The third government-assisted fund, the Overseas Economic Cooperation and Development Fund (OECDF), was introduced on 19 June 1989. This fund, with a total capitalization of NT$30 billion, provides loan guarantees, investments, and various forms of technical assistance to developing countries over a five-year period. The fund is being used to finance exports of technology and capital goods to selected countries through the Export-Import Bank of China.

Nonbanking Financial Institutions

The nonbanking financial institutions (NBFIs) consist of the postal savings system, investment and trust companies, and insurance companies. These NBFIs were established through specific regulations or laws but are all subject to the Banking Law.

THE POSTAL SAVINGS SYSTEM

The postal savings system (PSS) began operating in Taipei,China in June 1962. The system accepts savings deposits and handles local and foreign remittances, but does not provide loans. Its savings deposits are redeposited with the CBC and four banks, namely, Chao Tong Bank, Land Bank of Taiwan, Farmers Bank of Taiwan, and Medium Business Bank of Taiwan. These funds are used for medium- and long-term loans to specific investment projects at a preferential interest rate.

With 1,276 post offices and 251 postal agencies throughout the island, PSS has been effective in mobilizing savings from the rural and newly developed areas. The growth in its assets has been very steady, perhaps because of the convenience of its service network for most residents (see Tables 5 and 6 for a breakdown of PSS assets and liabilities). In 1997, PSS had some NT$17 billion in deposits, including simple life insurance reserves, for a market share of 15.1 percent, second in importance to the domestic banks.

INVESTMENT AND TRUST COMPANIES

Investment and trust companies were established in 1971 in Taipei,China to encourage long-term savings and investment. They are chartered under the provisions of the Banking Law, although some of them are also governed by special statutes. These companies are not allowed to accept deposits from the public. Their main source of funds is the discretionary trust, which offer slightly higher guaranteed rates of return than commercial bank savings deposits.

Five investment and trust companies operate in Taipei,China. In 1998, these companies had assets of NT$488 billion—51 percent in loans to private enterprises, 27.7 percent in securities investments, and 5.1 percent in real estate. The China Development Corporation (CDC), which began operating as early as May 1959 and is partly government-owned, is also considered a trust company. Unlike the other trust companies, CDC accepts neither deposits nor trust funds. In addition to its own capital base, the corporation obtains funds from the government and international financial institutions. It renders assistance to private industries in the form of medium- and long-term loans, equity investment, guarantees, and trust and agency services.

Table 5: Postal Savings System Assets, 1987–1997 (NT$ million)

		Portfolio Investments				Claims on Financial Institutions				
			Securities							
Year	Loan	Government Securities	Government Enterprises	Private Enterprises	Financial Institution	CBC	Other Monetary Institutions	Cash in Vaults	Other Assets	Total Assets
1987	5,095	3,468	5,780			518,116	351,258	5,086	43,439	932,242
1988	6,103	5,463	5,448			598,443	322,845	5,292	57,841	1,001,435
1989	7,103	5,702	4,284			737,052	212,894	5,831	65,765	1,038,631
1990	4,161	3,617	2,524			851,078	223,978	6,250	74,259	1,165,867
1991	1,576	23,432	1,296			1,045,495	244,923	6,878	86,250	1,409,850
1992	2,865	52,769	801	5,085	70,157	1,139,353	347,578	8,631	109,406	1,736,645
1993	5,108	99,594	398	22,219	27,766	1,139,571	467,285	9,250	132,203	1,903,394
1994	2,457	41,336			2,085	1,183,735	575,932	9,242	165,424	1,980,211
1995	2,754	58,728		41,224	34,473	1,116,728	762,097	10,205	158,942	2,185,151
1996	3,474	128,816	7,960	145,270	63,380	1,055,047	884,871	10,230	163,736	2,462,784
1997	4,909	155,866	6,985	75,976	44,753	1,028,254	1,054,157[a]	12,617	175,386	2,558,903

CBC = Central Bank of China.
[a] Includes claims on other financial institutions amounting to NT$4,264 million.
Source: Central Bank of China (1998a).

Table 6: Postal Savings System Liabilities, 1987–1997 (NT$ million)

	Savings Deposits			Due to Financial Institutions				
Year	Giro Accounts	Passbook Savings Deposits	Time Savings Deposits	CBC	Other Monetary Institutions	Other Liabilities	Net Worth	Total Liabilities + Net Worth
1987	7,473	498,927	285,190			128,978	11,674	932,242
1988	9,237	545,278	284,468		5,000	144,459	12,993	1,001,435
1989	10,951	459,211	387,690		14,000	154,775	12,004	1,038,631
1990	11,236	465,050	525,707			140,326	23,548	1,165,867
1991	12,492	512,948	717,474			139,392	27,544	1,409,850
1992	15,560	581,804	916,979		2,500	189,390	30,412	1,736,645
1993	18,114	608,210	980,999			262,495	33,576	1,903,394
1994	1,264	659,708	1,076,458		7,679	181,183	33,919	1,960,211
1995	24,863	705,369	1,232,200		4,108	183,325	35,286	2,185,151
1996	25,744	756,194	1,445,920			199,725	35,201	2,462,784
1997	27,401	752,848	1,455,528	15,500		271,638	35,988	2,558,903

CBC = Central Bank of China.
Source: Central Bank of China (1998a).

INSURANCE COMPANIES

There are 30 life insurance companies, with 103 branches, and 26 property and casualty insurance companies, with 127 branches, in Taipei,China. Of these, 22 are foreign companies. All insurance companies are subject to government supervision, and their asset management is examined by the MOF. A minimum capitalization of NT$2 billion is required to start up a new insurance company. To preserve policyholders' rights and benefits and to maintain financial stability, insurers are required to contribute to the establishment of separate stabilization funds, similar to the state insurance guarantee funds in the US. The stabilization funds charge up-front a flat rate of 0.2 percent of the total premiums for property/casualty insurers and 0.1 percent for life/health insurers.

