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FINANCIAL SECTOR ASSESSMENT MEXICO

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LATIN AMERICA & THE CARIBBEAN REGION VICE PRESIDENCY
FINANCIAL AND PRIVATE SECTOR DEVELOPMENT VICE PRESIDENCY

BASED ON THE JOINT IMF-WORLD BANK FSAP UPDATE REPORT

I. INTRODUCTION

1. **This Financial Sector Assessment (FSA) summarizes the structural and developmental aspects of the 2006 FSAP Update report for Mexico.** The stability and prudential oversight aspects of that report, including the ROSCs and their findings, are summarized in the FSSA that was discussed by the IMF Board, as part of the Article IV Consultation, in September 2006. *This FSA should be read together with the FSSA in order to get a full sense of the findings and recommendations of the 2006 Mexico FSAP Update.*[1]

2. **The 2006 exercise for Mexico updated the financial sector assessment that was concluded in March 2001.** A joint IMF-WB team visited Mexico from February 22 to March 7, 2006.[2] Its findings and recommendations were thoroughly discussed with the authorities in a wrap-up session at the end of the mission. The diagnosis and assessment of the FSAP Update, and hence this FSA, are based on information as of March 2006.

3. **The 2001 FSAP found that the Mexican financial system was on the path towards greater resiliency to shocks and enjoyed an increasingly favorable environment**

[1] Specifically, the topics covered in the IMF's FSSA but not covered at all in this FSA are the following: (i) the analysis of financial system stability, including the evolution of financial soundness indicators and the approach to and results from stress testing; and (ii) the assessment regulation and supervision specific to banking, insurance, securities markets, payment systems, and anti-money laundering, including the report on the observance of the standards and codes (ROSCs) that were undertaken under the FSAP Update (see paragraph 4) and are associated with these financial sub-sectors. In respect to regulation and supervision, this FSA does cover the assessment of the organizational arrangements for financial system oversight.

[2] The Mexico FSAP Update team gratefully acknowledges the excellent hospitality, cooperation, and openness of the Mexican authorities and technical counterparts. The FSAP Update mission was co-led by Augusto de la Torre (World Bank) and Alfredo M. Leone (IMF), and included Jorge Cayazzo, Jorge Chan-Lau, Marco Espinosa, Jan Woltjer (all IMF), Mario Guadamillas, Britt Gwinner, Gregorio Impavido, Emanuel Salinas, Constantinos Stephanou (all World Bank), Ruth de Krivoy (former Governor of the Central Bank of Venezuela), and Solange Bernstein (Superintendent of Pension Funds Administrators of Chile), Jonathan Katz (formerly with the U.S. Securities and Exchange Commission), Rudolph Zepeda (U.S. Federal Reserve Bank of Atlanta). Pierre Papadacci (IMF/STA), Martin Naranjo (World Bank Office in Mexico), and Sonia Echeverri (Administrative Assistant, IMF) assisted the mission.

for its development. This was all the more notable against the background of the 1994-95 Tequila crisis and its aftermath and was a reflection of sound macroeconomic policies, major progress in systemic bank restructuring, and strengthened economic links with the United States. The banking system was not found to pose a risk to financial stability, but it needed to resume lending to the private sector. The 2001 FSAP took place at an important juncture for the development of the financial sector, with major legal reforms under consideration.

4. **At the same time, a number of issues were identified in the 2001 Mexico FSAP that needed to be addressed by the authorities.** There were no clear rules to prevent a troubled institution from having access to the BOM's liquidity support. There was no system of prompt corrective actions and the framework for bank resolution needed substantial reform. There were deficiencies in the strategic role, operations, and financial performance of development banks, which the authorities were addressing through legal, regulatory, institutional, and governance reforms. The existing framework for housing finance required a major overhaul. Financial sector supervision required further strengthening and the regulatory framework was being moved toward best international practices. Regulatory agencies lacked adequate autonomy, and further improvements were needed in the coordination of day-to-day supervisory activities, the regulatory field for financial services across institutions, and the disclosure practices of some entities.

5. **At the request of the authorities, the 2006 FSAP Update had a broad coverage** related to the particular juncture in Mexico—the transition to a new administration. This justified an Update that would, on the one hand, assess the progress in the financial sector reform agenda implemented over the past six years and, on the other hand, identify reform gaps and priorities that could be addressed by the incoming administration. The full FSAP Update documentation, on which this FSA is based, includes:

- The Aide Mémoire, summarizing the Update findings and recommendations;
- Technical background notes on selected topics (namely, Evolution of Financing to the Private Sector; Housing Finance Markets; Pensions and Annuities; Organizational Arrangements for Financial System Oversight; Derivatives Markets; Stress Testing and Risk Management Practices in the Banking System; and Strategic Issues in Development Bank Reform); and
- Principle-by-principle reassessments of Observance of the Basel Core Principles for Effective Banking Supervision and the IOSCO Objectives and Principles of Securities Regulations, as well as an Update of Observance of the CPSS Core Principles for Systemically Important Payments Systems.

6. **This FSA is organized as follows**. Section II describes the macroeconomic and institutional situation at the time of the Update. Section III evaluates the evolution of financing to the private sector. Section IV explores ways to view competition issues in payment services and credit markets. Section V covers organizational arrangements for financial sector oversight. Section VI discusses derivatives markets. Section VII reviews banking safety net arrangements. Section VIII looks at issues in private pensions, insurance and annuities. Section IX assesses housing finance markets. And section X discusses strategic issues in the reform of development banks. Appendix 1 provides a list of acronyms.

Appendix II contains the detailed FSAP Update recommendations. Appendix III summarizes financial sector reforms adopted between 2001 and 2006. Figures and Tables begin on page 40. The FSAP Update Key Recommendations are summarized in Box 1 below.

Box 1. Key FSAP Update Recommendations

- Reinforce the monitoring of credit risks associated with consumer and mortgage lending. ST
- Further strengthen consolidated supervision of financial conglomerates. ST
- Reassess the mandates, functions, and instruments of development banks. ST
- Establish full autonomy of supervisory agencies, subject to adequate accountability. MT
- Establish plans for orderly consolidation of mortgage Sofoles once the SHF stops second-tier lending to them. MT
- Maintain the 2009 sunset date for the state-owned SHF second-tier lending to fund middle- and high-income housing. MT.
- Introduce interagency contingency planning and develop internal protocols regarding emergency liquidity assistance. ST
- Promote greater competition among different credit providers by the timely collection and disclosure of standardized interest rate indicators for different loan products; and improve the registry systems and contract enforcement environments across state jurisdictions. MT
- Carry out self-assessment of SIAC and SPEI regarding observance of the CPSS CPSIPS. Also, carry out self-assessments of the SIDV and the two Central Clearing Counterparties (CCPs) regarding observance of CPSS/IOSCO recommendations. ST
- Promote competition on net returns in the private pension system and resolve the impasses regarding disability benefits that have stalled the development of the annuities market. MT
- Consider market discipline-supporting measures for deposit insurance such as a reduction in coverage and the charging of risk-based premiums. MT
- Establish an effective framework for the liquidation of banks and enable partial deposit transfers under the Purchase and Assumption (P&As) bank resolution procedure. ST
- Seek a suitable formula to improve the financial condition of the Institute for the Protection of Bank Savings (IPAB), including the transferring of its debt to the federal government. MT
- Further foster cooperative agreements to enhance the achievement of economies of scale in retail payments infrastructures. MT
- Move to up-front subsidies (instead of interest rate subsidies) in INFONAVIT housing loans to low income households and redirect the mandatory contributions that workers now make to INFONAVIT towards their Afore-administered pension fund accounts. MT
- Consolidate and further reform the development banks towards development agencies focused on promoting the sustainable development of efficient and accessible financial markets. MT

ST = Short term
MT = Medium term

II. Macro and Institutional Setting for the 2006 FSAP Update

7. **Reforms over the last decade have strengthened economic fundamentals and contributed to a more stable economy, but growth has not risen to a higher path.** Fiscal consolidation reduced the gross public sector debt to GDP ratio to below 45 percent by end-2005. Inflation fell to less than 4 percent, in the context of a flexible exchange rate system. These improvements contributed to Mexico's achievement of investment-grade rating, uninterrupted access to capital in international markets at low cost, and resilience to shocks, including the spillover effects of the Russian crisis. However, Mexico's growth has been uneven and relatively low in per capita terms. In effect, after a recession in 2002–03, real GDP growth rose to 4.2 percent in 2004, declined to 3 percent in 2005, and the consensus forecast sees growth at close to 4 percent for 2006.

8. **The financial system is diverse in terms of types of institutions but dominated by large foreign-owned financial conglomerates.** Since the 2001 FSAP, the financial system trend toward conglomeration has intensified in a highly internationalized financial system. Large, multinational financial groups that are involved in virtually all the salient lines of financial business (banking, insurance, asset and fund management, brokerage, pension fund administration, etc.) dominate the Mexican financial landscape. However, large conglomerates are not dominant in all sectors, including importantly insurance. Commercial banks account for 49 percent of financial system assets (Figure 1) and the banking system is concentrated (the three largest banks accounting for close to 60 percent of banking assets) and highly internationalized (foreign-owned banks represent close to 80 percent of all banking assets). Development banks, privately managed pension funds (AFOREs), and mutual funds account for 13, 13, and 11 percent, respectively, of financial system assets. Insurance, non-deposit taking credit institutions (Sofoles), and other non-banks are making important strides and jointly account for the other 14 percent. In the last two years, private banks have acquired some mortgage Sofoles.

9. **Helped by good macroeconomic policies, sound oversight, and a favorable external environment, the Mexican banking system has increased its resilience to adverse shocks.** Capital adequacy, provisioning, and profitability (as well as other financial soundness indicators) are strong and are considered to be sufficient to sustain severe shocks and adverse scenarios regarding credit and market risks. However, given the very fast growth in consumer and mortgage lending (consumption and mortgages), the authorities are aware of the need to strengthen their monitoring of the credit risk associated with these segments. The local currency bond market has developed considerably, helping minimize currency mismatches in the system. Derivative markets have grown significantly (both the organized and the over-the-counter markets) allowing better management of market risks.

10. **The institutional framework for financial markets and their oversight has strengthened considerably.** Over the past 6 years, a prominent role was assigned to financial reform in line with the 2001 FSAP recommendations (see Appendix III). Key objectives of this reform were to:

- promote domestic savings, particularly popular and long-term savings;
- further strengthen financial system regulation and supervision;

- accelerate the modernization of the financial services industry;
- facilitate the reactivation of bank credit;
- deepen domestic stock and bond markets;
- modernize development banks; and
- consolidate the reformed pension system (second pillar).

As a result, by the time of the 2006 FSAP Update, overall transparency, including accounting and disclosure standards in the financial system, had vastly improved. This, together with the limitation of the previously unlimited guarantee on bank liabilities, had significantly boosted market discipline. The quality and effectiveness of regulatory and supervisory framework had registered remarkable improvements, although, as discussed below, some issues remain regarding the distribution of regulatory functions, coordination, and regulatory and supervisory gaps. Compliance with international standards and codes improved significantly. Discussions with supervisors and market participants suggest that financial institutions have in place the required information technology infrastructure, appropriate internal controls, and know-how to manage risks in derivatives books. Regulation and supervision of derivatives activities follow international standards and good practices.

