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Macroeconomic Causes of Bank Unsoundness

The linkage between macroeconomic policy and microeconomic structures and policies runs in both directions: microeconomic structures affect macroeconomic performance, and macroeconomic policies have microeconomic consequences. Structural policies that encourage real sector growth are ultimately reflected in the prosperity of individual enterprises and affect macroeconomic policy objectives and outcomes. A loose fiscal stance will tend to put pressure on government revenue sources and systems, the microeconomic elements of fiscal operations. Macroeconomic shocks, particularly in the monetary domain, will tend to put pressure on bank balance sheets and banking system health. The banking system, however, plays a central role in the economy and is linked to more than just monetary policy and interest rate determination. The following chapters consider four traditional areas of policy analysis (real sector policy, monetary policy, fiscal policy, and external sector policy), and discuss the two-way linkage between the soundness of the banking system and each of these areas.

Economic conditions and policies are key determinants of the soundness of the banking system. Banks fail, and banking systems become unsound, for many reasons, including poor or negligent management, excessive risk taking, a poor operating environment, fraud, or a sharp deterioration in the economic environment that invalidates the assumptions on which loans and investments were initially made. Although bank soundness is first an issue for individual banks, it is more likely to be systemic when unsoundness is due to macroeconomic conditions, because all banks will be exposed to those conditions. In addition, individual banking problems could become systemic owing to the spread of liquidity or solvency problems through contagion and domino effects, and this could compound the effects of macroeconomic shocks on banks. This chapter first outlines how macroeconomic conditions affect the banking system

and then turns to the effects that particular monetary, fiscal, and exchange policies and instruments may have on bank soundness. Finally, the impact of the overall policy stance is considered.

Banking system fragility can impair the efficient working of markets and implementation of macroeconomic policy. An unsound banking system not only fails to provide the microeconomic channels necessary for the efficient implementation of monetary policy, but may also impair economic growth prospects, impose significant fiscal costs, and interfere with the smooth functioning of the exchange system. These effects, discussed in Chapter 5, arise from the impact of banks' portfolio weaknesses and constraints on the level and structure of interest rates, on the volume and allocative efficiency of credit, and on the responses of the banks and of other economic agents to monetary conditions.

The following discussion draws on a sample of country experiences to illustrate both aspects of this two-way linkage between banking systems and macroeconomic policy. The sample comprises 34 countries that have recently experienced significant banking sector problems or crises and for which data on a range of aspects of both the causes and consequences of these problems were available. It includes 19 developing countries, 8 countries that are in transition from a command to a market economy, and 7 industrial countries. In terms of geography, it includes 5 countries from Africa and the Middle East, 8 from the Western Hemisphere, 8 from Asia, and 13 from Europe. The European experience is heavily represented to include a number of transition economies. Nine of the banking problems featured here happened principally or entirely in the 1980s, 23 occurred mainly in the 1990s, and 4 are longstanding. At least 17 of the problems were still ongoing at the time of writing (mid-1996). Eight cases for which sufficient data were available are analyzed quantitatively in the annex to this Part; the conclusions drawn from that analysis are incorporated into the discussion throughout the book.

While an effort was made to choose cases that were representative of different regions, types of country, and problems (e.g., developing countries, problems caused by the transition from a planned economy), to a great extent the sample was dictated by the availability of information, and even among the sample countries there was, unfortunately, a great degree of disparity in the type and quality of information. Thus, while the tables that follow summarize these countries' experiences in order to provide illustrative examples of the various issues covered in this study, they should not be construed as providing an exhaustive survey of all cases in which these issues arose.

Table 3 provides summary information on these 34 cases: it lists the types of financial institution in each country that were affected and a brief description of the problems. The experience of these countries is tracked

Table 3. Selected Cases: Institutions Affected and Description of Problems1

Country	Institutions Affected	Description of Problems
Argentina (1980–82)	Businesses, banks, and other financial institutions.	Nine percent of loans were nonperforming in 1980 and 30% in 1985, and 168 institutions were closed.
(1989–90)	State banks and the central bank.	Nonperforming assets constituted 27% of the aggregate portfolio and 37% of the portfolios of state-owned banks. Failed banks held 40% of financial system assets. There were depositor runs, high levels of nonperforming assets, 8 banks holidays, and a forced renewal of time deposits.
(1995)	Banks and finance companies.	The financial system experienced currency outflows and flight to quality. Eighteen percent of depositors were withdrawn between December 1994 and May 1995. Forty-five of 205 institutions were closed or merged through September 1995.
Bangladesh (1980s–present)	All domestic banks, accounting for 95% of banking assets.	In 1987, 20% of the loans of 4 major banks, whose assets accounted for 70% of all lending, were nonperforming.
Bolivia (1994–present)	Private commercial banks.	Two banks with 11% of assets were closed in November 1994. There were depositor runs. Four of 15 domestic banks, with 30% of assets, were undercapitalized and had liquidity problems and high levels of nonperforming loans in 1995.
Brazil (1994–present)	State banks, private commercial banks, and other financial institutions.	Of 246 banks, 17 small private banks have been liquidated, 3 private banks have been subjected to official intervention, and 5 state banks have been placed under special temporary administration. These 25 banks held 8.8% of total deposits in mid-1994. In addition, 2 large and 2 medium-sized banks (representing 6.6% of deposits) have received assistance to merge.
Chile (1981–86)	Banks and other financial institutions.	The authorities intervened in 4 banks and 4 nonbank financial institutions (with 33% of outstanding loans) in 1981; 9 other banks and 2 more nonbanks (with 45% of outstanding loans) were subject to intervention in 1982–83, and many others were assisted. At the end of 1983, 19% of loans were nonperforming. The central bank purchased substandard loans at par to help recapitalize banks; such purchases continued through 1987, although the largest intervened banks were recapitalized and sold by 1986.