Currency Risk of Banks

Very few banks in Taipei,China have substantial foreign-currency positions. There were restrictions on trading and dealing in foreign currency until the early 1990s. Although a floating exchange-rate system was adopted in 1978, the rate has been stable for a long time. Most banks, until the early 1990s, concentrated on the domestic market. Since then, some banks have developed businesses in the People's Republic of China (PRC) and Southeast Asia. International businesses involve many restrictions where domestic banks are concerned, and have therefore been largely reserved for branches of foreign banks. Currency transactions at the individual and corporate levels are almost unconstrained, but there are strict regulations on banks' foreign-exchange activities, foreign participation in the local stock market, and speculation in local currency.

The development of the foreign-exchange market and recent changes in the market are briefly described below. It may help to see how regulators reacted during the crisis and to understand the current foreign-exchange activities of banks in Taipei,China.

Foreign-Exchange Market Development and Recent Changes

The NT dollar has been quite stable in value in recent years compared with many other currencies. From 1990 to 1996, the exchange rate fluctuated between NT$24.5 and NT$27.98 to the US dollar. During the Asian currency turmoil, while the currencies of some Southeast Asian countries plummeted by 30 percent or more from July 1997, the NT dollar fell by only about 11 percent from April 1997 till mid-November 1997. During the first 10 months of 1997, the NT dollar depreciated in three stages, first in April 1997 after CBC relaxed its defense of the line at around NT$27.5 to the US dollar, then in July 1997, and again in October 1997. The NT dollar hovered around NT$28.5 to the US dollar in mid-October, and reached NT$31.1 on 13 November of the same year, after the CBC's new hands-off policy allowed the NT dollar to be determined by market forces. However, CBC changed the nature of the market by suspending the trading of currency futures (referred to as nondelivery forwards in Taipei,China) and limiting speculators' participation from mid-1998.

Several important factors have influenced the exchange rate of the NT dollar. These include the international value of the US dollar in relation to other currencies, interest-rate differentials between the domestic and foreign markets, speculation, inflows of foreign investments, travel expenditures, short-term capital movements, and the attitude and intervention policies of CBC. Each of the above factors has affected the value of the NT dollar and its market performance. Increased expectation of a depreciation in the NT dollar in mid-October 1997, for instance, led many importers to buy US dollars while exporters were reluctant to sell the same, further pushing down the value of the NT dollar. The increase in short-term foreign capital outflow also contributed to the downtrend. In addition, political concerns, such as changes in the nature of relations between Taipei,China and the PRC, should be taken into account when considering the short-term fluctuations in the value of the NT dollar.

ROLE OF FINANCIAL AUTHORITIES

The government has intervened in the foreign-exchange market, in the light of its balance of payments, to maintain a sound foreign-exchange market. For example, CBC fought against panic buying of the US dollar in the first quarter of 1996 when Beijing was testing ballistic missiles near the island. At the time, the central bank used its foreign-exchange reserves to halt a plunge. It also adopted defensive measures to preserve the value of the NT dollar from April to October 1997, such that the currency depreciated much less than many other Asian currencies. However, although the authorities have intervened in many ways during the crisis, the general trend in the foreign-exchange market is still toward deregulation and internationalization.

MARKET CHARACTERISTICS

The foreign-exchange market in Taipei,China bears the following characteristics:

- Exchange rates reflect the workings of the market, and relatively large amounts of foreign exchange can be remitted inward or outward without restrictions.
- Market volume is still relatively small, so the government can intervene effectively when necessary.
- Compared with the capital account, the current account has had less influence on the value of the NT dollar in recent years. In particular, capital movements rule the value of the NT dollar.

EXCHANGE-RATE DEREGULATION

Taipei,China changed from a pegged to a floating exchange-rate system in 1978. The foreign-exchange market was established in February 1979 and the NT dollar was able to float freely within a narrow range (i.e., 2.25 percent) against a daily mid-rate. The mid-rate was set according to the weighted average of the interbank transactions of the previous business day. In April 1989, a new system of free price negotiation came into existence. At present, every bank is entirely free to set its own rates for foreign currencies.

In August 1993, the Regulation Governing Foreign Exchange Brokers was promulgated to influence prominent brokers to set up branches or participate in joint ventures, to make the foreign-exchange market more efficient, and to establish an international network. In addition, authorized foreign-exchange banks were allowed to trade in a third currency. Other new products, such as margin trading, swaps, and forward rate agreements, were also permitted. In November 1994, the first specialized foreign-exchange brokerage, Taipei Forex Inc., was established. The second foreign-exchange brokerage began operating in early 1998. The foreign-exchange market is expected to further broaden in scope and volume.

NEW TAIWAN DOLLAR FORWARD AND FUTURES TRADING

The local currency forward market was established in 1979 in accordance with the spot exchange market, but it was suspended from July 1987 to October 1991 to discourage speculation and cut off the influx of foreign hot money into Taipei,China. Originally, only trade-related transactions in currency forwards could be accepted to avoid speculation and arbitrage. This restriction was lifted in March 1994 to include several service items such as shipping, transportation, and marine insurance in the current account.

The central bank allowed the entry of more local and foreign currency traders in January 1995 and authorized for the first time forward currency dealing and trading by companies that were conducting only capital-account transactions. Starting 7 July 1995, banks could transact in currency nondeliverable forwards (NDFs). NDF transactions are, by nature, over-the-counter futures contracts. However, NDF trading was restricted to trade-related transactions in mid-1998 to prevent speculation in the NT dollar during the Asian financial crisis.

CAPITAL FLOW DEREGULATION

In July 1987, the authorities lifted most of the restrictions on the NT dollar. This change has completely liberalized current-account transactions. With respect to capital-account transactions, each individual can now make outward and inward remittances of up to US$5 million per year. On 1 June 1997, the amount was raised to US$50 million per year for corporate entities, which did not have to obtain prior approval from CBC or state specific uses for the funds remitted. Such high ceilings on outward and inward remittances virtually did away with limitations on capital flow for local individuals.