11. **As concerns for financial system stability have eased, policy attention has increasingly turned toward issues of competition, efficiency, and access.** Mexico no longer faces a shortage of loanable funds—domestic financial savings as measured by M4a rose by about 11 percentage points of GDP between December 2000 and December 2005. While the bulk of the expansion in domestic loanable funds was channeled to public sector debt instruments, in line with a massive shift in government borrowing from international to local-currency markets (which has reduced the vulnerability to shocks of the government's liability portfolio), the quantity and, especially, the quality of formal financing to the private sector has risen over the past five years (see below). While financial system stability and soundness has improved considerably, significant efficiency and access problems remain. Large parts of the population have no bank account and in some rural areas no banking infrastructure exists at all. Access to credit markets is segmented with varying degrees of competition for different segments of lending—with SMEs, small farmers, and low-income households being the salient underserved segments. Competition problems affect the retail payments sector as well as the pension industry, as discussed below. Understandably, therefore, policy priorities have shifted away from short-term stability concerns to longer-term developmental concerns.

III. Evolution of Financing to the Private Sector

12. **Debt financing to the private sector (excluding non-performing loans) has begun to increase relative to GDP over the past six years.**[3] The total of foreign- and domestic-funded debt financing to the private sector (excluding NPLs) increased by almost 2 percent of GDP between 2000 and 2005 (Figure 2).[4] The domestically-funded portion of that

[3] Given the marginal contribution of equity financing to the private sector, the analysis in this section focuses on (external and domestic) debt financing to firms and households.

[4] Lack of adequate time series data on the financial condition of the corporate and household sectors has restricted the analysis in this section to a mostly supply-side perspective.

financing increased much more, by almost 4 percentage points of GDP since 2000. To gain a better understanding of the underlying trends, note that the size of restructured performing loans was significant in the early part of the period,[5] which partly masks the strong underlying growth in housing finance since 2003. Excluding all restructured loans (non-performing as well as performing), the stock of total debt finance to the private sector rose by about 5 percent of GDP during the 6-year period ending in 2005. Domestically-funded consumer and housing finance expanded significantly in the more recent part of this period, while the total (i.e. domestic and foreign) debt financing to firms marginally declined in terms of GDP. This latter phenomenon in part reflects a vigorous de-leveraging by firms and bad loan write-offs by banks that took place in the earlier part of the period.

13. **Importantly, the quality of debt financing improved remarkably.** NPLs declined (from over 5 percent of GDP in 2000 to below 1 percent in 2005Q3) while loan origination standards and credit-risk management have vastly improved—in tandem with an increase in foreign ownership of the banking sector and the significant strengthening in prudential oversight and credit infrastructure (including legal reforms on collateralized lending, and the extensive use of the credit bureau). The development of new mass retail credit products by financial institutions has lifted credit constraints for many households. Domestic corporate bond markets have taken off, allowing (large) companies to issue debt securities domestically in local currency with long maturities and affordable (often fixed) interest rates.

14. **The supply of financing has shifted toward domestic nonbank providers** from foreign funding sources (bond issuance abroad and cross-border bank lending). Private sector financing from foreign sources decreased by 2 to 5.4 percent of GDP over the 2000-2005 period, while financing from domestic private sources rose by about 1 percentage point to nearly 13 percent of GDP (Figures 3 and 4). The increase is particularly pronounced for Sofoles, whose portfolio more than tripled in real terms over this period, albeit from a low base. At the same time, a favorable macroeconomic environment, combined with strong institutional investor demand (particularly from defined-contribution pension funds) and important capital markets reforms (e.g., the introduction of the *certificado bursátil*, a versatile bond contract that allows ample flexibility to determine amortization schedules, covenants, and restrictions, and provides strong assurances regarding legal enforceability), has led to a near-doubling, again from a small base, in the financing to the private sector provided via the domestic bond market. INFONAVIT's mortgage portfolio also grew significantly over this period (68 percent in real terms) from a higher base.

15. **The amount of financing to the private sector that is funded by the public sector has risen**, although it is relatively small compared to financing from private sources and INFONAVIT, a congressionally chartered housing fund. While development banks have generally moved from first- to second-tier lending, their funding (direct and indirect) of credit to the private-sector increased by about 1 to 2.6 percent of GDP between 2000 and 2005 (Figure 4). Part of this increase was due to a larger volume of partial credit guarantees, used by development agencies and banks to promote lending to underserved sectors (e.g.,

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[5] A large share of the restructured loans dates back to government-sponsored programs introduced after the 1995 Tequila crisis to avoid further deterioration of banks' loan portfolios and to protect borrowers. See "*Policy Responses to the Banking Crisis in Mexico*" (Graf P., BIS Policy Paper 6, August 1999).

SMEs, low-income housing, and agriculture) (Figure 5). Mortgage lending by INFONAVIT is comparatively much larger and rose form 3.8 percent of GDP in 2000 to 5.2 percent of GDP in 2005.[6]

16. **While Sofoles and INFONAVIT dominate the mortgage market, commercial banks have recently re-entered this market.** Sofoles—funded first by FOVI and subsequently by SDF—took a lead in the post-Tequila resumption of housing finance. Mortgage lending by Sofoles rose from 0.4 percent of GDP in 2000 to 1.6 percent in 2005 (Figure 6). Starting in 2003, however, commercial banks started to enter mortgage lending aggressively. Drivers behind the growth of this market include: (1) strong pent-up demand for housing due to demographic changes; (2) lower and less volatile inflation and interest rates; (3) major improvements in the market infrastructure (credit bureau, *Miscelánea de Garantías*); and (4) a broad range of supportive reforms in housing finance, including improved loan collections by INFONAVIT and funding of Sofoles by the SHF.

17. **The strong growth in consumer lending throughout this period has been driven by both demand- and supply-side factors**. Over the past five years, consumer credit has risen from less than 1 to about 3.5 percent of GDP (Figure 7). It has represented the main area of loan growth for commercial banks. Supporting factors have been good macroeconomic performance, underleveraged households (at least initially), strong innovation in banks' financial products and lending technologies (i.e., distribution channels, credit scoring, flexible terms and rates), and the extensive use of the credit bureau, and the entrance of new providers (especially Sofoles).

18. **Available indicators on prices are inconclusive to assess changes in credit affordability, although there remains a significant divergence in rates for similar credit products across lenders.** Limited availability of historical interest rate time series by credit product and the questionable reliability of existing ones, constrain any conclusive evaluation of affordability. Available data suggest that, after an initial decline in early 2001, real interbank interest rates (used to price commercial loans) and credit card rates have not declined significantly. However, longer maturities and durations have become much more available in the debt markets. At the same time, there is strong market consensus that mortgage interest rates have fallen and mortgage maturities have increased considerably since 2000, but an official interest rate series has only recently began to be published. Different lenders (banks, Sofoles, and department stores) charge widely disparate interest rates on similar types of consumer credit (Figure 8), suggesting market segmentation (i.e., limitations on alternative financing sources for low-income versus higher-income households) or insufficient consumer awareness on rates, despite the requirement on lenders to disclose the so-called CAT (total annual cost of credit).

19. **Financing sources outside the domestic (formal) financial system appear to be important, although there are no data to verify this hypothesis**. Mexico's current depth in formal domestic credit to the private sector as a percentage of GDP (below 20 percent) is roughly at par with its historical level during the 1970s and 1980s. This level, however, is

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[6] INFONAVIT is funded by private sector workers' contributions and does not receive resources from the government. Retiring workers can transfer their INFONAVIT's account balance to their retirement account.

low when compared to that in countries of similar per capita income and economic size (Figures 9 and 10). This apparent shortfall might be compensated in part by financing outside the domestic financial system. Examples include the reinvestment of retained earnings, foreign financing,[7] supplier credit,[8] and the numerous providers of unofficial household financing, but a paucity of data makes substantiating this hypothesis difficult.

20. **The prospects for continued private sector financing growth are positive although not uniformly so across all segments.** Barring adverse macroeconomic and external developments, the capacity of the financial system to expand private sector financing and thereby contribute further to economic growth is strong. It is underpinned by well-capitalized and profitable banks; institutional investor assets (which are growing at around 1 percent of GDP per annum); low levels of exposure;[9] and a much improved legal and regulatory framework. However, finance has not been "irrigated" evenly across the private sector and this will not change in the short run. At present, only large creditworthy corporations can tap local and foreign capital markets, while commercial banks prefer mass retail loans to leverage their lending technology platforms and take advantage of economies of scale. Access to finance by small- and medium-size enterprises (SMEs) is hampered by various financial-sector-related and broader structural problems that contribute to opacity and informality, with increase risks and costs.[10] Funding sources outside the domestic financial system may partly fill the SME financing gap, but they tend to be inefficient and costly.

21. **The authorities may wish to consider the following recommendations to facilitate deeper and broader financing of the private sector**. A short-term policy measure would be to promote greater use of the credit bureau for SMEs—in particular by ensuring that the credit history of all SME loans is captured appropriately by the credit bureau.[11] The authorities should promote further improvements in the governance structure of the credit bureaus, to ensure open access subject to basic privacy safeguards. Standardized credit affordability indicators (i.e., interest rate time series by type of loan and by provider) as well as of accessibility indicators (i.e., loan volumes by products, firm size, economic sector and state) should be collected and disclosed.[12] Improved data collection and analysis would help understand the connection between developments in the real sector and financing patterns,

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[7] Foreign (bond and bank) finance for Mexican corporations amounted to 5.4 percent of GDP in 2005, representing about 40 percent of private domestic financing to firms (Figure 11). Some foreign financing has taken the form of supplier credit as a result of the integration of the Mexican manufacturing sector with the U.S.

[8] BOM surveys suggest that 60 percent of firms used trade credit as the main financing source in 2005.

[9] Private-sector financing in the form of loans, bonds, and equity represents below 40 percent and 20 percent of commercial bank and institutional investor assets, respectively.

[10] BOM's data indicate very little change in the relative importance of micro and SME loans in banks' lending portfolio since 2001. However, these figures understate micro and SME finance to the extent that such loans are recorded as corporate credit (in the case of discounting of invoices provided by a large corporation to its SME supplier) or as consumer credit (credit cards given to micro-entrepreneurs).

[11] For instance, loans to SMEs that involve invoice discounting are currently recorded by banks in the credit bureau as loans to large corporations to whom the SMEs act as suppliers.

[12] One issue that will need to be addressed in this connection is the institutional responsibility/mandate for the creation and publication of such indicators. Some indicators of this type are already produced by BOM and CONDUSEF.

the role of financing sources outside the formal domestic financial system, and the nature competition issues in different credit markets (e.g., via a more detailed chart of accounts that would capture bank costs and revenues by loan product). Also, the authorities should evaluate the effectiveness of development banks' support of SME finance, including with respect to the design and targeting of partial guarantees. Longer-term policy recommendations would include further strengthening of public registries of commerce and property and the reduction in their user cost (notaries); stronger and more consistent enforcement of creditor rights across different state jurisdictions; and further simplification of the regulatory environment related to SME lending without unduly compromising prudence. The feasibility of tapping capital markets via innovative SME-loan securitizations should also be assessed in light of the ongoing growth in institutional investor assets.