Table 3 *(continued)*

Country	Institutions Affected	Description of Problems
Czech Republic (1991–present)	State and private commercial banks and savings banks.	38% of loans were nonperforming in 1994–95. There was a bank run. Three small banks were closed in 1993–94, and 1 failed in 1995 and another early in 1996.
Egypt (1991–95)	Commercial banks.	Four main public sector banks were given capital assistance.
Estonia (1992–95)	Commercial banks.	Insolvent banks held 41% of banking system assets. Two major banks were merged and nationalized, and the licenses of 5 others (1 large) were revoked. Although in early 1994 it appeared that the problems had been resolved, in 1995 the nationalized entity experienced severe difficulties. In addition, during 1994, 2 more large banks were found to be insolvent and were merged and converted to a loan-recovery agency.
Finland (1991–94)	Commercial, savings, and cooperative banks.	Nonperforming loans and credit losses reached 13% of total exposure at their peak in 1992; there was a liquidity crisis in September 1991.
France (1991–95)	Crédit Lyonnais (a large state-owned bank) and some privately owned banks.	Nonperforming loans were 8.9% of total loans in 1994. 15% ($27 billion) of Crédit Lyonnais' loans were nonperforming. Some other banks have posted large losses, including Crédit Foncier de France, which in 1996 announced losses for the previous year greater than shareholder capital.
Ghana (1983–89)	Government-owned banks, private commercial banks, and rural banks.	Forty percent of bank credit to nongovernment borrowers was nonperforming in 1989; one bank was closed and two were merged.
Hungary (1987–present)	State and private commercial banks.	Eight banks, accounting for 25% of financial system assets, became insolvent. At the end of 1993, 23% of total loans were problematic. There have been 2 depositor runs.
Indonesia (1992–present)	State-owned and private banks.	Nonperforming loans, which were concentrated in state-owned banks, were over 25% of total lending in 1993 but declined to 12% in September 1995. A large private bank was closed in 1992.
Japan (1992–present)	Commercial and saving banks, *jusen*, credit cooperatives, and life insurance companies.	In early 1996, the Ministry of Finance estimated problem loans at around 8% of GDP. A regional bank and several credit unions failed in 1995, and there were depositor runs at some of the credit unions. Many of the larger banks declared losses for 1995–96.

Table 3 *(continued)*

Country	Institutions Affected	Description of Problems
Kazakstan (1991–95)	Most private commercial banks, but especially formerly sectorally oriented banks.	Forty percent of assets are to be written off; 80% of banks would be insolvent if all loan losses were written off.
Kuwait (1990–91)	Entire financial system.	A large part of the private sector's loan portfolio became nonperforming due to the loss of property and collateral.
Latvia (1995–present)	Large and small private banks.	The publication of audited reports in April 1995 revealed that two thirds of the audited banks recorded losses in 1994. Eight bank licenses were revoked in 1994, and 15 more were revoked during the first seven months of 1995. The subsequent closure of the largest bank (with 30% of deposits) and 2 other major banks triggered a banking crisis in the spring of 1995. A decision has been taken to liquidate the largest bank (subject to court approval), and several banks, including a few large ones, have had their licenses revoked.
Lithuania (1995–present)	Large and small banks.	Of 25 banks, 12 small ones are being liquidated and 4 larger ones do not meet the capital adequacy requirements. The fourth largest bank was closed. The operations of 2 banks, which accounted for 15% of deposits, were supported in 1995. There were large-scale deposit withdrawals at the end of 1995 and beginning of 1996. A restructuring plan is under consideration.
Malaysia (1985–88)	Commercial and cooperative banks, finance and insurance companies, illegal deposit-taking institutions.	The largest domestic bank wrote off nonperforming loans equivalent to approximately 1.4% of GDP in 1983. During 1985–86, there were sporadic bank runs and a number of deposit-taking institutions failed. The authorities intervened in 3 banks, 4 finance houses, 24 deposit-taking institutions, and 14 insurance companies. Nonperforming loans were estimated at 32% of total loans in 1988.
Mexico (1994–present)	The entire financial system.	The ratio of nonperforming to total loans rose from 9% at the end of 1994 to 12% in December 1995. The authorities intervened in 2 banks in September 1994, and 4 of the remaining 35 banks (which held 17.5% of total assets at the end of 1994) in 1995. An additional 2 were taken under the administration of FOBAPROA (the deposit insurance agency). Several banks placed