Until January 1991, foreign institutional investors could not invest in the local stock market. By 20 December 1996, a foreign institutional investor could invest up to US$600 million. Foreign individuals and corporate investors were permitted for the first time to invest directly in the local stock market in March 1996. Foreign individuals could invest up to US$5 million, and foreign corporate investors, up to US$20 million (US$50 million since 2 June 1997). The aggregate holding of foreign investors was originally limited to 20 percent of the shares of any listed company, but this limit was increased to 25 percent on 21 November 1996. However, although more space is opening up for foreign investors, foreign participation in the stock market amounted to only 3 percent of the total market value as of early 1998.

Supervision and Examination

The major regulatory bodies for financial institutions are the central bank, the MOF, and CDIC. The Banking Law requires CDIC to coordinate with the other two agencies in examining the operations of insured institutions. However, recent developments in the coordination of banking supervision have caused CDIC to take the lead in supervision and examination. All examinations are initiated by CDIC. While MOF and CBC send representatives to participate in the examinations, most of the examiners come from CDIC. CDIC now monitors and examines insured institutions only, but MOF has decided to make deposit insurance compulsory for all deposit-taking institutions. The bill is being reviewed by legislators.

Deposit Insurance System

CDIC began its operations in September 1985. Almost all of its capital was subscribed by MOF and CBC. CDIC exists to protect depositors and maintain a sound banking system by supervising and monitoring the operations of insured institutions, handling problem institutions, and resolving failed institutions. The deposit insurance system in Taipei,China is voluntary, unlike the systems in Canada and the US, where bank membership is compulsory. However, the system may eventually become compulsory, and all banking institutions will then have to be insured and examined by CDIC. In a compulsory system, all financial institutions will be insured by CDIC (government) and taxpayers will be forced to assume all the liabilities arising from bank failures. This is a move away from the market economy and from the use of depositors to regulate bank risk-taking behavior.

INSURANCE COVERAGE

The insurance covers only certain types of domestic deposits that are denominated in local currency. The maximum insurance coverage available to each individual depositor in any insured institution is NT$1 million. The average ratio of insured deposits to total insurable deposits of all insured institutions is 42 percent (Table 7).

INSURANCE PREMIUM

The premium rate is set at 1.5 basis points of insured deposits. The total amount of insured deposits is computed every six months. Duan and Yu (1994) reported that CDIC undercharged the insured institutions and

Table 7: Deposits of Insured and Insurable Financial Institutions, as of 28 February 1998 (NT$ million)

Item	Insured Institutions				Insurable		Insured/insurable (%)	
	No.	Covered Deposits	Total Deposits	Covered/Total Deposits (%)	No.	Total Deposits	No.	Total Deposits
Private financial institutions								
Domestic banks	34	1,592,419	4,141,036	38.5	38	6,611,381	89.5	62.6
Investment and trust companies	4	67,556	267,765	25.2	4	267,765	100.0	100.0
Credit cooperative associations	56	642,196	1,164,278	55.2	60	1,194,852	93.3	97.4
Credit departments of farmer's associations	246	660,969	1,050,280	62.9	287	1,207,360	85.7	87.0
Credit departments of shermen's associations	27	20,072	29,104	69	27	29,104	100.0	100.0
Local branches of foreign banks	29	57,912	270,450	21.4	45	278,971	64.4	96.9
Subtotal	396	3,041,124	6,922,913	43.9	461	9,589,433	85.9	72.2
Government financial institutions								
Domestic banks	5	238,332	879,672	27.1	8	1,866,212	62.5	47.1
Investment and trust companies	0	0	0	0	1	33,365	0	0
Subtotal	5	238,332	879,672	27.1	9	1,899,577	55.6	46.3
Total	**401**	**3,279,276**	**7,802,585**	**42.0**	**470**	**11,489,010**	**85.3**	**67.9**

Source: Central Deposit Insurance Corporation (1998).

provided them with a huge subsidy over the last 10 years. Still, many small institutions choose not to join the deposit insurance system because the government and CDIC have been bailing out all defaulting institutions, no matter whether they were insured or not. Eight banks owned by provincial governments, which account for about 30 percent of total deposits, are not yet insured. The provincial governments do not consider another tier of protection provided by CDIC and the central government as necessary. Though several failed resolutions have occurred, CDIC has never made any cash payoff because all the resolutions use the purchase-and-assumption method, with no cash involved. The acquiring organizations are willing to pay for the losses because they can get compensation from the market shares and charter values of the failed banks. The deposit insurance reserves have therefore accumulated to NT$452 million, which is equivalent to 4 basis points of CDIC's insured deposits.

ON-SITE EXAMINATION

CDIC's supervision program combines on-site examination and off-site monitoring. CDIC conducts regular on-site examination of all insured institutions. Head offices are examined every year. The frequency of examinations of the branches of insured institutions depends on the institution's credit rating. Institutions rated "A" or "B" are examined every three years; those rated "C" every two years; those rated "D" or "E", every year. The regular examinations are mainly concerned with the management of asset risk and quality as well as compliance with financial laws and regulations. CDIC also conducts unscheduled examinations of specific operational areas. Examiners focus on violations of laws and regulations, abnormal and excessive loan growth, or major operational deficiencies.

MONITORING SYSTEM

In order to fully understand the financial status and operations of insured financial institutions, and take timely supervisory action, CDIC developed a monitoring program, the Insured Financial Institutions' Early Warning System (IFIEWS), in 1988. The system was designed to allocate examination resources more efficiently among problem and potential problem insured institutions, and to identify changes in the financial conditions of insured financial institutions and prevent their failure. This system can also help to identify specific problem areas, thus aiding off-site analysis and helping to focus examinations on major areas of concern.

The IFIEWS has two subsystems. The Examination Data Rating System (EDRS) is based on the CAMEL (capital adequacy, asset quality, management capacity, earnings, and liquidity) rating system used by the federal financial supervisory agencies in the US. Instead of relying solely on the examiner's judgment, the EDRS uses a statistical method to select financial evaluation ratios, and assigns weights to these ratios. On the basis of these assigned weights, the system can calculate individual scores on the five CAMEL criteria and a composite score. The composite score will indicate the financial condition of the insured institution. On the basis of the foregoing criteria, institutions are rated from "A" to "E," with "A" as the best rating. Institutions rated "D" or "E" are included in the exception list, which also consists of institutions that meet any of the following conditions:

- Adjusted net worth is smaller than two thirds of capital.
- Ratio of nonperforming loans to total loans is more than 10 percent (for banks) and more than 5 percent (for credit cooperative associations and credit departments of farmers' and fishermen's associations).
- Liquidity reserve ratio fails to meet the legal minimum of 7 percent for three consecutive months.
- Total affiliated loans are greater than 120 percent of preadjusted net worth.