IV. Competition Issues in Payment Services and Credit Markets

21. **Where economies of scale and network effects dominate, cooperation, interoperability and access to common infrastructures is needed to maximize social benefits.** In payments markets, open access to infrastructures for the interchange and processing of payments can stimulate competition and thus improve the level of services. Open access is also important in credit and pension markets, where key infrastructures include the credit bureaus and the PROCESAR network, respectively. Maximum social benefits are obtained if competition does not limit access to infrastructures and rather focuses on fees, prices, and quality of services. However, in concentrated financial systems such as Mexico's, the dominant, large financial groups may have incentives to limit competitors' access to their networks or to establish "clubish" network arrangements, erecting barriers for nonmembers and their clients.[13] The incentives to limit access to outsiders might be accentuated where the owners of infrastructures are also the main users, as is the case in Mexico with regard to key retail payments networks. A suboptimal equilibrium that may be hard to dislodge would undermine healthy price competition, leading instead to high costs, fees, and/or prices. The remainder of this section focuses on competition issues in retail payments and credit markets. Most of the discussion is qualitative and developed around hypotheses that should be tested through future research, given the scarcity of adequate data, particularly in the credit area.

Competition in retail payments markets

22. **Current indications are that there is no good balance between cooperation and competition in the retail payments area, with banks tending to limit access to infra-structure instead of competing on fees and services.** Large banks can force outsiders to open an account with an exclusive network if they want access to electronic fund transfers

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[13] In the market for credit cards, for instance, the two largest banks issued around 70 percent of outstanding cards in 2005. Moreover, the fraction of the credit card market controlled by the largest four has been above 80 percent recently, reaching 90 percent in 2004. Similarly, five banks have contracts with 93 percent of the retailers who use POS-terminals in their shops, while the two largest banks control around 60 percent of this market. The Herfindahl Hirschman index (HHI) in some financial markets exceeds the limits below which the Mexican Competition Commission is willing to accept mergers without further investigation (see "*The Regulations of Payment Cards: The Mexican Experience,*" José L. Negrin, Banco de México, Review of Networks Economics, Volume 4, December 2005).

(EFT), or payroll or direct debits. Similarly, the use of an ATM of another bank is discouraged by charging a high "foreign fee." Banks tend to make it costly and cumbersome to transfer money to clients of other banks—until recently, they set a relative high interchange fee for interbank transfers and did not include tertiary information in the interbank transfer order. They also forbade clients to fulfill their credit card or mortgage obligations via EFT from an account with another bank. As a result, the development of the market has been hampered.

23. **Against this background, BOM has rightly focused on transparency and access to infrastructures to promote greater competition in retail payments.** Measures have included: (1) publishing fees and commissions charged by individual banks; (2) fostering the use of the common interbank infrastructures by setting standards for EFTs (including tertiary information), abolishing the interchange fee for EFTs and allowing clients to fulfill credit card or interest payment obligations via an EFT from an account with another bank; (3) abolishing limitation on access to switch services for non banking institutions; and (4) enhancing consultations with banks on the methodology to set interchange fees for debit and credit card transactions using the threat of regulation to foster greater competition. Unduly regulating fees and commissions in the complex market can backfire and lead to a misallocation of investments, hampering market efficiency. Until 2005, interchange fees set by banks for credit and debit card transactions at points of sales were based on total sales for each merchant, discriminating thereby against small merchants. The current interchange fee has been reduced and is more uniform (only discriminates by type of business).

24. **The authorities could consider further measures to foster a better balance between competition and cooperation.** These measures would aim at: (1) reducing the role of bank branches in bill payments and remittances, and enhancing the role of nonbank service providers, such as department stores, especially in rural areas; (2) enlarging employees' freedom to choose the bank where they can receive wage payments electronically; (3) eliminating barriers to the provision of services using common platforms, such as direct debits and payroll schemes via CECOBAN; (4) ensuring interoperability between retail payment networks and/or seeking to integrate the different service providers; (5) fostering the adoption of CHIP-NIP technology to promote the use of debit cards in point-of-service (POS) terminals; (6) changing the law to give EFTs the status of legal tender and coordinating with the MOF the substitution of checks with EFTs for social benefits, pensions, and salaries; (7) allowing more financial intermediaries to be direct participants in SPEI; (8) promoting public trust in the use of electronic payments through education and consumer protection programs; and (9) fostering efficient and fair conflict resolution schemes with respect to payment services.

Competition in credit markets

25. **The analysis of competition in different credit markets is hindered by lack of data.** Most of the framework for Mexican bank accounting, reporting, and statistics was designed for prudential and stability purposes, rather than to facilitate the study of efficiency and competition. To be sure, the Mexican banking system is much more transparent now, and information on loan amounts by type, aggregate financial income, aggregate fees, and aggregate costs is readily and publicly available. For instance, the BOM publishes through its

website detailed comparisons of costs of mortgage, consumption, and deposit products. However, finer distinctions are needed to discriminate costs, income, and risks by credit product, so as to follow the patterns of competition in different credit markets. Finer information is also needed to discriminate between market power factors and excessive risk taking behind lending spreads and credit allocation.

26. **Competition issues are different for different credit markets, reflecting the interaction between the institutional matrix, loan technologies, and strategies of credit suppliers.** The institutional matrix, given by the formal and informal rules governing credit markets, is path dependent. It is expressed in a variety of relevant institutional and organizational arrangements, including the infrastructure for writing and enforcing credit contracts, the features of a financial safety net, the framework for bank supervision and regulation, the accounting and informational infrastructure (including credit bureaus). These institutional features interact differently with different loan technologies for different credit products and with the different business strategies of the players in credit supply. Hence, this matrix affects differently the nature and degree of competition in the various credit markets.

27. **Competition in Mexico seems higher in markets that depend relatively less on the quality of the local contract enforcement institutions.** This is clear in the large corporate segment of commercial lending, where the credit market features creditworthy and well-known borrowers, global players, and contestability from the securities markets. In this market, corporate debtors can select the most convenient jurisdiction to finance themselves, which makes the deficiencies in the local credit infrastructure less relevant. In the credit card market, scoring technologies have brought down costs while the absence of collateral requirements implies less dependence on contract enforcement institutions—both factors militate to increase competition. However, competition in the credit card market seems to occur mainly through product differentiation and there appears to be insufficient price competition. The markets for mortgage and car loans, also amenable to credit scoring methods, have benefited from an increase in nondeposit taking intermediaries (i.e., Sofoles) and greater transparency. Competition in these markets appears to be growing.[14]

28. **Conversely, there is significantly less competition in credit markets where the use of the local credit infrastructure cannot be avoided.** The market for SME lending is a salient example. Players in this market are mostly local. Global knowledge and loan technologies are less useful, the costs of gathering information are high, and scoring methods appear less applicable due to SME heterogeneity. Credit contract enforcement and collateral repossession processes cannot avoid the local judiciary and are further hampered by deficiencies in movable property registries and informality.

29. **This said, financial innovation and thinning profit margins in other credit markets can help boost competition in the SME finance market, despite the mentioned**

[14] A modernization of the legal framework for Sofoles and leasing and factoring companies was very recently approved. The changes aim at enhancing efficiency in the supply of credit products through competition. Among other things, this reform allows Sofoles to become multi-purpose societies (i.e., Sofomes). It also permits any non-deposit taking company to carry out credit activities as well as leasing and factoring operations, without having to be subject to banking prudential norms. If the non-deposit taking company is related to a bank group, however, it must comply with all prudential norms applicable to banks.

constraints. For example, credit cards for micro enterprises or electronic factoring of SME claims on large corporations are arguably examples of this type of innovation in Mexico. Credit cards for micro enterprises treat the firm as a consumer to avoid regulatory costs and the contract enforcement infrastructure. Electronic factoring allows the booking of SME receivables as loan exposure to the large corporation that buys products from SMEs. The recommendations discussed in the previous section, regarding the financing of the private sector, apply also to fostering greater competition and efficiency in credit markets.

V. Organizational Arrangements for Effective Financial System Regulation, Supervision, and Financial Sector Policymaking

30. **The organizational architecture for financial system oversight involves several agencies.** SHCP sets regulatory policy for the financial system, particularly license granting and removal for banks. CNBV is the supervisor and issues secondary regulations for banks, other credit institutions, and securities markets. The BOM has regulatory responsibilities, especially regarding money, foreign exchange, and derivatives markets, as well as payment systems and financial operations and product characteristics. CONSAR oversees pension fund administrators (AFOREs) and the CNSF oversees insurance companies. IPAB is the bank resolution and deposit insurance agency that is also charged with disposing distressed assets inherited from the 1994 Tequila crisis.

31. **The 2001 FSAP identified problems of insufficient clarity and duplication in the distribution of regulatory functions across agencies, as well as lack of formal autonomy of regulatory agencies.** The FSAP Update team revisited these issues in an integrated manner. In particular, it evaluated the suitability of the current organizational arrangements and distribution of functions across agencies. It also addressed the issues of autonomy, competencies, and coordination among policymakers (mainly SHCP and BOM), key supervisors and regulators (mainly CNBV, CNSF, and CONSAR—the "Commissions"), and SHF in the case of Sofoles.

32. **Since the 2001 FSAP, the trends toward conglomeration and internationalization have intensified.** Conglomeration and internationalization have profoundly reshaped the Mexican financial market. As noted, substantial portion of financial-sector assets are now being managed by financial groups, mostly foreign-owned.

33. **Substantive progress was made to adapt the arrangements for effective financial system regulation, supervision, and policymaking to the new conditions.** Reforms encompassed legal, operational, information systems, and transparency and information disclosure aspects. The assessment of observance of various international standards reflects the significantly modernized regulatory framework. Coordination among regulatory agencies has also notably improved, including through interlocking boards of the various commissions, day-to-day cooperative interaction among agencies, efforts to increase consistency in regulations across financial entities, and a recent program of simultaneous inspections. Moreover, financial sector reforms introduced in the past six years (described throughout this document) were guided by a clear strategic vision. Important steps have been taken towards consolidated supervision.

34. **However, further reforms are needed for the Commissions to attain full autonomy.** A reallocation of powers and responsibilities would be necessary for the Commissions to have complete operational autonomy over the entire life cycle of regulated entities (licensing, regulation and supervision, and removal of the license). The Commissions' budgets are dependent on, and merged with, budgetary process administered by SHCP. And the heads of the Commissions are appointed by the Executive Branch, via the Minister of Finance. The authorities consider the full political and budgetary autonomy (subject to adequate accountability) of the Commissions as a desirable and healthy objective.

35. **Reforms are also required to implement a full-fledged consolidated supervision of financial groups**. In particular, capital adequacy requirements are set only at the level of individual entities, and not at a consolidated group level, which creates opportunities for arbitrage. Also, simultaneous inspections fall short of truly joint inspections and the figure of lead supervisor does not formally exist.[15] To be sure, conglomerate risks are mitigated by the civil-code based Mexican legal framework which sets out with great precision the permissible activities for each type of financial entity. This creates segmentations that, while hindering synergies and financial innovation, limit conglomerate risks. However, as groups increasingly follow a group-wide strategy, the scope for such risks inevitably widens. Progress towards full-fledged consolidated supervision is hampered by a complex silo-based regulatory/supervisory architecture. Moving towards full-fledge consolidated supervision requires legal reforms to, inter alia: give the regulator the power to presume the existence of a group; set capital requirements for the group as a whole, in addition to its individual entities; strengthen the role and powers of the lead supervisor for the group who should be able to oversee the holding company *and* the individual entities; further eliminate barriers to exchange information; and allow for joint—not just simultaneous—inspections.