Table 3 *(continued)*

Country	Institutions Affected	Description of Problems
		subordinated obligations of mandatory conversion with FOBAPROA to meet their minimum capital requirements and to repay external credit lines; the latter were fully amortized by September 1995. The government, through FOBAPROA, assisted the recapitalization of some banks by purchasing problem portfolios at their accounting value net of loan-loss provisions. At the end of 1995, 19% of the bank loan portfolio was restructured into long-term loans denominated in inflation-indexed units. The overall cost of the several programs to support the banking system is estimated at 6.5% of GDP.
Norway (1987–93)	Commercial and savings banks, credit cooperatives, and finance companies.	Six percent of commercial bank loans were nonperforming. Heavy losses and insolvencies led to a crisis at the end of 1991. The government became the principal owner of the 3 largest banks, whose share of total commercial bank assets was approximately 85%.
Pakistan (1980–present)	Mainly state-owned banks.	The banking system is financially vulnerable because of a high proportion of nonperforming loans—estimated to be 10% of bank assets.
Paraguay (1995–present)	Banks and finance companies and illegal deposit-taking institutions.	The authorities invervened in 4 private banks (out of 35), a savings and loan, and 3 finance houses, accounting for some 10% of financial system deposits, during the summer of 1995. There have been interventions in 6 other finance companies since then. Depositor restitution and operations to facilitate borrowing by distressed institutions cost an estimated 4% of GDP by the end of 1995.
Philippines (1981–87)	The commercial paper market, investment houses, commercial and rural banks, a development bank, and thrift institutions.	Rural and thrift banks accounting for 1.6% of banking system assets failed in 1981, owing in part to the effect of a confidence crisis sparked by fraud in the commercial paper market that also resulted in bank runs and the failure of several investment houses. Through the mid-1980s, 3 private commercial banks, 128 rural banks, and 32 thrift institutions failed; 2 other private banks were taken over by government financial institutions. The largest commercial bank, which was state owned, and the Development Bank were bailed out; their nonperforming assets, which were transferred

Table 3 *(continued)*

Country	Institutions Affected	Description of Problems
		to a government agency, accounted for nearly 30% of total banking assets. In 1986, 19% of loans were nonperforming.
Poland (1991–present)	State and private commercial banks, cooperative, and specialized banks.	Sixteen percent of loans were classified as losses, 22% as doubtful, and 24% as substandard in 1991.
Russia (1992–present)	Most domestic banks.	Over 2,500 banks have been established since 1992. In 1994, 110 banks were closed and 96 were closed in the first 8 months of 1995. Official estimates of loan arrears were 40% of total credit to the private sector at the end of 1995.
Spain (1977–85)	Small, medium-sized, and new commercial and industrial banks.	From 1978 through 1982, 110 banks, accounting for 20% of deposits, were rescued. In addition, in 1983 one group that controlled 100 enterprises and 20 banks was nationalized.
Sweden (1990–93)	Started at finance houses and spread to banks and mortgage institutions.	Eighteen percent of total unconsolidated bank loans were reported lost (on a consolidated basis the figure was 13%), although the loss is likely to be less than 10% after recoveries and the sale of collateral. The 2 main banks were assisted.
Tanzania (1988–present)	Domestic state-owned banks, and the local Meridien subsidiary.	State-owned commercial banks, accounting for over 95% of the system, were insolvent. Between 60% and 80% of all loans were nonperforming, and the losses of the largest bank were equivalent to 70% of deposits at the end of 1994. The government contributed to recapitalizing this bank and to the reorganization of the second largest bank between 1993 and 1995. There was a run on a small state bank in 1994, which subsequently failed in 1995. The Tanzanian subsidiary of Meridien BIAO also failed in 1995.
Thailand (1983–87)	Finance companies, securities companies, and commercial banks.	Fifteen percent of bank assets were nonperforming. There were runs during the crisis of 1983–85 and 15 finance companies failed. More than 25% of the financial system's assets were affected. Through 1987, 25 institutions were closed, 9 were merged, and 18 supported.
Turkey (1994)	State and private commercial banks, unlicensed fringe institutions, and stockbrokers.	Depositor runs in the spring of 1994 resulted in the closure of 3 medium-sized banks. To stem further runs, the government introduced full-deposit insurance in May 1994.

Table 3 *(concluded)*

Country	Institutions Affected	Description of Problems
United States (1980–92)	First thrifts and credit unions, then commercial banks.	During the period, 1,142 savings and loan (S&L) associations and 1,395 banks were closed; 4.1% of commercial bank loans were nonperforming in 1987.
Venezuela (1994–present)	Commercial banks and financial groups.	In 1993, 8.5% of loans were reported as nonperforming before the crisis started. The authorities intervened in 13 of 47 banks, which held 50% of deposits, in 1994. These included 3 of the 4 largest banks. An additional 5 banks were subject to intervention in 1995. Support by the government and the central bank to the banking system amounted to almost 17% of GDP in 1994–95.
Zambia (1994–present)	Domestic commercial banks, including local Meridien subsidiary.	One of the largest commercial banks, the local Meridien BIAO subsidiary, failed in early 1995 and received official support equivalent to approximately 1.5% of GDP. Two small banks failed in late 1995; 2 other small banks are experiencing liquidity, and possibly solvency, problems. Other banks are also considered to be fragile.

[1] Years in parentheses denote the period of banking problems.

in this volume in subsequent tables, which catalogue the factors (structural, macroeconomic, and microeconomic) that contributed to their banking sector problems, and the repercussions for monetary, fiscal, and exchange policies and the real economy.