Once institutions in the exception list are identified as problem banks, an analysis is performed to determine the causes of the problems, and the necessary corrective actions are initiated.

The second IFIEWS subsystem is the Call Report Percentile Ranking System (CRPRS), which is based on the surveillance procedures of the US Federal Reserve System. The CRPRS is CDIC's principal off-site surveillance tool. It uses quarterly data from call reports of the individual insured institution to calculate the institution's percentile ranking on each of the evaluation criteria and its composite percentile ranking. The calculated scores are used to derive an enforcement follow-up list. Aside from determining the current status of the insured institution, this system can monitor their operational trends by looking at the quarterly changes in their respective percentile ranking. Institutions that meet any of the following conditions are included in the enforcement follow-up list:

- Percentile ranking of composite score:
  - Government-owned banks: above 90
  - Private banks: above 80
  - Trust and investment companies: above 50
  - Credit cooperative associations: above 80
  - Credit departments of farmers' and fishermen's associations: above 70
- Deterioration of more than 40 percent in the composite percentile ranking within 12 months.
- Percentile ranking of individual ratio above 90.

Institutions in the enforcement follow-up list are subjected to documentary analysis by senior examiners of CDIC to determine the causes of the problems. Once the nature of the problems is confirmed, CDIC adopts the necessary measures and enforces follow-up tasks. Specifically, CDIC takes the following enforcement steps:

- Confirm and analyze the problems.
- Enforce comprehensive annual examinations.
- Conduct on-site examination in advance of the routine schedule.
- Conduct specific examination, if necessary.
- Establish a file of follow-up tasks.

- If necessary, recommend the following rigid enforcement actions to MOF:
  - Request correction by a specified date.
  - Request regulatory agencies to conduct onsite examinations immediately.
  - Take preconservatorship steps to remedy the situation.
  - Assess a penalty (fines, demerits for manager-in-charge, removal of manager-in-charge).
  - Recommend conservatorship and receivership.

MANAGEMENT CONSIDERATIONS

The early-warning system is not a panacea but only a supervisory measure and could never replace onsite examination. This system can only detect general problems existing in insured institutions, and will still fail to detect problems unique to individual institutions. In 1992, MOF recognized the need for a national early-warning system for all financial institutions. Under its guidance, CDIC established the National Financial Institutions' Early Warning System (NFIEWS). The effectiveness of the NFIEWS has not yet been established, although the financial stability and soundness of the banking sector in general have not been affected during the Asian crisis. In fact, no financial institution has slid into financial distress since the crisis began.

HANDLING PROBLEMS OF INSURED INSTITUTIONS

In general, decisions regarding troubled institutions are arrived at by balancing several policy considerations. These considerations include preserving financial stability, protecting individual depositors, maintaining market discipline against risk taking, and minimizing costs to the deposit insurance fund. The authority and the insurer have at their disposal a variety of alternative solutions and financing options to achieve these various policy considerations. CDIC can, if authorized by MOF, dispatch personnel to assist the insured institution. It can also terminate the insurance status of the institution if the latter fails to rectify regulatory transgressions within the time prescribed by CDIC.

HANDLING FAILED INSURED INSTITUTIONS

When an insured institution voluntarily closes or is ordered by MOF to close because it cannot make payments to its depositors, CDIC acts as the statutory receiver. CDIC must then fulfill its insurance obligation to protect the interests of depositors and enable them to quickly receive the principal and interest on their deposits within the maximum coverage limit. CDIC can do this in any of the following ways:

- Directly pay the insured deposits in cash.
- Arrange for the insured deposits to be transferred to other insured institutions in the same area.
- Temporarily operate the closed institution in CDC's own name if no other insured institution in the same area can assume the transfer of deposits.
- With prior approval from MOF, extend loans to or purchase assets from the closed institution. Otherwise, the institution will be liquidated according to the law.

When CDIC liquidates the assets of the closed institution, it distributes the proceeds periodically to those having a claim on the receivership. As insurer, CDIC acquires a claim against the receivership equal to the amount of the payoff after it compensates depositors of the closed institution. That is, CDIC becomes the co-claimant on the closed institution's assets. No insured institution has been put under receivership since CDIC began its operations in 1985.

Banking Business Environment

Asset and Liability Management Standard for Most Banks

Asset-liability management (ALM) refers to the coordinated management of a bank's balance sheet to allow for alternative interest-rate and liquidity scenarios. It is commonly believed that the asset-liability management committee (ALCO) is the single most important management group in a bank. In Taipei,China, most banks, except the community financial institutions, manage interest-rate risk through ALM, using the techniques of maturity gap management and duration gap management. The community financial institutions are usually managed not by professional managers but by their associated members (farmers, fishermen, etc.), and therefore have a much lower level of management skill.

However, the loan portfolios of Taipei,China banks have long been dominated by floating-rate loans, and fixed-rate loans are only a negligible portion. In contrast, traditional banks in the US have assets whose maturity is significantly longer than the maturity of their liabilities. Therefore, without a careful calculation of assets and liabilities, it is not clear whether Taipei,China banks have a positive or negative maturity or duration gap. According to a study by Yu, Shen, and Chen (1995), equity prices of Taipei,China banks were not sensitive to interest-rate movements from 1989 to 1994. This may imply that Taipei,China banks in general have a matched duration structure of assets and liabilities.

MERGERS TO RESOLVE WEAK INSTITUTIONS

Mergers and acquisitions (M&As) do not happen often in the Taipei,China financial markets. Though there have been over 100 M&As in the 1990s, very few of them involve large banks or nonbanks. Of these recent M&As, 90 percent were carried out through cash payments and 10 percent of them through stock swaps. However, during the second half of 1995 and into 1996, there were more than 21 instances of panic runs against community financial institutions. Most of these failing institutions were resolved through assisted mergers with commercial banks or other community financial institutions. The government is aware of the financial weakness of community financial institutions and encourages them either to merge with other financial institutions or to convert themselves into commercial banks, which are subject to more restrictive regulations.