36. **Although considerable progress has been made in leveling the playing field and reducing regulatory arbitrage, certain regulatory inconsistencies remain and require attention.** In some cases, different norms apply to the similar financial products. For instance, rules on margin calls are different for banks and securities firms. In the case of derivatives, banks can offer, negotiate, and invest in these instruments on and off exchange, but mutual funds are at present excluded from this market.[16] Similarly, insurance products with a savings component are regulated differently from savings products issued by banks; and mutual fund-like products offered by insurance companies do not seem to follow the segregation rules applicable to mutual funds proper.

37. **Notwithstanding notable advances in simplifying the regulatory/supervisory framework, regulatory compliance costs could be reduced further.** Measures have been taken in order to avoid duplication of reporting requirements from banks and other financial intermediaries. In 2000, BOM, SHCP, CNBV, IPAB, and CONDUSEF (the consumer

[15] The law specifies that a holding company will be supervised by the agency in charge of supervising the preponderant entity of the financial group, as determined by the SHCP. However, the holding company is characterized by a very simple balance sheet and performs no significant financial activity other than being the legal holder of the stock of its members. The agency in charge of supervising the holding company does not have lead responsibility in supervising the members of the financial conglomerate.

[16] Pension funds, however, are allowed to buy and sell derivatives both on exchange and OTC.

protection agency) created the Committee for Coordination between Authorities on Financial Information. The authorities agreed to share their information in order to eliminate duplications of data requirements. Requirements for additional information from any of the members must be first addressed to the Committee to ensure that the information has not already been obtained. The Committee has been working successfully and many financial information reports have been eliminated. Recently CONSAR and the CNSF joined the Committee. However, further improvements would include: (1) avoiding reporting requirements to multiple agencies and multiple officials in the same agency; (2) standardizing reporting forms; (3) minimizing multiple and uncoordinated inspections; (4) improving timeliness in authorization procedures; and (5) streamlining sanctions across the system to ensure a more uniform proportionality between violations and sanctions.

38. **The system of cross opinions on proposed new regulations, which reflects a desire to establish adequate checks and balances, can be simplified and has the downside risk of undercutting the operational autonomy of regulatory agencies.** Most opinions rendered by regulatory agencies on their peer's proposed new regulations are not binding. However, the agency requesting opinions typically would prefer not to issue or amend a regulation in the absence of a favorable opinion. There are no time limits to issue opinions and a general interpretation of administrative silence does not exist. This can in some cases result in delays in issuing new regulations or in clarifying the interpretation of existing laws and regulations. At its worse, the complex process of cross-opinions can lead to paralysis and dilution of responsibilities, unnecessarily hindering the operational autonomy of the Commissions. At its best, cross-opinions can result in actions that have a strong backing of all the agencies involved. There is room to strike a better balance and streamline the system of cross-opinions. Among other things, the authorities should consider introducing deadlines to issue opinions.

39. **The unusually high degree of internationalization of the Mexican financial system puts a premium on cross-border cooperation among financial regulators and supervisors.** Assessing the incentives of foreign shareholders vis-à-vis the Mexican operation; implementing effective group-wide cross-border consolidated supervision; enhancing cross-border supervisory cooperation; and readying for an efficient resolution process in the case of failure of a foreign-owned systemically-important financial group are all critical to the success of the Mexican regulatory and supervisory agencies in discharging their duties. The effectiveness of formal Memoranda of Understanding (MOUs) must be cemented in practice through continuously enhancing the strong working relationships that already exists between Mexican supervisors and their foreign counterparts.[17]

40. **Against this background, a building block or phased approach to the reform of the organizational arrangements for financial system policymaking, regulation, and supervision is recommended.** This final objective should be to attain full autonomy (political, operational, and budgetary) for the Commissions, complemented by strong boards that include independent directors whose terms do not coincide with the political cycle, and

[17] The CNBV maintains MOUs with the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, the New York State Banking Department, the Office of the Superintendent of Financial Institutions of Canada, the U.K.'s Financial Services Authority and the Bank of Spain, among others.

strengthened accountability. Commissions' autonomy imply their separation from SHCP (currently their legal status is that of decentralized agencies—*órganos desconcentrados*—of SHCP). Consideration might also be given to a possible of consolidation in the longer term of the various Commissions into a single financial system oversight institution.

41. **The first phase of the reform could focus on a suitable realignment of powers and responsibilities and on improved coordination.** This would entail transferring many of the regulatory powers currently held by the SHCP to the Commissions, as was done recently for securities markets under the new Securities Markets Law. The three Commissions (CNBV, CNSF, CONSAR) would remain in this phase as decentralized agencies of SHCP. This would reduce the burden of opinions, while remaining opinions would be made more agile by setting deadlines and establishing an "administrative silence regime" that is conducive to action. Since the structure of the Commissions' boards would remain unchanged until they reach full autonomy, improvements in board performance should be sought in this first phase, including via a more active use of board committees to deal with specific topics. To complement these changes, SHCP and BOM should further strengthen their role in financial development and financial stability policy, respectively. BOM, in addition, would evaluate the possibility of discontinuing prudential regulation in areas in which the CNBV has issued its own, and continue its efforts to simplify the regulations it is legally obligated to issue. Finally, the coordination between CNBV, CNSF, and CONSAR would be strengthened through MOUs that set clear responsibilities, accountabilities, and operational rules covering information exchange as well as supervisory decision making and coordinated responses to problems. This could be further enhanced via a formal interagency coordination process conducted through a high-level working group with strong technical support that meets periodically. Board members representing BOM would be called to play a critical role in this process, as their tenure is not determined by electoral cycles.

VI. Derivatives Markets

42. **The 2001 FSAP did not cover the derivatives markets.** The vigorous development since then of these markets warrants an assessment under this FSAP Update.

43. **The most important derivatives market in Mexico is the OTC derivatives market that is fully integrated with the global derivatives market.** Currently, the most traded instruments in this market are currency options, forwards, cross-currency swaps, and peso-denominated interest rate swaps (TIIE-swaps). Currency options have been very popular recently as their costs, as proxied by implied volatility, have been falling continuously since end-2002 (Figure 13). By end-2005, the Bank for International Settlements estimated that the outstanding notional amount in the OTC market amounted to $530 billion. Compared to other Latin American countries, OTC markets in Mexico are inexpensive (Figure 12).

44. **The comparatively much smaller domestic exchange-traded derivatives market, MexDer, offers a number of futures and options.** MexDer—which is less than one-sixth the size of the OTC market—offers futures on equities, equity indices, foreign currencies, and government bonds, as well as options on equities, equity indices, and exchange-traded funds. The derivatives exchange grew rapidly from 2001 to 2004 but the notional outstanding

amount fell by some 50 percent in 2005 when one of the market makers shifted its operations offshore to take advantage of lower costs.

45. **Market participants appear to use derivatives mainly for arbitrage and speculation rather than for investment or hedging purposes.** Both foreign and domestic banks are important players, which may explain why eight out of 10 contracts are held for trading purposes. Long and short positions in futures and options are roughly balanced in both the OTC and ETD markets.

46. **Risk management of derivatives books in financial institutions operating in the Mexican derivatives market appears to follow sound practices.** Although the FSAP team did not conduct an in-depth assessment of these risk management systems and practices, discussions with supervisors and market participants suggest that financial institutions have in place the required information technology infrastructure, know-how to manage risks in derivatives books, and appropriate internal controls. Further validation of this finding is warranted, given the limited time available for the team to conduct its own assessment.

47. **Supervision of derivatives activities appears to follow international standards and good practices.** Financial institutions engaged in derivatives activities must obtain prior authorization from the relevant regulatory/supervisory authorities. In the case of pension funds, the authorization is granted by CONSAR but the operations that can be done have to conform to the authorized practices by the BOM. Although different institutions active in derivatives markets are supervised by different authorities, authorities follow a risk-based approach that requires institutions to be well capitalized relative to their portfolio risks. Substantial information on the risk of financial institutions' portfolios is reported periodically and, in some instances, on a daily basis. Supervisory institutions use in-house models to assess risks and conduct periodic onsite supervisions.

48. **Increased liquidity in the repo market would enhance the efficiency of the interest rate derivatives market and reduce the potential for currency mismatches in the corporate sector.** Illiquidity in the repo market for specific issues has led to the swap curve to trade at wide spreads relative to the peso yield curve, enabling domestic corporations to obtain cheap synthetic dollar financing.[18] Foremost among the reasons for this illiquidity is the fact that only primary dealers on government securities can borrow securities from BOM. Also, institutional investors such as pension funds and insurance companies do not lend securities and mutual funds are prohibited from lending securities. Recent regulatory changes that facilitate repo operations on specific issues and the participation of pension funds in repo and securities lending operations are expected to contribute to increase liquidity in the repo market. Market practice, however, has not caught up with recent regulatory changes and the authorities should consider other measures such as improving primary dealers' contracts. The authorities are aware of this issue and a thorough analysis is currently being carried out by SHCP and BOM to identify further measures.

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[18] These corporations issue fixed rate peso-denominated debt, swapping the fixed rate coupons into TIIE payments using the TIIE swap. A cross-currency swap is then used to swap the TIIE swap payments into U.S. dollar floating rate payments. Finally, a fixed-for-floating interest rate swap is used to transform the payments into fixed U.S. dollar coupons.

49. **Educating the public is necessary to prevent a backslash associated with the use of derivatives.** Inappropriate use of derivatives could lead to large losses in the portfolio value that may be realized if investors are forced to unwind positions. The ensuing public outcry could derail current policy efforts to increase the use of derivatives. CONSAR notes, though, that risk management of pension fund portfolios using VaR (which effectively limits the leverage of the portfolio) and the use of specialized investment staff (they have to pass a certification processes to operate derivatives) reduces the likelihood that pension funds would suffer a large loss because of their use of derivatives.

50. **The tax law could be streamlined to facilitate the transfer of collateral in case of the default of a counterparty to a derivatives transaction.** Unless a trust is established in connection to the transaction (*caución bursátil* or *prenda de garantía*), the transfer of collateral in case of a counterparty default is taxed. Establishing a trust, however, increases transaction costs for contracts written onshore and tilts investors toward the offshore market.

51. **The authorities should foster the emergence of a local credit derivatives market.** Credit derivatives enable investors to gain credit exposure to scarce corporate paper and bank loans and protect their portfolios against credit risk. The authorities should therefore set up the conditions for the development of a credit derivatives market. This would require improving the availability and quality of credit information on corporations, and harmonizing the legal framework governing the recovery process in case of default across states.

52. **MexDer should continue its current efforts to attract more participants.** MexDer is vulnerable to the high concentration of trades among a limited number of participants. Concentration implies that the withdrawal of one market maker could have a negative impact on liquidity and volatility (a happened in 2005) and widens the scope for market manipulation. Measures recently introduced by MexDer should help attract local institutional investors and foreign participants. MexDer, however, should also consider measures to reduce contract costs if it wants to remain an alternative to the OTC market.