Economic Conditions and Sound Banking

Banking system soundness reflects in large measure the health of the economy. In a weakening economy, there may be few new bankable projects. Business and household borrowers and even the government may have difficulty in servicing their existing loans. Financially and operationally fragile enterprises, with high debt, low profitability, and declining markets, will have reduced ability to service their loans and responsiveness to interest rates.[12] Thus fluctuations in real sector conditions, particularly in the enterprise sector, have an immediate impact on banking system soundness through the quality of loan portfolios; loan losses in turn reduce the level of bank capital and reserves (net worth). The country cases presented in Table 4 include many instances of recessions in the period leading up to banking sector problems.

[12] See Kneeshaw (1995) and Sundararajan (1995).

Table 4. Shifts in Macroeconomic Policy and Conditions[1]

Argentina (1980–82): Recession in 1980–82. Fast growth in money and credit occurred as the boom of the late 1970s matured. Substantial real appreciation of the peso and a loss of international reserves preceded the crisis. Inflation was reduced in the early 1980s from the high levels of the 1970s.

(1989–90): Recession in 1988–90. There were strong capital outflows and a sharp devaluation in 1989. The fiscal deficit was high and the government was unable to borrow. There was a hyperinflation from 1989 to July 1990, and a sharp devaluation in 1989.

(1995): Inflation ended abruptly when the exchange anchor was introduced in 1991. Growth started to slow in 1993 and there was a recession in 1995. The public sector borrowing requirement shifted from approximate balance in 1992–93 to a marked deficit in 1994. Strong aftershocks from the December 1994 Mexican crisis were experienced in the capital markets leading to large capital outflows and a loss of excess gross international reserves under the convertibility regime. Interbank interest rates rose from 10% in December 1994 to 65% in March 1995. Some political uncertainty preceded elections in May 1995.

Bangladesh (1980s–present): Droughts and floods were factors, as was political unrest. Inflation reached double digits, and interest rates became negative in the early 1980s. Inflation was reduced from 1988 to 1994.

Bolivia (1994–present): Hyperinflation in 1985, since reduced; the economy has since stabilized with moderate economic growth but rapid credit growth. Dollarization reached 90%. Interest rates doubled, while U.S. rates were falling, and spreads were high. There was a flight to quality, although the Mexican crisis had little effect.

Brazil (1994–present): Monthly inflation fell dramatically from an average of almost 45% a month during the second quarter of 1994 to 3.3% by August 1994 with the adoption of the Real Plan. Since then, the monthly inflation rate has remained low, averaging below 1% in the first quarter of 1996. Economic activity surged in the second half of 1994 and first quarter of 1995, but as a result of restrictive policy measures, growth was 4.2% in 1995 as a whole. Monetary and credit aggregates increased substantially in the second half of 1994 owing to remonetization in the economy as a result of the sharp fall in inflation rates. There was a strong spillover from the Mexican crisis that began in December 1994. There had been large capital inflows prior to and following the introduction of the Real Plan, but they reversed to strong outflows during the Mexican crisis. In May 1995, the inflows began to increase again and international reserves increased by US$13 billion in 1995. Monetary conditions tightened in 1995. Interest rates increased in real terms in the first half of 1995 reflecting the government's economic policies to cope with the overheated economy and the increase in risk following the Mexican crisis, but they declined throughout the second half of the year and continue to decline in 1996.

Chile (1981–86): From 1974, there was determined stabilization through tight monetary and fiscal policies and, from 1977, through a predetermined exchange rate that was eventually fixed in 1979. As a result, inflation declined sharply but the real exchange rate appreciated noticeably. Credit to the private sector rose sharply before the crisis. Beginning in 1979, massive capital inflows led to a substantial accumulation of private foreign debt. From 1981, the price of copper (Chile's main export) collapsed, while international interest rates rose. Imports surged and the current account deficit rose to

Table 4 *(continued)*

14% of GDP in 1981. In 1982 foreign capital inflows shrank to less than 30% of the amount received in 1981; there was a recession from 1982–83.

Czech Republic (1991–present): Inflation rose to 57% in 1991 but fell to 10% by 1994; there was a deep recession from 1991 to 1993. Capital inflows were spurred by bank inefficiencies in intermediation, which kept spreads high, and by an unwillingness on the part of domestic banks to lend long term.

Egypt (1991–95): The economy was initially overregulated; the move toward a decentralized and outward-oriented economic structure started from 1991. Gradual stabilization was achieved with a drop in the inflation rate and a reduction in the fiscal deficit. Exchange rate depreciation in 1991 contributed to significant commercial bank losses.

Estonia (1992–95): Trade with the Soviet Union was lost in 1990 and there was a terms of trade shock. Monetary policy was tightened and a currency board was instituted to end the posttransition inflation. There was a sharp recession in 1992 and the beginning of 1993.

Finland (1991–94): Lower interest rates and rapid credit growth led to a real estate bubble and overheating of the economy in 1988, during which monetary policy was constrained due to the exchange rate regime. Monetary tightening started in 1989. A tax reform that limited the deductibility of interest payments, coupled with high debt burdens, burst the bubble and caused a recession in 1990–93. Trade with the Soviet Union collapsed in 1990, and the economy suffered from a worldwide recession during the Persian Gulf war. The currency depreciated sharply in November 1991 and from September 1992 to early 1993, leading to defaults by businesses with foreign currency obligations.