UNIVERSAL BANKING ENCOURAGED BY THE GOVERNMENT

Though the banking system in Taipei,China was originally designed to have specialized banks serving alternative functions, the government now encourages the move toward universal banking. Beyond the traditional deposit-loan business specified in Article 3 of the Banking Law, banks are encouraged to expand their services by offering investment banking, insurance and securities brokerage, and other services. Thus, banks and investment banking firms are expected to have considerable overlap in their activities, unlike their counterparts in the United States, which are limited by regulations from comingling banking and commercial activities. In fact, several banks now provide brokerage and investment banking services together with their traditional banking business.

OFF-BALANCE-SHEET ACTIVITIES

Although off-balance-sheet activities (OBSAs) are a modern banking development, banks in Taipei,China, have long been undertaking traditional OBSAs such as loan commitments, lines of credit, guarantees, and letters of credit. However, OBSA data are hard to collect because many items are either not recorded or are not required to be reported to government authorities (except for the major traditional OBSAs specified in Article 30 of the Banking Law, which must be reported monthly). Table 8 presents OBSA data, specifically guarantees and letters of credit, collected for 14 listed commercial banks. As can be gleaned from the table, the volume of guarantees and letters of credit generally increased from 1995 to 1997 and reached NT$452 million by the third quarter of 1997. However, this volume is only about 2 percent of the total assets. More sophisticated OBSAs such as swaps, derivative contracts, and asset securitization are permitted, but under strict rules specified by MOF in 1995. These activities are not very popular among domestic banks but are often offered by foreign banks.

Table 8: Off-Balance-Sheet Activities, June 1995 to September 1997[a] (guarantees and letters of credit)

Month/Year	Amount (NT$ million)
Jun 1995	265
Sep 1995	380
Dec 1995	359
Mar 1996	402
Jun 1996	421
Sep 1996	403
Dec 1996	420
Mar 1997	451
Jun 1997	457
Sep 1997	452

[a] Sample of 14 listed commercial banks.
Source: *Taiwan Economics Journal* Database.

OFFSHORE BANKING UNITS

The first offshore center began operating in Taipei,China in July 1984; by December 1997 the number of offshore banking units (OBUs) had increased to 71. After the initial spurt in 1984, there was a leveling off in 1987, attributed partly to the weakening position of the US dollar and the general decline in international loan syndicates. In recent years, OBUs have grown dramatically in number and size as the government has relaxed regulations on OBUs to promote Taipei,China as a regional financial center. The major change in the regulations is that OBUs may now accept deposits from and lend to residents and nonresidents. This business used to be limited to financial institutions. Table 9 provides the detailed assets and liabilities of OBUs in Taipei,China. As of December 1997, there were 38 OBUs owned by domestic banks and 33 OBUs owned by foreign banks, with total assets of over US$39 billion.

CAPITAL ADEQUACY

The Banking Law requires banks to maintain a level of risk-based capital according to an adequacy test similar to that set by BIS. Banks that fail to meet the 8 percent criterion may not distribute dividends and will need new capital infusion. Otherwise, their banking licenses may be suspended. Starting January 1998, the Banking Law requires banks to measure their adequacy at VAR (value at risk) basis. Tables 10 and 11 report the ratio of net worth to assets as the capital adequacy ratio of banks chartered before 1991 and after 1991, respectively. In general, the ratio of net worth to assets is lower than the BIS capital ratio because risk weights adjust down the assets and raise the BIS ratio. According to a news release in March 1998, the only domestic bank that failed to pass the 8 percent BIS ratio was the Taiwan Cooperative Bank, whose BIS ratio was 6.71 percent. The bank of Overseas Chinese had its lowest BIS ratio of 6.75 percent in 1995. Table 10 shows that the Taiwan Cooperative Bank has a ratio of net worth to assets of 2.7 percent, the lowest among all domestic banks. Other “old” domestic banks, chartered before 1991, have a ratio of net worth to assets of 4.5 percent or better, higher than those commonly observed for US banks. Banks chartered after 1991, the “new” banks, generally have a higher ratio of net worth to assets, in the range of 8 to 13 percent (Table 11). This is not because of these banks’ intent to keep a strong capital position but due to high paid-in capital of NT$10 billion required by the authority. Higher asset growth is expected for these new banks to achieve operational efficiency and fully utilize their capital position.

At the end of 1997, credit cooperatives on the average had a deposits-to-assets ratio of 89.5 percent, and credit departments of farmers’ and fishermen’s associations, a ratio of 80.8 percent. No direct data on the net-worth-to-assets ratio of community financial institutions are available but this indicator can be derived from the ratio of net worth to deposits and the ratio of deposits to assets. Commu-

Table 9: **Assets and Liabilities of Offshore Banking Units, 1996–1998 (US$ million)**

Item	1996	1997	1998
Assets			
Loans to nonfinancial institutions	8,543	11,736	14,550
Residents	1,403	1,847	2,678
Nonresidents	7,139	9,888	11,872
Portfolio investments	2,576	3,885	4,223
Claims on financial institutions	23,421	19,943	19,175
Authorized foreign exchange			
Banks	10,478	7,751	6,207
Inter-OBU	2,798	3,228	2,770
Foreign financial institutions	10,145	8,964	10,197
Other assets	2,050	3,561	2,684
Total	**36,590**	**39,126**	**40,632**
Liabilities			
Deposits of nonfinancial institutions	2,617	4,551	6,241
Due to financial institutions			
Domestic	11,068	9,846	11,584
Inter-OBU	2,706	3,030	2,504
Foreign	17,254	16,363	15,383
Securities issued	971	1,177	1,382
Other liabilities	1,973	4,159	3,539
Total	**36,590**	**39,126**	**40,632**

Source: Central Bank of China (1998a)

nity financial institutions on the average have weaker capital positions than commercial banks. The credit departments of fishermen's associations, with a ratio of net worth to assets of around 3.7 percent, are the weakest group among the community financial institutions. Recent government reports indicate that there are more than 50 insolvent community financial institutions left unresolved and still in operation. The unresolved insolvent financial institutions remain a critical problem of the current banking system. There is no immediate plan to resolve these insolvent institutions because of their close links to local politics. Democratic elections have caused government officials to delay the resolution of the problem in exchange for local political support.