53. **Insurance companies should be authorized to use OTC derivatives to hedge their risks, subject to ensuring that these companies have the ability to manage the associated risks and once a suitable regulatory framework is in place.** TIIE swaps can help life insurance companies to better hedge the risks of their long durations liabilities. However, current regulations prevent them from using derivatives other than those listed in organized exchanges. MexDer has introduced an interest rate swap-like product (*engrapado* or *cadena de forwards*) but it is more expensive and less liquid than the OTC TIIE swap.

VII. Financial Safety Net Arrangements

54. **Significant reforms to the banking safety net introduced in 2001 include the revamping of the prompt corrective action regime and the phasing out of the previously unlimited guarantee on bank liabilities.**[19] A legal reform in June 2004 introduced a modern system of early warnings and prompt corrective actions. The new system imposes

[19] The financial safety net is defined here as an integrated system that comprises four key components: prompt correction, lender of last resort, bank resolution, and deposit insurance.

(cumulative) restrictions of increasing rigor on the operations of a bank in step with the deterioration of its capital ratio below a certain threshold.[20] It obligates CNBV to enforce, and the banks to comply with, a minimum set of corrective actions, including a regularization plan, and other measures deemed necessary by CNBV. This new system significantly curtails the margin for regulatory forbearance, thereby contributing to market discipline. However, as the prompt correction triggers are based exclusively on capital adequacy parameters, the system could be further strengthened by introducing (in the prompt corrective regime itself) triggers related to other factors that might also lead to bank instability, such as chronic illiquidity and unsound management. The functionality of the financial safety net was also enhanced by the reduction of the previously unlimited guarantee on bank liabilities, achieved gradually within a timetable that ended in January 2005. The authorities should introduce legal changes to further reduce the insured deposit amount which, at 400,000 UDIs (about US$120,000) per depositor per bank, exceeds the level in the neighboring U.S. and is also one of the highest in the world in terms of both absolute amount and per capita income.

55. **The introduction in April 2006 of a new legal framework for bank resolution was an additional and major step forward.**[21] The former bank resolution framework was heavily biased in favor of open-bank resolution, under which IPAB had powers to take full control of an insolvent bank, write off or substantially dilute the shareholders' equity, recapitalize and rehabilitate it, and sell it back to the private sector, keeping it open to the public all along. Open-bank resolution, however, became incompatible with the now limited deposit guarantee.[22] Moreover, the former legal framework was inadequate for the task of closing a nonviable banks and resolving it efficiently. The new law has very positive features. It includes cessation of payments as a trigger for bank resolution. It provides information exchange among relevant agencies. It establishes flexible options for closed-bank resolution—insured deposit transfers, purchase and assumptions (P&A), and bridge banks—subject to a less-cost criterion. It improves legal protection for supervisors, and it leaves the possibility for open-bank resolution in the case of banks considered to be "too-big-to-fail" by a "Financial Stability Committee" composed of the highest relevant authorities.

56. **The new bank resolution framework, however, includes two critical elements that should be closely monitored by the authorities.** These are:

- *Conditioned Capital Restoration Plan.* Under the new law, a bank whose CAR falls below 8 percent but is still above 4 percent[23] has the right to agree with the authorities on a capital restoration plan under the prompt corrective regime. To this end, it must first pledge at least 75 percent of shareholders' equity in favor of IPAB as a guarantee of compliance with the plan. If the bank does not comply with that plan, IPAB would

[20] Prompt correction measures begin at an early stage, once a bank falls below the 10 percent capital ratio, somewhat before it reaches the required minimum of 8 percent.

[21] This new legal framework was approved by Congress shortly after the FSAP Update mission left the field.

[22] The former resolution framework (1998 IPAB Law) required the determination by an independent "third" party (other than CNBV) that rehabilitation of an insolvent bank is a less costly alternative than its liquidation. Under the limited deposit insurance, however, it would normally no longer be the case that open-bank resolution is a lower-cost alternative compared to bank closure and liquidation.

[23] If the CAR falls below 4 percent, the bank goes automatically and necessarily into resolution.

write down the shareholders' equity against identified losses, become the owner of the bank and, thus, freely decide on the best bank resolution option under the less-cost criterion. The new law gives banks six months to amend their statutes in order to make such a pledge possible. This procedure aims at making the resolution process less vulnerable to being suspended or reversed through legal actions (*amparos*) undertaken by disgruntled bank shareholders.[24] There may be a risk that some banks interpose a preemptive *amparo* to avoid having to amend their statutes, arguing that they are not experiencing capital deficiencies at present. This risk is small, however, given the potentially bad signaling effects of such refusal. The authorities should give priority to ensuring that all banks change their legal statutes as soon as possible.

- *Haircut in too-big-to-fail cases.* The process of open-bank resolution for banks deemed to be "too-big-to-fail" is extensively detailed in the new law. As noted, a Financial Stability Committee (FSC) composed of the highest representatives of the relevant agencies (SHCP, BOM, CNBV, and IPAB) is responsible for making such a determination. If a bank is determined to be too big to fail, the FSC must also decide on a haircut for uninsured liabilities, using two criteria. First, that the haircut should not jeopardize the financial stability of the failed bank's nondepositor creditors (mainly other banks and institutional investors). Second, that it should not jeopardize the functioning of the payments system. A haircut in "too-big-to-close" cases might foster market discipline but the way in which it is to be determined is complex and may put FSC members in a difficult position. On the one hand, the first criterion—direct contagion—would lead to a relatively large haircut that could trigger a run on the bank.[25] On the other hand, the second criterion—indirect contagion—may lead the FSC to apply no haircut. The authorities are encouraged to issue internal implementing regulations to set up in advance guiding principles and flexible protocols on which the decision of the FSC should be based.

57. **In addition, the new bank resolution framework needs to be complemented by legal reforms to create a suitable framework for bank liquidation.** These complementary reforms are necessary to, in particular, enable partial deposit transfers under P&As. Under the recently introduced bank resolution framework, P&As can only involve the whole amount of deposits and, hence, partial transfers are not permitted.[26] The authorities are beginning with the preparation of a new bankruptcy law to resolve this shortcoming.

58. **IPAB has significantly contributed to reestablishing financial system soundness but additional reforms are required to enhance its credibility and role as deposit insurer.** IPAB is completing the liquidation of 13 banking institutions and has sold around 90 percent of the impaired assets inherited from FOBAPROA. IPAB has also established a commendable record of transparency and professionalism, and has worked steadily at raising public awareness of the limited deposit insurance scheme. However, IPAB is still saddled

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[24] Injunctions (*amparos*) are a common practice in Mexico. An *amparo*, if granted by a judge, can suspend the resolution process.

[25] Large investors (especially banks) are usually well informed about the financial condition of their counterparts and would rapidly reduce their exposure to troubled banks.

[26] Thus, the insured part of a large deposit could not be included in the P&A package.

with the debt stemming from the bailout implemented during the 1995 Tequila crisis. The servicing of this debt (at around 8 percent of GDP) absorbs 75 percent of the deposit insurance premiums, while the remaining premium income is used to cover IPAB's administrative costs (one third) and capital deficits (two thirds). As a result, IPAB has not been able to accumulate the deposit insurance fund and will not be able to do so for the next four years. This weakens IPAB's credibility as deposit insurer and hinders the transition to a modern and efficient risk-adjusted premium system. The authorities are encouraged to seek a suitable formula to improve IPAB's balance sheet, including by transferring IPAB's debt to the federal government (which would require legal reform).

59. **Once the conditions to enable the accumulation of the deposit insurance fund are in place, additional reforms would be needed to better align current deposit insurance features with international best practices.** In addition to reducing the deposit insurance limit, as noted, flexibility should be introduced in the law to allow IPAB to lower the premium rate (currently set at a minimum of 0.4 percent of total bank liabilities, or roughly equivalent to 0.6 percent of total deposits), which is high by international comparison. This would reduce incentives for banks to register liabilities off balance sheet. Also, the base for the application of the premium should be changed from total liabilities to total deposits.

60. **To further strengthen the soundness of the financial safety net, interagency contingency planning should be introduced, and BOM should develop internal protocols regarding emergency liquidity assistance.** Contingency planning exercises ("fire drills"), involving a small number of high-level officials from SHCP, BOM, CNBV, CNSF, CONSAR, and IPAB, are recommended to prepare for the possible failure of an individual bank, a systemically important financial group, or a systemic crisis. These exercises would help solve coordination problems and identify shortcomings in the legal, regulatory, and procedural frameworks. As regards emergency liquidity, to limit moral hazard, BOM has maintained ambiguity regarding the conditions and circumstances under which it might provide discretionary liquidity support to distressed financial institutions. However, BOM is encouraged to develop and establish clear *internal* objectives, criteria, and rules to guide such operations, so as to avoid potential inefficiencies—such as intervention delays, pressures from interest groups, procedural ambiguities, and lack of accountability.

VIII. Private Pensions, Insurance, and Annuities

61. **The authorities have succeeded in significantly increasing competition on fees in the defined-contribution (DC) pension fund industry**. CONSAR's strategy in this regard—which has become a point of reference for other countries with reformed pension systems—has centered on lowering barriers to entry and facilitating switches toward low-fee funds. In particular, a quarterly automatic assignment procedure has been implemented since 2002, whereby accounts in the *cuenta concentradora* are assigned to funds in the lowest quartile in terms of fees charged. This led to lower entry barriers (five new Afores joined the market during 2001–2005) and a decrease in concentration. Additional initiatives to facilitate migration of individuals toward lower-fee funds have included: deregulating the switching process to prevent the loosing Afores from impeding the switch; relaxing the one-year restriction on switches if individuals migrate to lower-fee funds; allowing switches over the internet; and ranking Afores by a measure of "equivalent fee" over assets (this measure

allows comparison between the fees charged as a percentage of contributions with fees charged as percent of assets). As a result, switches toward lower-fee funds have significantly increased in recent years (Table 1).

62. **Current fees have declined considerably and are on a clearly decreasing trend, but concerns remain regarding long-term equivalent fees over assets.** Twenty-three fee reductions have been observed in the last four years, with the one- and 25-year average equivalent fees over assets having decreased by 26 and 41 percent, respectively. As a result, Mexican equivalent fees over assets are now near the regional average, even when controlling for the number of years after the reform (Figure 13). This, in combination with a recent increase in marketing expenditures, has been associated with a comparable decline in profits. However, when measured in terms of longer-term equivalent fees over assets, Mexican pension funds are still relatively expensive in the region (Table 2). The relatively high long-term equivalent fee raises concerns, especially considering that Mexico's pension funds provide fewer services than comparable entities in other countries and that relatively expensive functions such as enforcement of contribution payments and collection of contributions are centralized in IMSS and PROCESAR, respectively.[27]

63. **While the automatic assignation of accounts and disclosure of equivalent fees have enhanced contestability, the methodology used is not appropriate for all individuals and the quality of service by low-fee Afores may become an issue.** The difficulty in comparing fees across Afores (as noted, Afores are allowed to charge fees as a percent of the monthly contribution or as a percent of assets under management), which can hinder competition, has been mitigated in Mexico by the widespread publication of equivalent fees over assets. However, CONSAR's equivalent fee calculation is a second best, valid only for an "average" individual. As a result, roughly one third of the switches to lower-fee funds that occurred in 2005 may have ended up paying more fees than if they had not switched. In addition, automatically assigned accounts are likely to be characterized by low balances derived from low contribution densities and low salaries.[28] Hence, low-fee Afores may not survive if they do not receive new assignations continuously or manage to attract higher balance and higher contribution density accounts. Afores may end up clustering into two groups: low-fee/low-service quality and high-fee/high-service quality. Until recently, incentives for this type of clustering were exacerbated by the fact that Afores tended to avoid signing up automatically assigned individuals, as this translated into higher costs. The recurrent assignation of accounts to low-fee funds introduced in February 2006 removes disincentives to register these accounts but does not necessarily address issues of low quality of service among low-fee Afores. It may thus become necessary in the future to require pension funds to provide members a minimum quality of services.