France (1991–95): There was a real estate boom followed by an economy-wide recession in 1992–93; a real estate depression in 1992–95; and low inflation, but high unemployment and fiscal deficit.

Ghana (1983–89): Severe weather induced fluctuations in agricultural output (e.g., drought in 1982–83 and flooding in 1989). There is high exposure to price fluctuations in commodities such as gold and cocoa. Controlled interest rates were negative in real terms until 1983. An economic reform program was put in place from 1983, and there were sharp exchange and interest rate adjustments in 1983–87. Ad hoc monetary measures were implemented, including a demonetization of notes, a freezing of large accounts, and the recall of certain loans. Credit rose sharply before the crisis, then fell.

Hungary (1987–present): There was a severe recession in 1991–93. The current account deficit was almost 10% of GDP in 1993–94 and the external debt rose from an already high level. The high inflation that followed the transition was reduced. Strict bankruptcy laws were introduced in 1992. The fiscal deficit grew to 8% of GDP in 1994 and a crawling peg was introduced in March 1995. There was heavy foreign borrowing by enterprises in 1994–95 and strong capital inflows in the second half of 1995.

Indonesia (1992–present): Money and credit grew quickly after liberalization in 1988–89; they were severely tightened in 1991–92. Periodic surges in capital inflows complicated monetary management. The interbank rate rose from 10% to 16% in a strong reaction to the Mexican crisis in early 1995.

Japan (1992–present): Expansionary monetary policy in the late 1980s contributed to bubbles in the real estate and the stock markets. A tightening of monetary policy led to the bursting of the bubbles in late 1990 and a downturn in economic activity.

Table 4 ***(continued)***

Kazakstan (1991–95): The economy was stagnant from 1986–90; there was a drought in 1991 and a sharp decline in the economy in 1991–95. The country exited from the ruble area in late 1993 and the exchange rate fell sharply in 1993–94. Fiscal and monetary policies were tightened in late 1994. Large subsidies to enterprises continued through the end of 1994; however, real interest rates became positive. There were capital inflows in 1995.

Kuwait (1990–91): Banks and the economy were hurt by structural weakness in oil prices. The Persian Gulf crisis from 1990–91 disrupted the economy and destroyed property, including bank collateral.

Latvia (1995–present): A terms of trade shock and a collapse of eastern markets occurred early in the transition. Banks' profit margins on trade financing declined as a result of price liberalization in Russia. Inflation was reduced from almost 100% in 1992 to 26% in 1994.

Lithuania (1995–present): The economy lost most of its Soviet trade in 1990 and experienced a sharp rise in energy prices to world levels. There was a recession in 1991–93. Expansionary monetary policy and supply shortages led to hyperinflation in 1992–93, which was reduced to 30–35% a year in 1995.

Malaysia (1985–88): Fast money and credit growth and a fiscal deficit of 20% of GDP in the early 1980s spurred inflation and price bubbles in the stock and real estate markets. The countercyclical policy led to a recession in 1985–86 and the bubble burst. Inflation was reduced to less than 1% in 1985. The slowdown resulted in a contraction of cash flow; corporate deposits fell by 19%. Oil and other commodity prices fell sharply in 1986. Real estate prices declined by 60–70% in 1986 relative to 1983. The terms of trade deteriorated sharply and the ringgit depreciated 17%.

Mexico (1994–present): During 1994, events such as the uprising in Chiapas in January, the assassinations of presidential candidate Colosio in March and of the secretary general of the ruling party in September, and a second Chiapas uprising in December, contributed to an environment of considerable political uncertainty. On December 20, 1994, the Mexican authorities widened the exchange rate intervention band that had been in place since late 1991. Two days later, as capital outflows persisted, the exchange rate was allowed to float. This was followed by a sharp depreciation of the peso and an increase in interest rates, accompanied by an abrupt downturn in the economy. The peso depreciated from MexN\$3.94 per U.S. dollar (prior its floating) to MexN\$7.60 per U.S. dollar in mid-March 1995. Short-term interest rates rose from 14% in 1994 to around 50% in 1995, reaching a peak of 85% in mid-March. GDP, which grew 3.7% in 1994, was expected to decline by about 6–8% in 1995. At the beginning of 1995, banks faced problems in rolling over foreign currency deposits and other short-term lines of external credit. The government had to amortize a substantial amount of short-term debt (Tesobonos) indexed to the U.S. dollar.

Norway (1987–93): Capital inflows were strong until the oil price decline in 1986. Tax reform occurred in the late 1980s. There was a credit explosion in the mid-1980s financed by foreign borrowing and central bank credit. A low interest rate policy was maintained. The exchange rate depreciated during and after 1986. Following the decline in oil prices, the bubble burst, and credit to the private sector fell in 1987. There was a recession from 1989–91.

Table 4 *(continued)*

Pakistan (1980-present): The economy has been highly regulated. Interest rates were decontrolled in 1995. There has been slow progress in fiscal consolidation. A recent devaluation caused losses on account of foreign exchange cover equivalent to 0.25% of GDP.

