

ECONOMIC COMMENTARY

Federal Reserve Bank of Cleveland

The Hidden Costs of Mexican Banking Reform

by William P. Osterberg

Analyses of the Mexican financial system in the wake of the 1994–95 peso crisis have generally focused on the fiscal costs of recapitalizing the nation's banks and of satisfying bank claimants. Seemingly missing from these reports are the possible costs of the incentives provided by banking reform. Such costs might be reflected in the prices at which Mexican banks attract funding or the likelihood that taxpayers will have to provide additional assistance.

Mexico's current economic conditions imply an important role for banking policy in the recovery. Since the implementation of the February 1995 assistance package, the U.S. government has been paid back and Mexico has been able to borrow again. However, as indicated in figure 1, banks continue to face a heavy burden of past-due loans.¹ While Mexican banking reforms and commitments to overhaul the financial system have been praised by analysts, the eventual cost of these efforts could easily exceed recent estimates.²

Although the financial press has acknowledged that higher interest rates increase total costs (by affecting debtors' ability to roll over debts), specific banking reform packages may have additional costs if they create expectations of future government aid. Furthermore, if monetary policy becomes oriented toward providing short-run assistance to the banking sector by lowering interest rates, it may jeopardize the enhancement

of banking skills and thus increase the possibility of dependence on future government aid.

This *Economic Commentary* emphasizes how incentive effects can drive up the cost of banking reform and ultimately boost the cost of resolving Mexico's debt problem. The first part of the article reviews the recent peso devaluation and crisis and discusses how monetary policy may become distorted to protect the banking system.³ The remaining sections highlight aspects of Mexico's previous banking reforms to show how incentives are affected, and examine the costs associated with several features of the reform efforts.

■ Exchange Rate Policy and the Mexican Banking System

The likely costs of Mexican banking reform cannot be assessed without discussing exchange rate policy. On the one hand, exchange rate policy constrains the resources available to Mexican authorities. On the other hand, the international value of the peso reflects the fiscal consequences of banking reforms. For example, if the peso were perceived to be overvalued, pressure might build for a tighter monetary policy or a reduction in fiscal expenditures. Either way, the banking system could be affected. In the former case, interest rate changes could influence bank profitability. In the latter case, expenditures on programs to modernize the banking sector or to support bank creditors might be included in the budget cuts.

Observers acknowledge that improvements in Mexico's economic conditions hinge on the latest banking reforms being successful but not too costly. However, the ultimate cost of the reform efforts will depend on monetary policy restraint and behavioral responses to the reforms. If interest rates are lowered to help the banks, or if banks expect continued government assistance, the final cost could easily exceed recent estimates.

Conversely, the credibility of any banking reform plan is relevant to assessing its likely cost. If reforms are not perceived as extensive enough, observers might anticipate an easing of monetary policy. Thus, a lack of credibility in the reform effort could negatively impact the peso.

In 1994, a combination of higher U.S. interest rates and Mexican political turmoil highlighted this connection.⁴ Because the Banco de Mexico (BOM) was committed to maintaining the announced value of the peso, when investors began liquidating their peso-denominated investments and demanding currencies such as the U.S. dollar, the BOM had to use its dollar reserves to buy the pesos.

In this case, maintaining a policy of sterilization (preventing the currency transaction from changing the Mexican money supply) would keep interest rates from rising and the money supply from falling. Higher interest rates, however, might have stemmed the outflow of funds from Mexico, and lowering the money supply might have reassured investors of the monetary authorities' resolve to fight inflation. Here, the fragility of the Mexican banking system may have played a crucial role by increasing the likely cost of boosting interest rates. Figure 2 confirms that interest rates did not rise until reserves had been depleted and the exchange rate regime had been abandoned.⁵

Although the BOM does not currently fix the value of the peso, any efforts to moderate exchange rate movements by intervening in the foreign exchange market bring up the same dilemma (see box). Sterilizing an intervention to maintain the money supply affects interest rates.⁶ Thus, the current fragility of the Mexican banking system could create another problem for monetary policy. Lowering interest rates might temporarily help commercial banks burdened with past-due loans by making their customers more willing to roll over debts. Increasing the money supply to lower interest rates might temporarily make it easier for loans to be paid back. However, this would weaken the credibility of the BOM's resolve to control infla-

BANKING AND BALANCE-OF-PAYMENTS PROBLEMS

Several countries have experienced a repeated pattern of banking and balance-of-payments difficulties, and the perception that Mexico might have been following the same path could have concerned investors when the crisis developed in 1994.^a If evidence indicates that a similar cycle is in fact emerging in Mexico, policymakers' task will become more difficult.