64. **CONSAR may wish to consider the following recommendations that do not require legal changes in support of its strategy to enhance competition on fees.** The ranking of Afores according to fees charged could be further simplified and individualized. Workers can already obtain a personalized ranking of Afores through the internet or the

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[27] Unlike similar entities in other countries, however, Afores offer accounting services for the individual accounts in INFONAVIT.

[28] Contribution density is the fraction of working years where the worker actually made contributions.

automatic telephone service,[29] but only a small fraction of workers use these media. The disclosure of rankings in a way that is relevant to each contributing worker can be generalized by requiring funds to include in individual pension account statements the peso amount that worker has paid in fees to his/her Afore during a given time period, as well as the peso amounts that he/she would have paid over the same period had he/she moved to other pension funds. This would be a simpler and more effective indicator to guide switching decisions than the current equivalent fee. It would ensure that at least twice a year members receive a correct individualized ranking by default. It might also contribute to increasing the fee elasticity of demand. Finally, and most importantly, it would strongly encourage Afores to move to an asset-based fee structure, thereby stimulating competition on net returns.

65. **The authorities should examine the possibility of transferring to PROCESAR those functions currently performed by Afores that are subject to scale economies** (e.g., back-office accounts management) **in order to further reduce costs and fees.** Any reform in the direction of further centralizing functions in PROCESAR should be preceded by a careful analysis of costs and benefits. In particular, if PROCESAR is to enlarge its role as a regulated monopoly of services to Afores, its ownership structure would have to change: to avoid conflicts of interest, PROCESAR should not be owned by Afores as it is now.[30] Also, the recently introduced operational-risk regulation would have to be fully implemented because the increased concentration of functions in PROCESAR may raise operational risk in the system. A legal reform would also be needed to give CONSAR regulatory authority over important operational processes of the pension system.[31]

66. **CONSAR should step up efforts to promote competition on net (risk-adjusted) returns.** CONSAR's emphasis on promoting fee-based competition has so far been warranted because pension fund portfolios were until recently very similar—they were invested almost exclusively in government bonds and the dispersion in portfolio returns was insignificant. The scope to promote competition on net returns has been widening, however. Pension funds are now allowed to invest, up to a limit, in equities and foreign assets and are required to offer two funds, a relatively conservative one and a riskier one. Moreover, quantitative investment limits were lifted in tandem with the introduction of a new risk-based supervision framework covering investment and operational risk.[32] As a result, the diversity in portfolio composition and returns has been increasing. These changed circumstances justify a shift in focus by CONSAR toward gradually promoting competition on net (ideally

[29] In 2005 almost 650 thousand calculator exercises were done in this internet-based tool. This suggests that the demand for simpler and individualized ranking appears to be high, but has so far been limited to individuals who have access to the internet and/or whose demand is highly sensitive to fees.

[30] PROCESAR's governance structure was recently reformed to include independent board members.

[31] Currently, registration, collection of contributions, and other basic processes of the pension system are regulated by IMSS.

[32] The operational risk supervision framework is of recent vintage and, as a result, appears to be superimposed on the old compliance regulation framework—a feature that has to be removed to lower regulatory compliance costs and, hence, barriers to entry. The risk-based supervision approach to pension fund investment is more mature. It gives Afores flexibility to choose investment strategies while controlling market-risk exposure through an absolute limit for the Value-at-Risk (VaR) and by curbing credit-risk exposure through the use of credit rating limits. This risk-based approach is consistent with the mutual fund nature of DC pension systems without guarantees and with best practices in developed countries.

risk-adjusted) returns. Efforts in this direction would be greatly facilitated if the industry converged towards a single, asset-based fee structure, as this would make it easy to compare funds by net returns. However, competition on net returns will remain hampered by the "put option" enjoyed by the transitional cohort (at retirement, this cohort can "put" their accumulated fund to the IMSS and receive benefits under the old pay-as-you-go system), which reduces incentives for this cohort to respond to differences in returns across funds.[33]

67. **Over the medium term, CONSAR should measures to raise replacement rates, including through further relaxing the ceilings on pension fund investment in foreign assets and equities.** As in other countries in the region—such as Chile and Colombia—the growth of pension funds in Mexico is outstripping the availability of suitable local assets. The limited availability of local assets and the fiduciary role of pension funds argue in favor of further relaxing the mentioned ceilings, especially to allow greater portfolio diversification via the international markets.[34] This would enable higher risk-adjusted net returns, facilitating the achievement of higher and less volatile replacement rates over the medium term. Additionally, to further boost replacement rates, the authorities should consider redirecting towards the individual pension accounts the payroll contributions that currently go to INFONAVIT (see below).

68. **In the longer term, consideration should be given to policies to address the tradeoff between increasing market discipline by facilitating switching, on the one hand, and maintaining stable replacement rates over time, on the other.** In a pure DC system, individuals bear all the investment risks (market, credit, and inflation risks) during the accumulation phase and the annuitization risk (the risk of receiving a low stream of old-age income because the annuity is bought when interest rates are low) at the time of retirement. These two sets of risks do not necessarily offset each other, resulting in volatile replacement rates over time—i.e., different replacement rates for individuals that, over their working life, have similar earnings and make a similar effort in saving for retirement. This problem may be exacerbated by policies that promote competition through transparent disclosure of net returns and freedom to switch to higher net return funds. These policies might accentuate the focus on short-term returns, shrinking the investment horizons of pension fund administrators. Tactical investment behavior within short investment horizons would further increase the volatility of replacement rates (although it may also raise expected replacement rates). In other words, there may be a policy trade-off, inherent to all DC pension schemes, between promoting competition and maintaining stable replacement rates. Mexican workers in the transitional cohort are not exposed to replacement rate volatility because as noted, at retirement they can opt for pension benefits under the old pay-as-you-go system. Hence, a strategy for reducing the volatility of replacement rates without unduly reducing expected replacement rates will need to be developed over time for the workers who

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[33] To be sure, the are some incentives for workers in the transitional cohort to monitor net returns in Afores, as this cohort will receive in a lump sum the balance accumulated since 1992 via the 2 percent contribution—i.e., about one-third of the total balance in the individual retirement account (excluding the balance in INFONAVIT).

[34] This would entail a legal reform, as the 20 percent limit on investments in foreign securities is established in the Retirements Savings Systems Law.

entered the system after 1997. Such a strategy is likely to involve a range of policies aiming at more tightly and smoothly linking the accumulation phase with the pay-out phase.

69. **CNSF has further and significantly increased the already high level of compliance with IAIS Insurance Core Principles that was observed under the 2001 FSAP.** Legal amendments in 2002 addressed concerns raised during the 2001 FSAP regarding constraints to carry over budget surpluses, inadequate staff salaries, and lack of adequate legal protection of supervisors. However, and as noted, CNFS has not yet achieved full political, budgetary, and operational autonomy. Regulations have been strengthened in line with the 2001 FSAP recommendations. Licensing rules for life and nonlife insurance companies have been harmonized and the same standards now apply to changes in control. Important improvements have been made in corporate governance and internal controls—including strengthening the role of the board, introducing rules on conflict of interest, establishing the compliance officer, and requiring independent directors. The investment regime for insurance companies was made more flexible. Solvency rules now incorporate duration matching of assets and liabilities for life insurance companies, and prospective valuation of liabilities and reserves has been introduced. CNSF has also implemented a dynamic solvency margin model to supervise the adequacy of capital and technical reserves. Important progress has been made in the area of monitoring, inspections and sanctions. Overall transparency and information disclosure has increased.

70. **The development of the market for annuities has been stalled following legal changes in 2001-02 that have resulted in most disabled individuals electing benefits under the old system, contrary to the original intention of the pension reform.** The original design of the pension reform law aimed at ensuring that disability, death, and workers' compensation benefits would only be purchased from specialized private annuity providers. Disability benefits are on average more generous under the new system, especially for those workers that have fewer than 20 years of contributions (Table 3). This design feature led to fast growth in the annuity market during 1997–2002. Legal reforms in 2001-02, however, gave IMSS the power to interpret the Social Security Law, which IMSS used to formally extend the option to choose benefits under the old system to disabled individuals. IMSS has an incentive to allow individuals to elect benefits under the old system because, when that happens, the government is liable for paying benefits. If, on the contrary, insured individuals choose the new system, IMSS has to use its own reserves to top up the disabled worker's pension fund balance in order to buy him/her an annuity in the market. Since the mentioned legal reforms, the number of disabled individuals selecting benefits under the new system and the corresponding flow of premiums to the private annuity industry has collapsed (Figures 14 and 15).

71. **The government should ensure that disabled workers have all the information necessary to choose appropriately between the old and new systems.** As noted, the financial position of IMSS improves to the extent that disabled workers choose benefits under the old system. IMSS, moreover, is not required by law to compare disability benefits under the two systems and disclose this comparison to the worker, unless the worker requests it. As a result, the government is now funding a liability that was not foreseen under the 1997 pension reform. In order to improve the current situation, the government's liability should be clarified so as to ensure that IMSS is indifferent to whether disabled workers choose

benefits under the old or new systems. Actions should be taken to ensure that IMSS appropriately discloses benefits under the two systems to disabled workers.

72. **The post-2001 collapse in premium flows to the annuity industry is only one of several factors adversely affecting this industry's financial position.** Annuity companies have been incurring underwriting losses since 2002 (Figure 16). The post-2002 bias leading disabled workers to choose benefits under the old system represents a change in the rules of the game, for annuity companies entered the market anticipating long-term growth in the annuitant population. To complicate matters further, since 2002 IMSS has been resorting to temporary pensions before declaring insured people disabled and allowing them to choose between the two systems. This has introduced another bias—as individuals who actually select benefits under the new system tend to live longer than average. The consequent degeneration of the annuitant pool in the private sector could further affect the solvency of the annuity industry. The concern about the solvency condition of the annuity industry is compounded by the fact that the mortality table that annuity companies are required to use is only experimental due to data constraints and not suited for the specific annuitant pool that these companies are actually insuring. Finally, the technical rate used to price annuities is fixed by law at 3.5 percent per annum in real terms, which is only marginally below the current interest rate of 4–4.5 percent for long-term bonds. The combined effect of all of these factors might render the marginal annuitant unprofitable to annuity providers.

73. **Some less urgent issues should also be addressed in order to better enable annuity companies to better hedge inflation, interest rate, and longevity risks.** Due to the small size of the market, most annuity companies do not have problems at present in matching the duration of their liabilities. As the market grows, however, the government will need to consider facilitating such matching by issuing zero coupon CPI-indexed bonds. In addition, as noted earlier, authorities should consider allowing annuity companies to buy interest rate swaps in the OTC market, subject to appropriate safeguards. CNFS should also consider modifying the duration matching requirements themselves by introducing key rate duration metrics. This would enable companies to adequately hedge against nonparallel shifts in the yield curve. Finally, CNSF could relax the inflation matching requirement for short-term liabilities (below one year).