Paraguay (1995–present): No significant shocks.

Philippines (1981–87): The ratio of credit to GDP experienced a sustained increase before the crisis. The world recession from 1980–82 hurt bank borrowers. The balance of payments crisis of October 1983 spilled over to the banking system, with the announcement of a moratorium on external debt payments provoking panic and runs. The exchange rate depreciated during the crisis.

Poland (1991–present): The hyperinflation that followed the transition ended in 1990–91, and the fiscal deficit was reduced. There was a recession in 1990–91.

Russia (1992–present): Following the collapse of the former Soviet Union and the end of central planning, there was a sharp decline in economic growth and lax demand-management policies were adopted. The liberalization of prices in 1992 resulted in an abrupt jump in the domestic price level. The collapse of the ruble zone in early 1993 resulted in a sharp deterioration in the terms of trade and a collapse in trade flows. In 1994 and 1995, macroeconomic policies were tightened, resulting in a reduction in inflation and increased exchange rate stability.

Spain (1977–85): Oil price shocks in 1973 and 1980 hurt this oil importing economy. The death of General Franco in 1975 gave rise to some political uncertainty. Monetary policy was tightened to reduce inflation. Industrial production fell from 1975 to 1978 and again in 1981. Real interest rates rose to high levels after having been negative. Share and real estate prices fell from 1974–81.

Sweden (1990–93): There was a large increase in credit following liberalization in 1985. There were capital outflows from 1988 to 1992. Inflation was cut sharply early in the 1990s, ending a real estate boom; real estate prices fell up to 50% in a short period. Tax reform contributed to the decline in real estate prices. The ERM (exchange rate mechanism) crisis in 1992 led temporarily to very high short-term interest rates that hurt banks.

Tanzania (1988–present): The economy was highly controlled until the mid-1980s. The financial sector was nationalized after 1967. Inflation was high; the exchange rate became overvalued; and real interest rates were negative from 1971 until 1988. Stabilization and structural reform programs began in 1986.

Thailand (1983–87): Credit grew very rapidly until there was a slowdown in economic activity in the 1980s.

Turkey (1994): Several years of increasing macroeconomic imbalances contributed to banking losses. High and rising fiscal deficits and an appreciating real exchange rate resulted in a rapidly increasing trade deficit, buildup of foreign debt, high inflation, and high real rates of interest. There was an exchange and financial market crisis during the early part of 1994, followed by a major depreciation of the currency. In April 1994, the government introduced stabilization and structural adjustment policies.

United States (1980–92): The Federal Reserve shifted from targeting interest rates to reserves in October 1979, which began the process of curtailing inflation in the United States. Interest rate ceilings, phased out in 1978–83, contributed to poor banking

Table 4 *(concluded)*

practices. Interest rates, which had been negative in real terms, rose to high real levels and became volatile in the early 1980s. The thrift industry was rendered market-value insolvent almost overnight, and the international debt crisis affected major money center banks. Oil price fluctuations contributed to booms and collapses in oil producing and consuming regions. There were recessions in 1980, 1982, and 1990–92. A silver crisis in spring 1980 caused problems for some U.S. banks. The decline in commodity prices caused bank failures in agricultural states in the early to mid-1980s. The exchange rate appreciated until 1986, hampering exports; thereafter the dollar declined until 1995. Tax reform in 1986 limited the deductibility of interest payments, reducing incentives for borrowing. The Persian Gulf war accelerated the decline that was beginning in the property markets in the early 1990s, while hurricanes and floods presented additional challenges to banks in affected regions. Political and tax preferences for housing encouraged an overexposure to the real estate industry.

Venezuela (1994–present): Oil prices declined after the Persian Gulf war ended. There was political unrest in 1992–94. Fiscal deficits spurred high inflation in the early 1990s, but recession in 1993–95 led to a decline in the asset price boom. Expansive monetary policy allowed negative real interest rates in 1994–95, coinciding with a large fiscal deficit. The external situation deteriorated with capital flight and exchange rate depreciation in 1994. Confidence declined further following political disruption and bank failures. Spillover from the Mexican crisis that began in December 1994 hurt domestic banks.

Zambia (1994–present): Fiscal and monetary tightening in 1992 led to a reduction in inflation. Indirect instruments of monetary policy were introduced in late 1992. The exchange rate was allowed to float in 1993. Prolonged drought exacerbated economic problems.

[1] Years in parentheses denote the period of banking problems.

Bank difficulties associated with business cycles or other temporary effects can often be managed within the context of an appropriate cyclical macroeconomic policy. In some cases, however, the fundamental banking sector weaknesses exposed by a cyclical downturn are too severe to be redressed solely by an economic upturn. For example, recent banking problems in Japan were linked to the bursting of the asset price bubble in 1990 and exacerbated by the prolonged recession. The cyclical downturn helped to reveal, but was not the principal cause of, the weaknesses in bank balance sheets. It is now recognized that simply waiting for the economy to grow out of the problem is unlikely to be sufficient without additional measures to restructure and recapitalize banks. Asset price declines, particularly in real estate, also played a role in the Nordic countries, the United States, and Venezuela.