A familiar pattern is that a persistent current-account deficit, financed by capital inflows (borrowing from the rest of the world), pushes up currency values. These higher values, when combined with slowly falling domestic inflation, threaten export growth. The capital inflows fuel a boom in bank lending for consumption, but may not boost investment enough to improve productivity significantly.

Ultimately, the current account deficit may be perceived as unsustainable, or the real exchange rate may be perceived as too high. In this situation, a variety of events could precipitate a crisis. In 1994, Mexican political uncertainty arising from the assassinations of three prominent leaders may have precipitated a crisis by weakening confidence in the BOM's ability to maintain economic progress.

In Mexico and some other countries where balance-of-payments and banking crises have gone hand in hand, maintenance of announced exchange rate targets required government purchases of the foreign currency that was pouring in. Then, neutralizing the impact of such purchases on the domestic money supply through sterilization would increase interest rates and possibly damage the banking system.

a. These similarities are discussed in Graciela Kaminsky and Carmen Reinhart, "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems," Board of Governors of the Federal Reserve System, unpublished manuscript, February 10, 1996. The authors find that in 18 of 25 financial crises, financial liberalization preceded each episode by five years or less.

tion, and the pattern of late 1994 and early 1995 might be repeated, leading to interest rate changes and damaging the nation's banks. On the other hand, it might be hard to buy credibility for a monetary policy which keeps rates so high that costly problems persist in the banking system.

Using monetary policy to assist banks facing high levels of problem loans might also ultimately impede the development of banking skills. If the central bank lends to commercial banks to fund projects that are not profitable enough, inflation will result when the creation of credit is not matched by an increase in output.⁷ Such lending weakens banks' incentives to enhance their ability to distinguish between good projects and bad ones. To avoid the temptation to make problem loans, commercial banks can be encouraged and aided in developing the

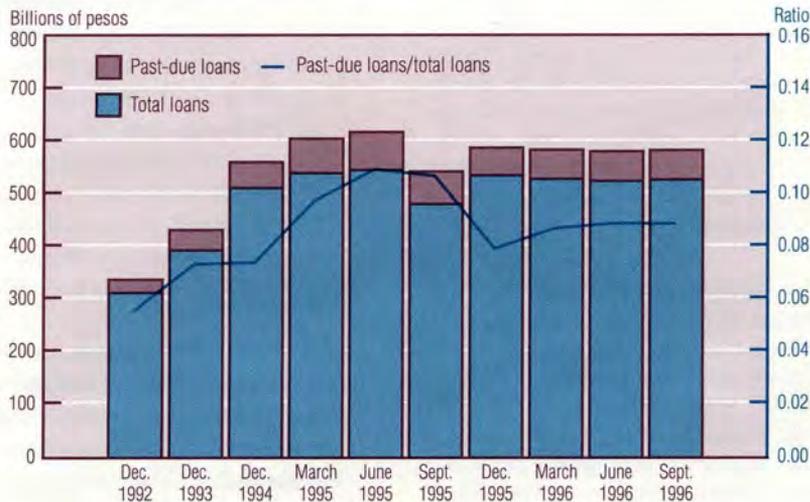
skills necessary to evaluate the riskiness of borrowers and of outstanding loans. This may involve training bank personnel or improving data collection and reporting.⁸

■ Some Legacies of Mexican Banking Reforms

Certain aspects of previous Mexican banking reforms are relevant to assessing the ultimate cost of the current efforts.⁹ First, to the extent that current reforms are viewed as repeating past patterns of government involvement in banking, they may strengthen bankers' (or borrowers') expectations that the government will save them from bankruptcy. The perverse incentives that this would create could ultimately increase costs.¹⁰

A relevant precedent might be the Mexican government's response to the debt crisis and peso devaluation in the early

FIGURE 1: MEXICAN LOANS



SOURCE: Comision Nacional Bancaria y de Valores.

FIGURE 2: FOREIGN EXCHANGE RESERVES AND M1



SOURCE: Banco de Mexico.