PERFORMANCE EVALUATION

Profitability in banking is moderate. In terms of return on assets (ROA), new banks average 76 percent, better than the 65 percent for old banks. Even for an equity multiplier of 20, which is found among a few old banks, the return on equity (ROE) would be 13 percent. The equity multiplier is roughly around 10 for the new banks, giving them an ROE of 7.65 percent, which is very close to the yield on government bonds. Of course, some of the old banks are profitable. Shanghai Commercial Bank, for instance, has an ROE of 21.12 percent, and United World Chinese Bank has an ROE of 17.14 percent. The ROA of community financial institutions is slightly lower than that of commercial banks. However, because they have weaker capital and a higher equity multiplier, their ROE may not be lower than that of banks.

NONPERFORMING LOAN RATIO

Loans with payments overdue by more than 90 days are considered nonperforming. Nonperforming loan (NPL) ratios went up over the five years between 1993 and 1997 and peaked at 4.07 percent at the end of March 1997. This was mainly due to the

Table 10: Selected Indicators on Domestic Commercial Banks Chartered Before 1991, as of 11 February 1998

Name of Bank	Credit Rating by TEJ[a]	Assets (NT$ billion)	Loan (NT$ billion)	No. of Branches	No. of Employees	CAR (%)	NPL (%)	Operating Revenue Per Capita (NT$ million)	Operating Expenditures/ Assets (%)	ROA (%)	Operating Profit (%)	Liquid Reserve Ratio (%)
United World Chinese	1	468.7	292.7	57	2,444	7.0	1.93	11	4.6	1.2	20.2	14.7
Shanghai Commercial	1	205.1	131.3	36	1,500	11.8	2.45	12	6.1	2.5	27.1	11.8
Bank of Taiwan	1	1,742.7	1,183.5	96	na	9.2	1.8	na	na	na	na	15.1
Central Trust	1	474.5	302.4	34	3,374	7.0	1..84	10	6.1	0.9	13.1	11.5
Land Bank	1	1,130.6	812.6	83	na	5.3	3.52	na	6.6	0.8	9.8	11.6
Chiao Tung Bank	1	447.9	343.9	31	1,141	6.7	2.2	25	6.3	0.8	0.4	16.9
Taipei Bank	1	481.4	329.2	65	3,225	7.4	2.25	10	6.1	0.6	10.9	13.3
ICBC	1	594.7	342.7	56	3,191	5.9	1.75	9	4.3	0.7	10.8	27.6
First Commercial	2	949.7	645.9	138	6,582	4.8	4.27	10	6.1	0.6	11.5	17.5
Taichung Business	2	223.5	159.6	59	2,077	8.7	5.08	6	4.9	0.9	17.8	24.3
Hua Nan Commercial	2	910.9	596.3	127	6,199	5.0	4.59	10	6.2	0.7	11.8	16.4
Farmers' Bank	2	451.3	331.2	70	2,068	5.2	4.34	15	6.5	0.4	7.3	12.8
Taiwan Cooperative	2	1,541.1	1,021.7	132	na	2.7	4.04	na	na	na	na	27.7
Taipei Business	2	238.5	170.1	73	1,979	8.2	3.00	7	4.9	1.0	15.3	13.0
Chang Hwa Commercial	3	859.1	575.9	140	6,440	4.7	5.69	9	6.1	0.6	10.4	17.5
Kaohsiung Bank	3	121.5	88.9	29	1,027	4.5	3.10	8	6.6	0.5	6.7	20.9
Taiwan Business	3	754.7	543.3	114	5,455	4.6	4.15	10	6.3	0.6	9.1	11.9
Chinfon Commercial	4	147.4	96.4	20	931	9.1	8.90	6	0.0	0.3	8.7	8.6
Hsiuchu Bank	4	236.1	164.6	62	2,095	6.4	7.00	7	5.2	0.6	11.7	16.5
Kaohsiung Business	5	96.0	58.2	57	1,475	8.2	17.00	1	6.2	(0.3)	(6.8)	19.2
Taitung Business	5	48.3	27.3	25	577	19.6	15.00	5	5.6	0.0	(0.5)	18.9
Hualien Business	5	37.0	23.4	24	635	6.7	11.00	1	7.5	0.0	1.1	10.6
Overseas Chinese	5	176.8	133.0	43	1,926	6.4	11.30	3	3.3	0.3	9.1	11.2
Tainan Business	5	133.9	84.2	59	1,335	7.0	8.56	6	5.3	0.6	7.9	13.3

na = not available, ( ) = negative values are enclosed in parentheses.
CAR = capital adequacy ratio, ICBC = International Commercial Bank of China, NPL = nonperforming loan, ROA = return on assets, TEJ = Taiwan Economic Journal.
[a] 1 = highest (best) rating and 5 = lowest (worst) rating.
Source: *Taiwan Economic Journal* (1998).

recession in the real estate sector and the many cases of default in construction loans. Recently, banks have been encouraged to write off their bad debts. As a result, the NPL ratio declined to 3.82 percent at the end of December 1997 (Table 12). The Banking Law has set a 4 percent NPL ratio as the ceiling ratio beyond which tougher regulations and monitoring will be imposed and new lines of business and branches will not be approved.

OLD BANKS AND NEW BANKS

Fourteen of the 24 banks chartered before 1991, the old banks, have NPL ratios exceeding 4 percent. Seven of the eight medium- and small-business banks are among the 14 banks. In addition to the seven business banks, there are five state-owned banks that are relatively large in the industry. They are First Commercial, Hua Nan Commercial, Chang Hwa Commercial, Farmer's Bank, and Taiwan Cooperative. The first three are owned by the provincial government, and provincial legislators can influence loan decisions. Farmer's Bank and Taiwan Cooperative carry out government strategic loans. These five state-owned banks are expected to have a high number of NPLs. The only bank left from the above two categories is the Bank of Overseas Chinese, which was previously owned by the government. Of the 16 newly chartered banks, only five have an NPL problem.