IX. Housing Finance Markets

74. **Since 2001, there has been impressive progress in establishing the key building blocks for sustainable mortgage securitization and private mortgage origination markets.** The well-designed, methodical rebuilding of the housing finance market in Mexico following its collapse with the Tequila crisis of 1995 has become a referent for similar efforts elsewhere in emerging economies. This process was underpinned by the consolidation of macroeconomic stability, which helped lower market interest rates and extend maturities, thereby improving mortgage affordability.[35] *Sociedad Hipotecaria Federal* (SHF)[36] has led

[35] Middle-income households in Mexico can now obtain a peso denominated 15-year mortgage loan at a fixed nominal interest of about 9 percent.

[36] SHF, created by a law enacted in 2001, is a housing-oriented development bank. It has the authority to act as a second-tier lender during an eight-year transition period and to fund this activity by issuing government-guaranteed debt. After that transition period, SHF's functions will be restricted to the provision of guarantee

many of the policy measures in this area, including by funding mortgage lending through its second-tier window, which is mainly used by housing Sofoles; fostering the standardization of mortgage origination and mortgage-backed securities; reinsuring with U.S. mortgage insurance providers; supporting the securitization of mortgages with its partial financial guarantees; and creating new property appraisal standards.[37] More recently, SHF has also promoted lending to lower-income households by providing lines of credit to housing microfinance lenders. The legal and regulatory framework to sustain a mortgage-backed securities market is mostly in place and recent legal reforms have reduced the average time to foreclosure from five to two years. While much work remains to be done on registries, several state property registries have been reformed. Crucial to the government's strategy is SHF's legal obligation to cease in 2009 its funding of mortgage loans to higher income households as well as SHF's plan to exit the mortgage insurance market as private sector providers enter following the recent legal changes that permit this type of insurance product.

75. **Housing finance markets have grown fast in the recent period with a rising involvement of private-sector intermediaries; however, public-sector funding and institutions continue to dominate.** Mortgage lending to moderate and upper-income households has surged—the system-wide mortgage portfolio grew by a cumulative 65 percent between 2000 and 2005, to 9.6 percent of GDP. The participation of mortgage Sofoles in outstanding housing loans grew from 6.2 percent in 2000 to 17.3 percent in 2005. As noted, banks are re-entering the market—they accounted for over 7.2 percent of houses financed in 2005 compared to 0.2 percent in 2000. While Sofoles are mostly funded by SHF—at the same maturities as those of the housing loans they originate—their lending carries no subsidy element. Hence, the combined contribution of Sofoles and commercial banks to primary mortgages can be considered to be market-based lending. However, INFONAVIT increased significantly its dominance of the primary mortgage market, from 49 percent of outstanding balances in 2000 to 60 percent at the end of 2005. Mortgage lending by FOVISSSTE (the equivalent of the INFONAVIT for public sector employees) further adds to the large public sector presence in this market.

76. **INFONAVIT has substantially improved its management and operations and is currently less dependent on the flows from mandatory contributions to fund its mortgage lending.** INFONAVIT—whose housing loans are considered to be part of the package of social security benefits for private sector workers[38]—has registered a significant modernization of its management and operations in recent years.[39] It has widened its cooperation with the private sector by allowing its members to leverage their INFONAVIT

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products to primary private mortgage lenders and to promote housing finance to lower-income households. In addition, the government guarantee on SHF debt is preset to disappear in 2013.

[37] SHF prices, reserves, and sets capital for its products, so as to cover expected and unexpected losses and provide a market-related return on equity. This implies a prudent use of the government guarantee.

[38] IMSS-supervised PROCESAR collects all social security contributions and then transfers funds to INFONAVIT for the housing component of social security and to Afores for the DC pension fund component. The coverage of private sector workers' affiliation with IMSS is the same as that with INFONAVIT and with the Afore system. At retirement, the unused portion of the accumulated worker's savings in INFONAVIT is added to her account with the Afore.

[39] FOVISSSTE's operational improvements, though not trivial, pale in comparison to INFONAVIT's.

savings to obtain market-based mortgage finance. It has implemented more efficient systems and processes for mortgage origination and servicing, substantially reducing NPLs and improving loan collection. It has adopted banking accounting standards and voluntarily made itself subject to CNBV oversight. It has put in place executive committees for risk management, auditing, and strategic policy. It has securitized portfolios, although the securitizations have been expensive, requiring unusually high collateralizations (18 to 23 percent).[40] INFONAVIT's cash flows are increasingly made up of loan collections and less of the mandatory contributions it receives from private sector workers. This creates a unique opportunity for an important reform—to formally decouple the contributions of private sector workers to INFONAVIT from the funding of INFONAVIT-originated mortgage lending, allowing such contributions to flow directly to the individual accounts with the Afore system.

77. **However, INFONAVIT and FOVISSSTE continue to distort mortgage markets through interest rate subsidies in their housing loans to lower-income households.** INFONAVIT charges wage inflation plus 9 percentage points on mortgage loans to individuals earning more than the equivalent of five minimum wages, translating to a nominal interest rate that is higher than some banks and a bit lower than Sofoles. However, the wage-indexation feature of these loans is not market compatible, as the political risk therein is impossible to measure and manage. For households earning less than the equivalent of four minimum wages, INFONAVIT charges wage inflation plus four percentage points (FOVISSSTE charges wage inflation plus four to six percentage points, depending on the income of the household), which results in a below-market rate, given the costs and risks involved in lending to this market segment. These interest rate subsidies reduce income for INFONAVIT and FOVISSSTE affiliates that do not get a housing loan, but in a way that is not apparent, as the loss of income is not reported on the financial statements. It is recommended that these entities switch from interest rate subsidies to upfront subsidies that equal the present value of the foregone interest stream over the expected life of the mortgages. This would increase transparency in their financial statements and eliminate the relative price distortion. In addition, to level the playing field for mortgage originators the tax exemptions enjoyed by INFONAVIT and FOVISSTE should be eliminated (or extended to all other lenders). Also, they should move away from wage-indexed loans, towards more market-friendly mortgage products. Finally, INFONAVIT should expand its efforts to use its influence constructively, for instance by encouraging states to reform property registries and title transfer and registration procedures. This is particularly important for the development of a housing finance market for used houses, which is at present virtually nonexistent.

78. **Further steps should be taken toward establishing a centralized, integrated policy on housing finance subsidies for low-income households.** An estimated 4.2 million households live in substandard conditions and are not served by formal mortgage institutions. About 20 percent of these households have a member that is affiliated with either INFONAVIT or FOVISSSTE, but these institutions' subsidies are inequitable and do not reach the informal sector.[41] The streamlining or elimination of many subsidy programs and

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[40] INFONAVIT's loan securitizations represent about 1.3 percent of its outstanding mortgage loans.

[41] By 2005, for instance, INFONAVIT's loans had reached only 3.4 percent of its low-income affiliates (employed individuals that earn two to four monthly minimum wages).

the creation of CONAFOVI to coordinate housing policy have been steps in the right direction, but they fall short of what is needed, not least because CONAFOVI lacks budgetary authority to manage a national system of subsidies and also lacks binding coordinating powers over INFONAVIT and FOVISSSTE. The Boards of INFONAVIT and FOVISSSTE should consider gradually moving towards upfront subsidies and market-based interest rates. Finally, INFONAVIT and FOVISSSTE should target their housing credit lines to low-income households.

79. **The start of a mortgage-backed securities market is an important and fundamental achievement but some questions have been raised over what appears to be less-than-satisfactory due diligence reviews on securitized portfolios.** During 2003-2005 issues of 15 mortgage-backed securities for a total of MEX$11.5 billion have come to market, involving mortgage loans initiated mainly by the larger Sofoles. While noteworthy, this represents only 0.7 percent of the balance of credits outstanding in the system at end-2005, and banks have not yet issued mortgage-backed securities, as they have no need for liquidity. Furthermore, given recent experiences with the unsatisfactory work of auditors, credit-rating agencies and credit enhancers, the authorities should seek ways of encouraging the exercise of due diligence reviews as part of each transaction, which is all the more important in a nascent mortgage-backed securities market such as Mexico's.[42]

80. **Plans should be put in place to ensure an orderly consolidation of mortgage Sofoles when SHF phases out its second-tier credit line for moderate and upper-income lending.** While a shakeup can be expected in the mortgage Sofol industry, it is crucial not to postpone the sunset of SHF's credit line. Smaller institutions that lack adequate scale in their operations will have to change their business model, be acquired by a bank, or go out of business. After close to 10 years of transition, Sofoles that have not ceased to be dependent on SHF's credit line should be allowed to exit. Nonetheless, the shakeup might be softened by the recent Congressional approval of the full deregulation of nondeposit taking mortgage lenders that are not related to bank groups—as the implementation of such law would reduce costs and entry barriers. The materialization of the benefits of that law, however, will require effective market discipline, which in turn calls for improvements in issuer disclosures.

X. Strategic Issues in the Reform of Development Banks

81. **Substantial progress has taken place over the last five years in reforming the system of development banks and funds (DBs), along the lines recommended in the 2001 FSAP.**[43] The 2001 FSAP emphasized that DBs suffer from an inherent tension between

[42] For instance, serious deficiencies were found in a mortgage pool where SHF was asked to provide mortgage insurance. Thirty percent of the loans suffered from documentation problems. The auditor had reviewed only a small sample of loans. The rating agency did not review any loan files, nor did the institutions that were offering credit enhancements. No firm was called upon to play a specialized diligence role.

[43] The Mexican *Sistema Financiero de Fomento* includes development banks and trust funds (*fiedeicomisos*). At present, the main components of this system are: Financiera Rural and FIRA, both oriented towards the rural sector; NAFIN, which works mainly with SMEs; BANCOMEXT, charged with promoting and financing exports; BANOBRAS, which finances subsovereign entities; BANSEFI, which focuses on technical assistance and other risk-free, centralized services to popular savings and credit institutions; SHF, which spearheads the development of the housing finance markets and provide second-tier funding to mortgage lenders (until 2009).

their social policy mandate (i.e., to foster access to financial services for households and firms that are costlier and riskier to serve) and the objective of avoiding losses in their bank-like activities. To overcome this tension, the 2001 FSAP team recommended a reform strategy based on separating subsidies from finance, consolidating DBs, and gradually transforming them into development agencies (DAs).[44] Since then, progress has been remarkable. DBs are now regulated and supervised with the same rigor as private banks. DB governance and accountability, managerial professionalism, and transparency have greatly improved in most cases. DBs must now pursue their mandates subject to the explicit requirement of preserving their capital in real terms. Interest rate subsidies in DB loans have been reduced while an increasing share of subsidies is financed through the government's budget. Lending by DBs has significantly shifted from the first tier (or direct lending) to the second tier (or lending through private financial institutions), bringing a higher number private financial intermediaries to the system. The coverage of partial guarantees has been declining, from levels of 80 percent or more to about 50 percent on average. As a result of all this, DBs in recent years have been consistently reporting strong capital positions and positive results in their income statements.[45]

82. **Beyond the mentioned general improvements, however, the depth and breadth of reform in other respects has been very uneven across DBs.** The FSAP Update team assessed these differences in reform progress against the following basic questions: Does a DB aim at mitigating a well-defined problem of access to finance? If so, is this objective adequately incorporated in its legal mandate? Is its mandate consistent with sustainable financial market promotion? Is the mandate defined in a static or dynamic manner? Are the institutional form, functions, and instruments of the DB consistent with a market-friendly mandate? And, is DB performance adequately evaluated?