Beyond the general difficulties of operating in a weak economy, macroeconomic shocks often contribute to bank unsoundness. Table 4 summarizes economic shocks experienced by the 34 sample countries. Sharp

changes in relative prices can present problems to enterprises and to their banks. Economies in transition have undergone dramatic shifts in relative prices, which contributed to enterprise insolvencies and bank unsoundness. The rise in oil prices in the 1970s and early 1980s damaged oil import dependent businesses and countries, and their banks; the decline in oil prices beginning in 1986 contributed to recessions and bank failures in oil exporting countries (e.g., Nigeria and Norway); and in 1981, the collapse in the price of copper contributed to bank problems in Chile.

Shifts in the terms of trade have contributed to banking difficulties in many countries, including Chile in the early 1980s, Malaysia in the mid-1980s, and the countries of Eastern and Central Europe, the Baltics, and the former Soviet Union in the early 1990s. Finally, major changes in an economic system can lead to the disappearance of markets or sectors, which will present problems for enterprises, traders, and their banks. The demise of the Council for Mutual Economic Assistance (CMEA) had severe effects on both member countries and their nonmember trading partners (such as Finland).

Noneconomic shocks, such as wars or severe weather (droughts, floods), may have an adverse economic impact. Table 4 indicates a number of instances in which such events have contributed to banking sector difficulties in the sample countries.

Monetary Policy Instruments

The monetary instruments used to implement policy will also have effects on the banking system. The absence of a properly functioning lender-of-last-resort facility can distort the smooth functioning of payments systems and drive illiquid banks into insolvency through a fire sale of assets. Credit or interest rate controls can compel banks to hold unremunerated excess reserves, constrain bank liquidity management, and result in disintermediation, reducing banks' client base and profitability. Required reserves that are not remunerated at market rates constitute a tax on the banking system, and a large increase in nonremunerated required reserves may force banks to execute sudden portfolio adjustments that might affect their solvency and liquidity.[13] Similarly, high liquidity ratios that are used as a means to finance budget deficits at below-market interest rates also constitute a tax on the banking system and can result in a widening of interest rate spreads, increased bank lending rates, and disintermediation.[14]

[13] See Marston (1996).
[14] See Gulde (1995).

In part reflecting the concern for soundness of money markets and banking systems, monetary operations typically strive to implement policy through smooth adjustments in instruments that avoid high volatility in interest rates. The development of market-oriented financial instruments, such as treasury bills, can facilitate liquidity management by banks, but, where treasury bills are widely held by nonbanks, may increase pressure on banks' deposit base and expose market risks. Thus, the management of bank soundness during a transition from direct controls to indirect monetary instruments, and during the subsequent operation of market-based instruments, poses unique challenges for each country.[15]

Fiscal Instruments

Fiscal policy instruments may affect bank profitability and incentives to recognize loan losses on the banks' books in a timely manner. Tax systems that do not allow banks to deduct loan-loss provisions or that define earnings to include interest accrued on nonperforming assets effectively tax nonexistent profits, decapitalizing banks. Systems that include bank-specific taxes, or taxes on bank-provided financial instruments and transactions (such as taxes on checks or on bank debits) impose a burden on intermediation that can both weaken banks and reduce their role in the economy. Sharp changes in taxation, such as rescinding the tax deductibility of interest payments, can affect asset prices and the ability of borrowers to service loans. Such fiscal innovations, if inappropriately sequenced, may jeopardize bank liquidity and solvency, as was the case in several Nordic countries and the United States.[16]

Governments frequently use banks as a source of finance, through reserve requirements or required holdings of government securities; if these assets do not pay market rates, bank earnings suffer. In addition, some governments have imposed quasi-fiscal roles on both the central bank and commercial banks, particularly state-owned banks, in the form of programs of directed credit at below-market interest rates, portfolio restrictions, and regulations covering credit allocation, interest rates, and bank branching. These typically weaken banks (and sometimes the central bank) and have contributed substantially to systemic unsoundness in many countries.

Exchange Rate Policy

The effects of exchange rate policy vary across sectors. A prolonged overvaluation will be detrimental to export sectors, while a prolonged

[15] See Alexander, Baliño, and Enoch (1995) and Sundararajan (1995).

[16] See Drees and Pazarbaşioğlu (1995), and Table 4.

undervaluation will negatively affect sectors reliant on imports. The primary impact on bank profitability of the level of the exchange rate will be through the performance of borrowers although there may be some impact on banks' foreign exchange services or trading.

Exchange rate shifts also have different effects across sectors. The impact of a significant change in the exchange rate will usually worsen the financial condition of some borrowers and increase the number of nonperforming loans. The impact on banks may be compounded if regulations and management practices have not limited banks' direct and indirect foreign exchange risk exposure. Exchange rate shifts played a role in many of the 34 countries in our sample (Table 4).

Exchange rate instability and high levels of uncertainty negatively affect bank operations. Uncertainty linked to the Mexican financial crisis of 1995 in turn triggered financial problems in several Latin American countries and placed stress on banking systems in other emerging markets far removed from the crisis.[17] Unstable or deteriorating conditions are often accompanied by sharp increases in real interest rates, reflecting increased risk premiums. Exchange rate policies, often coupled with political concerns, may induce capital flight and bank runs. Expectations of a devaluation can cause disintermediation as depositors shift to foreign currency. Dollarization, which reached 90 percent in Bolivia, for example, can limit the effectiveness of domestic monetary policy instruments. Furthermore, while extensive dollarization of domestic intermediation may appear to reduce exchange risk, this is often only at the expense of increased credit risk, which will surface when a depreciation impairs borrowers' ability to service their foreign-exchange-denominated loans.