COMMUNITY FINANCIAL INSTITUTIONS

The high and increasing NPL ratios in all three sectors of community financial institutions highlight the weakness of the banking industry and the ineffectiveness of regulation. The average nonperforming ratios were above 4 percent for several years and cannot be controlled. Credit departments of farmers' associations had an average ratio of 10.2 percent at the end of the third quarter of 1997, while credit cooperatives had a ratio of 7.9 percent and fishermen's associations had a ratio of 6.2 percent. The problem of loan quality is obvious, but regulators have not been able to contain this problem

Table 11: Selected Indicators on Domestic Commercial Banks Chartered After 1991, as of 11 February 1998

Name of Bank	Credit Rating by TEJ[a]	Assets (NT$ billion)	Loan (NT$ billion)	No. of Branches	No. of Employees	CAR (%)	NPL (%)	Operating Revenue Per Capita (NT$ million)	Operating Expenditures/ Assets (%)	ROA (%)	Operating Profit (%)	Liquid Reserve Ratio (%)
E. Sun Commercial	1	159.1	118.3	24	728	8.7	1.80	15	6.0	1.0	13.4	10.8
Fubon Commercial	1	159.7	113.4	34	947	10.9	1.77	9	4.4	1.0	16.5	9.7
Entie Commercial	1	110.6	89.3	20	725	11.5	1.81	8	4.7	0.8	15.2	10.3
Bank Sinopac	1	149.6	107.0	25	834	9.0	0.52	10	4.7	0.8	14.6	10.3
Grand Commercial	1	138.2	103.6	24	771	11.0	2.37	10	4.6	0.9	17.7	11.0
Far East. International	1	114.4	81.3	21	714	11.9	1.89	9	4.8	0.6	11.7	11.5
Dah An Commercial	1	129.2	101.6	23	802	9.9	1.84	9	4.5	0.8	15.5	10.3
Asia Pacific	1	109.3	78.9	25	696	11.2	2.43	9	4.7	0.7	13.6	11.4
Chung Shing	2	129.0	97.0	21	720	12.6	4.00	10	4.6	1.0	16.9	13.8
Chinese Bank	2	118.8	91.4	22	789	10.0	2.62	8	4.8	0.6	11.5	8.9
Union Bank	2	139.4	100.2	25	954	10.4	1.87	8	4.9	0.7	12.9	10.2
Taishin International	2	158.3	115.1	22	1165	8.0	1.88	8	5.2	0.8	12.2	10.4
Cosmos	2	133.1	92.6	20	902	10.7	3.60	9	5.3	0.8	13.0	10.0
Baodao Commercial	3	122.6	88.2	18	793	9.3	4.50	8	4.9	0.6	10.8	8.8
Ta Chong Commercial	3	135.3	96.7	24	992	9.1	5.80	8	5.0	0.5	10.5	9.8
Pan Asia	4	121.5	88.8	17	666	13.6	8.86	10	5.0	0.6	11.1	9.7

CAR = capital adequacy ratio, NPL = nonperforming loan, ROA = return on assets, TEJ = *Taiwan Economic Journal.*
[a] 1 = highest (best) rating and 5 = lowest (worst) rating.
Source: *Taiwan Economic Journal* (1998).

"effectively, even with the support of public opinion during the wave of roughly 20 bank runs against these weak institutions. The political link among government, local politicians, and community financial institutions has hindered regulators from effective supervision. The weakness of this banking sector remains a challenge for future banking reforms.

Table 12: Nonperforming Loan Ratios of All Depository Banks, December 1993 to December 1997

Month/Year	NPL Ratio (%)
Dec 1993	1.24
Mar 1994	1.63
Jun 1994	1.62
Sep 1994	1.67
Dec 1994	1.85
Mar 1995	2.54
Jun 1995	2.5?
Sep 1995	2.75
Dec 1995	2.92
Mar 1996	3.36
Jun 1996	3.47
Sep 1996	3.89
Dec 1996	3.78
Mar 1997	4.07
Jun 1997	3.78
Sep 1997	3.95
Dec 1997	3.82

NPL = nonperforming loan.
Source: Central Bank of China.

LEVEL OF BANKING SKILLS

The level of skills in Taipei,China banks can be discussed with respect to consumer banking and corporate banking. At the consumer level, credit card and ATM transactions have grown at a double-digit rate in the 1990s, and are very popular among consumers. Telephone banking is available from many banks, providing consumers with information on lending rates, balance transfers, etc. The recent entry of new domestic banks and local branches of foreign banks has increased competition in the banking market and raised the level of banking skill significantly. However, state-owned banks still hold a substantial share of the deposits and loans markets. The slow pace of change in the skills level of these banks has continued to hold back the development of the banking sector.

At the corporate level, banking skills and services are at the highest level among the local branches of foreign banks. Among these, Standard Chartered and American Express provide full branch service through fully authorized computer access at the client's end. Corporate clients can have a full-service branch at their own office. For most other banks, online Internet banking for corporate clients, which provides information on such aspects as rates, account transfers, and foreign-exchange remittances, is popular. Most banks have set up or have been developing electronic data interchange (EDI) systems to provide online services in finance, tariffs, and trade for their corporate clients.

Another dimension of skill is ability to provide services in risk management or financial engineering. These high-skill services are mainly available at foreign banks. Some derivative products and services are also available at domestic banks, but at a very primitive stage. In terms of banking skill and service and product diversity, the participation of foreign banks has contributed substantially by increasing competition in the domestic banking industry.

Recommendations

Though the overall banking system appears to be sound, many areas still deserve attention, to improve the health and efficiency of the Taipei,China banking environment. The following are recommended measures to address the fundamental weaknesses of the banking system.