1980s. In September 1982, banks were nationalized and an array of exchange controls were enacted. In combination with relatively high reserve requirements, interest rate controls, and forced lending from the banks to the government, these policies had the effect of substituting the credit judgments of the central bank and the government for those of commercial banks.¹¹

The second reason to consider the history of Mexican banking reforms is that,

like the liberalization efforts of the early 1990s (which were designed to increase market discipline), current reform efforts could place new strains on bank supervision. The relaxation of interest rate controls (1988–89) and the privatization of banks (1990) were intended to promote the development of banking skills. However, as the chief of Mexico's national banking commission has noted, "Supervision was not precise enough to be able to accurately assess the new risks [of changed markets]."¹²

Recent Initiatives

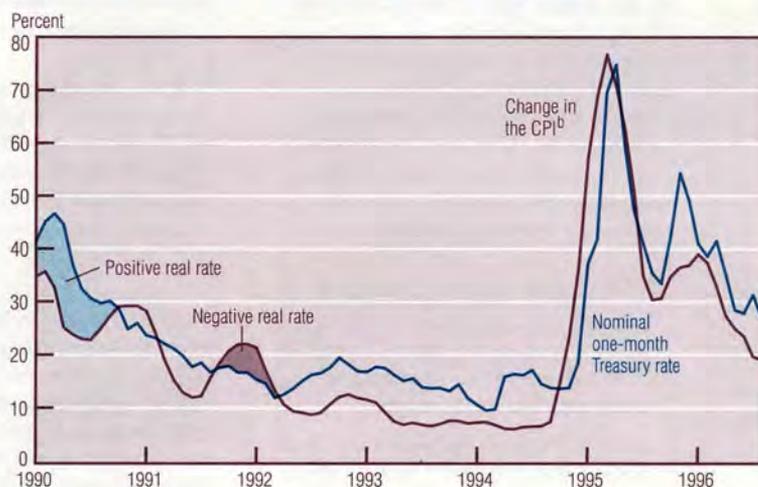
Skyrocketing interest rates in late 1994 and early 1995 worsened the already weak condition of Mexican banks by making it more difficult for them to fund existing portfolios and for borrowers to make loan payments. After the initial rescue package was announced in March 1995, the Mexican government initiated a series of programs to help both banks and debtors. Although some aspects of the reforms might reward banks for improved risk management, bank debtors or investors might also expect the government to further absorb risk.

The Mexican deposit insurance fund, Fondo Bancario de Proteccion al Ahorro (FOBAPROA), was bolstered by the Mexican government and international financial institutions in order to provide funding to clean up troubled banks. One of its major roles has been to provide funds to buy bad loans from banks in amounts equal to twice the new equity injected by owners. FOBAPROA has also funded a foreign exchange window to help Mexican banks meet their obligations denominated in foreign currencies without the market being alerted.¹³

The Programa de Capacitacion Temporal (PROCAPTE) was a temporary program administered by FOBAPROA to recapitalize banks. Banks with capital ratios below the 8 percent threshold were required to issue subordinated debt to FOBAPROA in exchange for bad loans. The debt converts into equity after five years, and banks cannot take on more debt until FOBAPROA has been repaid. If the bonds are not paid off in five years, the government then owns the bank, which would presumably be sold. The bank remains in charge of managing the loans. However, payments by FOBAPROA remain outside the bank while the loans are being resolved, so that only in an accounting sense does the capital position improve.¹⁴ Both FOBAPROA and PROCAPTE are viewed as having initially stabilized conditions in the Mexican banking system.

A third program was conceived to help banks reduce their inflation risk. Eligible bank loans are placed in a trust, their maturity is lengthened to as much as

FIGURE 3: REAL ONE-MONTH TREASURY RATE^a



a. The real Treasury rate equals the nominal rate minus the change in the Consumer Price Index (CPI).

b. Annualized rate of change based on six-month moving average.

SOURCE: Banco de Mexico.

12 years, and their denomination is changed to Unidades de Inversión (UDIs), which are peso-denominated but linked to Mexican consumer prices.¹⁵ The program was slow to be accepted, and was extended from consumer and commercial loans to mortgages and local government problems. The Mexican Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, or CNBV) also announced that \$5.57 billion would be made available for restructuring real estate debt, with banks asked to reduce interest rates and to extend payment periods.

In August 1995, a fourth program was announced. The Acuerdo de Apoyo Inmediato a Deudores de la Banca (ADE) was designed to help borrowers and banks agree on debt restructuring. Under its terms, individual loans would be renegotiated, with rate reductions subsidized by the federal government, and banks would agree to suspend all repossession and collection efforts. Debtors' organizations have opposed the effort and have pushed for debt moratoriums.¹⁶

Several other efforts have also been unveiled. The Mexican accounting system is being replaced by one consistent with Generally Accepted Accounting

Principles (GAAP), and consumer databases will be established to help banks better track and evaluate consumer credit risk. Training programs for bankers and supervisory and regulatory personnel are also planned. All of these efforts will ultimately make Mexican banks more attractive to purchasers, and regulatory changes have smoothed the way for foreign banks to participate in such transactions.