Overall Policy Stance

The macroeconomic policy stance will affect banks directly and via the real sector. Restrictive policies tend to have an immediate negative effect on the banking system, particularly if banks are already unsound. A relaxed policy that accommodates inflation may improve bank profitability but carries its own risks. When stabilization is finally implemented, banks are likely to find the adjustment difficult.

While sound banks should have sufficient balance sheet flexibility to adjust to changes in liquidity conditions, a sharp monetary contraction could trigger liquidity crises among unsound banks, which in turn could lead to or reveal insolvency. For example, the U.S. monetary contraction beginning in 1979 sparked the savings and loan (S&L) crisis. Banks will also be affected by a rise in interest rates or a change in the slope of the

[17] See Folkerts-Landau, Ito, and others (1995), and Rojas-Suárez and Weisbrod (1995b).

yield curve, to the extent that the rates banks pay to acquire funds adjust at a different pace from the yields of the assets banks hold. Interest rate increases will eventually be passed through to borrowers, but this will increase banks' credit risk as some borrowers, particularly highly leveraged borrowers, will be less able to service their loans at the higher rates. To the extent that a monetary tightening slows economic growth, the cyclical effects discussed above will come into play.

Experience has shown that although a loosening of monetary policy could be to the advantage of banks in the short term, an excessively loose policy may contribute to asset price bubbles and inflation and to future banking system problems. Rapid expansion of domestic credit tends to result in increased lending to high-risk sectors and to distort asset prices. Rapid growth in banking system credit relative to GDP was observed prior to financial crises in Argentina (1981), Chile, Colombia, Finland, Japan, Mexico, Norway, Sweden, and Uruguay.[18]

Banks can usually mitigate the impact of high inflation on their own profitability by indexing lending rates and shifting into assets whose prices lead inflation, such as foreign exchange. However, bank income under such circumstances is often derived from the float on payments, from the inflation tax collected on nonremunerated demand deposits (net of reserve requirements), and from foreign exchange dealing. These earnings may be unsustainable, particularly when inflation declines. Furthermore, bank portfolio risk is likely to increase.

High inflation or exchange rate variability, or both, reduces the quality of information provided by interest rates and goods prices. High interest rates during inflation may exacerbate the moral hazard and adverse selection problems inherent in bank lending. Uncertainties associated with inflation also erode the information base for business planning and credit appraisal (see Appendix I).

Prolonged macroeconomic instability and persistently inflationary policies will exact a toll from the economy, by, among other things, distorting bank operations and eroding the real value of bank capital. However, the transition to a more stable environment may not be easy for the banking system. Stabilization preceded episodes of unsoundness in Chile, Malaysia, and Finland, among other countries.[19] Where previously expected inflation has been incorporated into investment decisions, a rapid reduction in inflation will leave those forecasts unmet and borrowers unable to service their loans. Furthermore, after banks have adjusted their operations to inflationary conditions, macroeconomic stabilization may have a significant impact on bank profitability. A decline in inflation

[18] Hausmann and Gavin (1995).

[19] Garcia (1995).

deprives banks of inflation-linked sources of earnings. Instead, banks must rely increasingly on traditional intermediation, focusing on loan and client assessment.

The required transition in bank operations takes time, is difficult to manage, and has contributed to systemic banking problems in a number of countries. High inflation in Russia resulted in underemphasis on credit analysis and overemphasis on foreign exchange speculation. Tightening of monetary conditions in early 1995 reversed the gains in foreign currency positions and made default by marginal borrowers more likely as loan principal was no longer eroded by inflation.[20] Banks in Brazil experienced similar difficulties in 1995 owing to the reduction in income associated with the inflation tax. Brazilian banks seemed to have successfully adjusted to a high-inflation environment; however, the recent decline in inflation revealed underlying weaknesses in some banks' balance sheets and credit assessment. A significant reduction in the rate of inflation appears to have been a factor in 21 of the problem cases listed in Table 4.

These observations do not constitute an argument to retain persistently inflationary policies. Rather, they show that the mix of policies to reduce inflation has implications for bank unsoundness. The type of monetary tightening and the mix between interest rate and exchange rate policies may affect banking soundness, depending upon initial balance sheet exposures. For example, a steep rise in interest rates (or reduction in domestic liquidity) can result in a sharp decline in asset prices. As noted above, significant declines in asset prices were contributors to banking problems in the United States, Japan, the Nordic countries, and elsewhere. On the other hand, operating through the exchange rate could achieve a tightening of monetary conditions with perhaps a more attenuated effect on domestic asset prices, but would negatively affect banks to the extent that they have uncovered foreign asset positions. Regardless of the specifics of a banking system's exposures, an adjustment program that relies too heavily on monetary restraint could place excessive demands for swift adjustment on banks. In particular, a policy stance in which tighter monetary policy is used to compensate for unconstrained fiscal imbalances is likely to strain the microeconomic foundation for monetary policy, the banking system.

[20] See Jaffee and Levonian (1995).