Close Insolvent Institutions Immediately

Many identified problems or insolvent financial institutions have been left unresolved in the industry. These insolvent institutions will hurt healthier banks in the industry by offering a higher deposit rate to attract funds for their risk-taking projects. Regulators are aware of the potential losses and the damage to the banking system that can result from not closing down the insolvent institutions. However, the current administration has decided to delay resolving the problem in exchange for the political support of the related interest groups. The delayed resolution may undermine the overall health of the banking system and bring further losses to taxpayers.

Convert Community Financial Institutions Into Commercial Banks

Credit departments of farmers' and fishermen's associations and even credit cooperatives are outdated forms of financial intermediation. Tax preference and government subsidy should no longer be granted to these interest groups. Their system of allowing one vote for each member does not reflect the member's stake in the institution. Therefore, such financial institutions should not be managed by elected members. They should all be converted into commercial banks and be supervised and monitored like other banks in the system.

Institute a More Accountable Regulatory Framework and Transparency of Information

More than 20 bank runs have occurred over the last five years and yet no regulators have been held responsible for these long-delayed failures. Particularly in the case of community financial institutions, no regulatory body considers itself as having sole responsibility for monitoring and supervision. The MOF, the Ministry of Agriculture (for authorized farmers' and fishermen's associations), and the Ministry of Interior (for chartered credit cooperatives) debated long among themselves about their regulatory authority and responsibility over these community financial institutions. This regulatory structure needs to be redesigned so that each government agency would have clear responsibility and would be accountable for its policy decisions.

Though the transparency of financial information has improved over the years, regulators still tend to conceal information on financially distressed institutions on the grounds that releasing this information may again trigger runs on these weak institutions. This practice, in fact, make information less transparent and hinder the determination of accountability.

Privatize Government-Owned Institutions

State-owned banks and banks with substantial government shares still have significant market share in terms of deposits and loans. These banks usually compete at a cost advantage and with guaranteed business, but are in fact less profitable and have a higher ratio of NPLs. Privatization of government ownership in banking is necessary. This will increase the overall efficiency of the banking system.

Deal with the Problem of Lack of Confidence

Taipei,China has a relatively sound economy and has good fundamentals at the micro and macro levels. But confidence is low and faces considerable threat. During the Asian financial crisis, the Taipei,China stock market plummeted, and panic selling of NT dollars occurred. In addition, the stock market and foreign-exchange market have been very sensitive to political tensions in the Taiwan Strait. Foreign-exchange reserves, despite being the second or third largest in the world, can never sustain a confidence run on the currency. Lack of confidence remains a threat to the stability of the financial markets.

Check Government Guarantees

In addition to the national health insurance plan and pension plan, the government has sponsored several major infrastructure projects with a total budget in the hundreds of billions of US dollars through build-operate-transfer (BOT) transactions. To assist the project operators in obtaining enough capital from banks to support these BOT projects, the MOF has recently exempted BOT loans from the standard regulations on loan diversification and risk-based capital requirements. In several cases, the government even guaranteed BOT loans against defaults. In fact, most BOT projects are of poor quality. These undiversified BOT loans are risky and, without enough capital cushion, the failure of some BOT projects may bring the lending banks into financial distress. However, these financially distressed banks will not be closed in the current regulatory environment because they provided loans to government-sponsored projects and the government guaranteed these projects.

Develop Regional and International Economic Coordination

It is not clear where Taipei,China can go to for help if a more serious economic crisis occurs. Legitimately, it will not be able to get help from the International Monetary Fund (IMF) and the World Bank, since it is not a member of these two organizations. There is an apparent need for Taipei,China to develop regional economic cooperation or coordination relative to the globalization of its financial market.

References

Central Bank of China. 1998a. *Financial Statistics Monthly*. Economic Research Department, Taiwan District. January.

__________1998b. *Financial Statistics Monthly*. Economic Research Department, Taiwan District. March.

Central Deposit Insurance Corporation. 1998. *Deposit Insurance Information Quarterly* 11, no. 3 (March).

Chang, C.C., M.Y. Dong, and M.T. Yu. 1998. "Measuring Risk-Based Premium and Risk-Based Capital Requirement for Insurers." *Advances in Financial Planning and Forecasting* 8: 63–78.

Duan, J.C., and M.T. Yu. 1994. "Assessing the Cost of Taiwan's Deposit Insurance." *Pacific-Basin Finance Journal* 2, no. 1 (March):73–90.

Hendrie, Anne, ed. 1992. *Banking in the Far East, 1990: Structure and Sources of Finance*. Financial Times.

Hsu, C.T. 1993. "Parallel Financing and Industrial Development." Proceedings of the Conference on Taiwan Industrial Development. *Academica Sinica* pp. 87–114.

Insurance Institute of Taiwan. 1995. *Insurance Law of Taiwan*.

__________. 1995. *Insurance Review*.

International Monetary Fund. 1997. *World Economic Outlook*. Washington, D.C.: IMF. December.

Kane, E. J. 1998. " Role of Offshore Financial Regulatory Competition in Asian Banking Crises." Working paper. Boston College.

Krugman, P. "What Happened to Asia?" (Online). Available: http://web.mit.edu/Krugman/www/disinter.html

Lee, Y.S. and S.C. Chen. 1994. "Review of the Financing Development of Taiwan," Conference Proceedings on Taiwan Financial Development, *Academica Sinica*, pp. 23-151.

McKinnon, R.I. 1998. "The IMF, the East Asian Currency Crisis, and the World Dollar Standard. " American Economic Association Annual Meetings, January.

Taiwan Economic Journal. 1998. "Money Watching and Credit Rating." March.

Yu, M.T. 1997. "Measuring Fair Capital Adequacy Holdings for Banks: The Case of Taiwan." *Global Finance Journal* 7 (2): 243–257.

__________. 1997. "Government Appointed Directors at State-Owned Banks—A Principal-Agent Analysis." *Quarterly Review of Central Deposit Insurance Company* 10, no. 3(March): 39-48.

Yu, M.T., C. H. Shen, and C. C. Chen. 1995. "Interest Rate Risk and Duration Structure of Banks in Taiwan." *Journal of Management Science* 12, no. 2 (July): 169–193.