■ What Determines the Total Cost of Rescuing Banks?

A July 1996 estimate by the CNBV placed the fiscal cost of bailing out the banking sector at 135 billion pesos, excluding the ADE program, which was paid for from the 1995 fiscal surplus.¹⁷ Bad debt remaining on banks' books was estimated at 152 billion pesos as of March 1996, or roughly 18 percent of banks' total portfolios. An October 1996 estimate by Standard & Poor's put the cost of the total effort at 12 percent of 1996 GDP.¹⁸

Although the growth rate of bad-debt portfolios has slowed and bank capital ratios have risen, serious problems remain. Particular concerns have been voiced about consumer credit card debt and the burden on banks to make provisions for problem loans.

While the overall thrust of the reform efforts has been praised by many observers, the eventual cost of the programs may be higher than estimated. Analysts have generally focused on two reasons for this: 1) Higher interest rates or abrupt exchange rate changes could burden debtors further, and 2) the condition of Mexican banks is obscured by differences between their current accounting principles and GAAP, a standard more familiar to Western investors.¹⁹ However, as I emphasize below, the total cost will also be influenced by moral hazard and by any efforts to use monetary policy to protect banks from higher interest rates.

Moral hazard arises if creditors, anticipating that the government will absorb future banking losses, undertake riskier investments, which then lead to further government assistance. Some aspects of the current reforms are clearly designed to control moral hazard. For example, under PROCAPTE, banks must learn to manage bad debts or risk being taken over by the government. Also, the conversion to GAAP will make it easier for foreign investors to identify well-run banks.

Other aspects of the reforms, however, could induce moral hazard. For instance, the general extension of debtor aid programs throughout the economy might encourage some debtors to hold out for government assistance. Or, if investors interpret the government's willingness to absorb some of banks' foreign exchange risk as signaling it will do so again in the future, banks might not be penalized by the market for taking on such risk.

Finally, any efforts by the central bank to ease monetary policy and thus smooth the road for banking reform may also prove costly. Keeping interest rates low may appear to reduce the costs of reform. However, such a policy could risk more than a repetition of the previous crisis. Any inflation created may mask the true state of banking skills. At some point after sufficient progress has been made against inflation and banking conditions have begun to rebound, it could be tempting to ease

monetary conditions.²⁰ Figure 3 shows the recent history of the Mexican real one-month Treasury bill (CETES). Skyrocketing real rates in early 1995 precipitated a banking crisis. Negative real rates might imply that inflation is temporarily benefiting banks. For example, loans being used simply to finance inventory accumulation could be profitable even without any value being added to the inventories.²¹

■ Summary

The fragility of the Mexican banking system may have played a crucial role in the peso crisis of 1994–95. Under the previous exchange rate regime, monetary policy was oriented toward controlling the exchange rate. Sterilizing an intervention influences interest rates for the sake of neutralizing the impact on the money supply. Although the exchange rate is no longer fixed, there may be a continuing temptation to modify monetary policy for the sake of propping up banks. Such a policy not only risks a further loss of confidence in the peso, but in the long run it may also inhibit banks from utilizing or developing banking skills.

Analysts have praised most of the reform packages designed to address the burden of bad debt, although the total cost of these packages may exceed recent estimates. In this article, I have stressed that the ultimate cost will depend not only on the uncertain course of interest rates, but also on monetary policy and the behavioral responses to these programs.

The health of the Mexican banking system ultimately hinges on banks no longer expecting or relying on government assistance. Some aspects of the current reform efforts help in this regard. Other features, however, have only short-run benefits and might be viewed by some as repeating previous government intervention in banking, which could increase costs in the long term.

■ Footnotes

1. See Stephen Fidler, "Concern over Credit Health of Mexican Banks," *Financial Times*, August 2, 1996, p. 5. At first glance, the past-due loan ratios in figure 1 do not seem dramatically higher than U.S. rates (approximately 5 percent in the third quarter of 1996). However, accounting differences greatly complicate the comparison. (This point is discussed in more detail later in the paper.)

2. Estimates vary from 6 to 12 percent of 1996 GDP.

3. The Banco de Mexico administers the nation's deposit insurance system.

4. A variety of factors have been cited as contributing causes of the crisis. A good survey of the literature is provided in Marco Espinosa and Steven Russell, "The Mexican Economic Crisis: Alternative Views," Federal Reserve Bank of Atlanta, unpublished manuscript, February 1996. See also Jeffrey Sachs, Aaron Tornell, and Andres Velasco, "The Mexican Peso Crisis: Sudden Death or Death Foretold?" Columbia University, working paper, April 1996.

5. One recent study argues that Mexican monetary policy preceding the crisis was not different from past policy, and that increases in money demand (and the unforeseeable role of Tesobonos) complicated the BOM's job. See Steven Kamin and John Rogers, "Monetary Policy in the End Game to Exchange-Rate-Based Stabilizations: The Case of Mexico," Board of Governors of the Federal Reserve System, International Finance Discussion Paper No. 540, February 1996.

6. In a previous *Economic Commentary*, I discussed the choices facing the BOM during the period of capital inflows and upward pressure on the peso. See "How Important Are U.S. Capital Flows into Mexico?" December 1, 1994.

7. This point is emphasized in Lilia Rojas-Surez and Steven Weisbrod, "Financial Fragilities in Latin America: The 1980s and 1990s," International Monetary Fund Occasional Paper No. 132, October 1995.

8. Policymakers may want to consider both enhancing banking skills and giving bankers the necessary incentives to utilize their skills.

9. A more thorough review of previous Mexican banking reforms is provided in John H. Welch and William C. Gruben, "A Brief Modern History of the Mexican Financial System," Federal Reserve Bank of Dallas, *Financial Industry Studies*, October 1993, pp. 1–10.

10. A relevant concept here is moral hazard, which might be defined as actions taken by economic agents to maximize their own utility to the detriment of others in situations where the agents do not bear the full consequences of their actions. See *The New Palgrave: A Dictionary of Economics*, New York: Stockton Press, 1987, pp. 549–51.

11. A large government budget deficit may have strengthened the government's incentive to reduce its borrowing costs through various interferences in the banking industry. For details, see Robert R. Moore, "The Government Budget Deficit and the Banking System: The Case of Mexico," Federal Reserve Bank of Dallas, *Financial Industry Studies*, October 1993, pp. 27–36.

12. Eduardo Fernandez, quoted in Michael Tangeman, "The Once, and Future, Banking Crisis?" *Institutional Investor*, vol. 29, no. 11 (November 1995), pp. 119–25.

13. Such uses of FOBAPROA are reflected in monthly movements of Mexico's foreign exchange reserves. As of mid-1996, FOBAPROA's portfolio of loans amounted to \$13.8 billion, 92 percent of which was commercial loans.

14. Several banks have succeeded in repurchasing the subordinated debt and then instituting their own recovery programs. Often, PROCAPTE has been utilized by banks that were subsequently sold to foreign interests.

15. The trust is funded by banks' contributions of 15 percent of the eligible loans and by government bonds. Banks receive non-negotiable, nonindexed, zero-coupon government bonds, which are redeemed as the loans are repaid.

16. The original enrollment deadline was October 31, 1995, and the original renegotiation deadline was January 31, 1996. However, by October 31, 1995, only 60 percent of the eligible debtors had signed up, so enrollment was extended to January 31 and renegotiation to April 30.

17. As reported in "Crisis Was Bigger than Portrayed: CNBV Figures Out Banks' Past-due Portfolio at US\$ 20BN," *Latin American Weekly Report*, July 25, 1996, p. 333.

18. See "Mexico: More Time and Money Needed," *Financial Times*, October 28, 1996, p. 3. By way of comparison, another study estimates that the present value cost of U.S. savings and loans closed between 1980 and 1992 was \$130 billion. This would equal 2.5 percent of 1992 U.S. GDP. See James Barth, Carl Hudson, and John Jahera, "S&L Closures and Survivors: Are There Systematic Differences in Behavior?" in *The Causes and Costs of Depository Institution Failures*, Norwell, Mass.: Kluwer, 1995, pp. 9-27.

19. These differences are discussed in "Recovery Predicted for Mexican Banking at Cost to Government of up to \$8 Billion," *BNA Banking Daily*, July 3, 1995.

20. A future test of this possibility may arise as a result of the UDI program, which combines lengthening maturities and long grace periods in order to push the largest interest and principal payments into the future.

21. See Guillermo A. Calvo, "Financial Aspects of Socialist Economies: From Inflation to Reform," in Vittorio Corbo, Fabrizio Coricelli, and Jan Bossak, eds., *Reforming Central and Eastern European Economies: Initial Results and Challenges*, Washington, D.C.: World Bank, 1991, pp. 197-205.



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