83. **Greatest progress in integrating objectives, mandates, functions, and instruments has been registered in the cases of *Financiera Rural,* FIRA, BANSEFI, and SHF, all of which operate largely as development agencies.** The salient features of SHF were discussed earlier. *Financiera Rural* (created after the liquidation of *Banrural*) and FIRA have well-defined mandates and are prohibited from issuing deposits and, in the case of *Financiera Rural*, any other form of liabilities. They fund their lending activities (which are exclusively second tier in the case of FIRA) out of their endowments and loan collections. They promote capacity building among their target clientele via matching grants used by recipients to hire technical assistance. *Financiera Rural* lends at market prices and so does FIRA in its loans to large farmers; however, FIRA's lending to the poorest farmers is still at subsidized interest rates. FIRA also offers partial guarantees at subsidized prices, although it

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[44] Finance-oriented DAs promote financial access for underserved sectors and market development through market-friendly instruments that do not distort market prices or discourage private sector activity. Well functioning DAs are subject to high standards of transparency and accountability. They typically provide or mobilize TA and administer matching grants and subsidies that are financed by the government's budget. They may also provide partial guarantees (subject to appropriate pricing and risk management), support the development of market infrastructures, and/or catalyze or coordinate structured finance packages. Their lending, if any, tends to be second tier and funded out of their initial endowment (capital) or budgetary appropriations (i.e., DAs do not normally issue deposits or other forms of liabilities).

[45] The exception is BANCOMEXT, which continues to make losses on account of its export promotion activities (see below).

is implementing a program to phase out the subsidy element therein.[46] More recently, FIRA has engaged in innovative investment bank-like activities—coordinating large structured finance operations by aligning incentives and distributing risks among participants, and offering interest rate and currency swaps, all at market prices. BANSEFI, created in 2001, has the mandate of promoting popular savings (a function inherited from its predecessor, PAHNAL) and of spearheading the cooperative development of the Popular Savings and Credit sector (composed of over 400 *Cajas Populares*).[47] To this end, BANSEFI administers a one-off government investment subsidy to finance technical assistance to raise the sector's governance, transparency, and management capacity to standards required for licensing by CNBV. This subsidy is also used finance the initial setup of a common network and infrastructure that could capture economies of scale, lowering costs for the *Caja* sector. Together with ongoing internal reforms, BANSEFI is becoming a *Caja de Cajas*, capable of offering centralized, efficient services to licensed *Cajas*. The BANSEFI-led program has made substantial progress in meeting its objectives, although there have been delays in the process of authorizing *Cajas*. SHF, FIRA, *Financiera Rural*, and BANSEFI define their mandates dynamically—they move on to new activities once the market they were promoting becomes self sustaining. For example, efforts are underway to sell BANSEFI to the *Cajas*; SHF will—as noted—cease second-tier lending as of 2009; and market-based lending by *Financiera Rural* is attracting banks back to the rural sector.

84. **In the case of other DBs, mandates remain unclear and their initial raison d'être is loosing relevance in the face of rapid financial market development; however, NAFIN has shown notable managerial improvements and instrument innovation.** NAFIN, BANCOMEXT, and BANOBRAS are constrained by a static mandate in their Organic Laws. Their initial niches (financing of SMEs, exports, and subsovereigns, respectively) are being eroded—they can hardly sustain their traditional cost-of-funds advantage vis-à-vis the large, international commercial banks or the capital markets. Absent a legal reform, the degree of change in these DBs has largely been a function of management quality. NAFIN has made greater progress in repositioning itself and developing new instruments—for instance, it created an internet-based market for SME receivables that has become an example of innovative practices in the region. The loss of cost-of-funds advantage in export finance has led BANCOMEXT to gradually return to first-tier lending since 1998, away from its second-tier lending objective, although in the last two years efforts have been made to shift back to second-tier lending and establish a new business plan to operate as an "Eximbank." While the advantages of keeping the export promotion function in BANCOMEXT (rather than in, say, the Ministry of Foreign Trade) can be debated, it is clear that such a function should be financed by the government's budget (rather than via the current cross-

[46] The nonpayment culture (moral hazard) fostered in the past by Banrural's poor loan origination and collection practices had compelled FIRA to sometimes offer subsidized incentives and guarantees to induce banks to lend to agriculture. The current, sounder lending practices of *Financiera Rural* have substantially reduced moral hazard in agricultural lending and, as a result, the distortionary impact of subsidies in FIRA guarantees has become increasingly evident and should be corrected as a matter or priority.

[47] In its function of savings promotion, BANSEFI acts as a narrow bank—collecting small savings via its numerous branches (around 500) and investing then almost exclusively in Mexican Treasury securities. Although allowed by its law, BANSEFI has been careful not to use its branches to provide credit, as this would stifle the development of the *Cajas*, nullifying its principal mandate. The ambitious BANSEFI-led program of strengthening the *Cajas* sector is underpinned by the 2001Law of Popular Savings and Credit.

subsidization within BANCOMEXT's activities). BANOBRAS is also losing its traditional competitive edge in cost of lending to subsovereigns. Moreover, as the most creditworthy state and local governments increasingly access private financial markets, BANOBRAS is being left with the weakest subsovereigns, which creates major challenges for it to meet its mandate while preserving its capital.

85. **Going forward and in the shorter run, the reform of DBs should focus on avoiding reversals in the progress achieved so far, while further rationalizing their operations.** There is a particular need to rationalize the numerous financial subsidies and guarantee programs, as this multiplicity is leading to poor targeting, duplications, and "double-dipping" by beneficiaries. In this connection, the government is encouraged to continue with its current plan of establishing a "subsidies bureau" that would significantly contribute to mitigating the mentioned problems. A continuous effort of assessing the impact of lending, guarantee, and subsidy programs (which requires the construction of panel and cohort data) should be part of program design and evaluation. Efficiency losses due to duplication of functions and infrastructures across DBs should also be identified and corrected.[48] Finally, efforts should continue in each DB to fully separate subsidies from finance, by moving to market-based pricing of their products while ensuring that remaining subsidies are well designed, well targeted, and funded directly from the budget.

86. **Over the longer term, the DB system should be further consolidated, mandates reformed and made dynamic in some cases, and major improvements introduced in the way in which DBs performance is measured and rewarded.** All of this would require substantial legal reform. Subject to a clear definition of objectives and mandate, a DA oriented towards SMEs should replace NAFIN and BANCOMEXT, while the latter's export promotion functions should be transparently financed by the government's budget. Similarly, as FIRA moves to full market pricing of all of its financial products, the case in favor of consolidating FIRA and *Financiera Rural* in a single, rural-oriented DA will grow stronger. The authorities should in the short run reform BANOBRAS' instruments and operations, so to better match its mandate; in the longer run, consideration should be given to transforming BANOBRAS into a DA oriented toward infrastructure and capacity building in state and local governments. Finally, as the DB system evolves towards a DA model, there will be a growing need to reform the way in which DB performance is measured and evaluated using internationally accepted practices. The current criterion—of measuring performance in terms of the volume of loan disbursements—is bound to become increasingly less relevant. New criteria should focus on the impact of DA market-friendly interventions. As such interventions will increasingly involve nonlending instruments, their impact should be assessed in terms of their catalytic role in fostering a sustainable broadening of access to financial markets for underserved sectors.

[48] For instance, several DBs keep separate, costly infrastructures in order to fulfill the same function of acting as a financial agent for the government. Similarly, DBs could share back-office functions, with considerable cost savings for all. The joint venture capital fund with participation of BANOBRAS, BANCOMEXT, NAFIN, and FOCIR is an example of rationalization to avoid duplication.

APPENDIX I

ACRONYMS

AFOREs	Private pension fund administrators
Asigna	Stock exchange clearing fund
BOM	Bank of Mexico
CECOBAN	Banking Clearing Center
CNBV	National Banking and Securities Commission
CNSF	National Insurance and Sureties Commission
CONSAR	Pension Fund Commission
CPSS	Core Principles for Systemically Important Payment Systems
EFT	Electronic Fund Transfer
FOVISSSTE	Housing Fund of the Social Security Institute of Public Sector Workers
FSAP	Financial Sector Assessment Program
FSC	Financial Stability Committee
IMF	International Monetary Fund
IMMS	Mexican Institute of Social Security
INFONAVIT	Institute of the National Housing Fund for the Workers
IPAB	Institute for the Protection of Bank Savings
LMV	Securities Markets Law
MBS	Mortgage-backed securities
MexDer	Mexico's Derivatives Market
MOUs	Memoranda of Understanding
OTC	Over-the-counter
P&A	Purchase (of assets) and Assumption (of deposit liabilities)
POS	Point of Sale
PROCESAR	Operator of the National Data Base
SHCP	Secretary of Finance and Public Credit
SHF	Federal Mortgage Society, a state development bank
SIDV/SSS	*Sistema Interactivo para el Depósito de Valores* (SIDV), a securities settlement system (SSS)
SIEFOREs	Privately administered pension funds
SMEs	Small- and medium-size enterprises
Sofoles	Nondeposit taking specialized credit institutions
TIIE	Benchmark for the interbank money market (*Tasa de Interés Interbancaria de Equilibrio)*
UDI	*Unidad de Inversión*
VaR	Value at Risk
WB	The World Bank

APPENDIX II

Detailed FSAP Update Recommendations

1. Short Term

Financial stability and derivatives markets

- Strengthen monitoring of credit risks associated with consumer and mortgage lending.
- Continue to strengthen the monitoring of banks' liquidity and contagion risks.
- Better coordinate the design of stress scenarios within the BOM, between the CNBV and the SHCP, and among supervisors and banks, to improve the analysis of financial system-macro shocks linkages.
- Consider developing continuity plans by the authorities in conjunction with the private sector.
- Publish the BOM's stability report.
- Complete ongoing analysis aimed at identifying ways to make repo markets more liquid.
- Continue attracting participants to MexDer, including by allowing insurance companies to access OTC derivatives market, for hedging purposes, having in place an appropriate regulatory framework for their use to ensure that the risk arising from these transactions maintains an acceptable risk level.

Financing of the private sector and competition in credit markets

- Include in the credit bureau the performance record of SMEs whose loans are currently recorded as invoice discounting with large corporations in bank balance sheets.
- Promote greater competition across different credit providers through the further development and disclosure of standardized interest rate indicators by type of loan product and by provider.
- Evaluate the effectiveness of development bank lending and partial guarantee programs for SMEs.

Development and competition in retail payments systems

- Promote access of households to the banking sector by enlarging the scope of present payroll schemes, improving the possibilities of bill payment services, and promoting competition on fees and services.
- Foster consumer mobility by enlarging employee freedom to choose banks and removing present limitation under existing payroll schemes.
- Promote the use of common products (e.g., direct debits and payroll schemes) via CECOBAN.

Organizational arrangements for financial system policy, regulation, and supervision

- Realign regulatory functions by shifting most regulatory powers from the SHCP to the Commissions, following the precedent established for securities regulation by the recent Securities Market Law.
- Further strengthen coordination among regulatory agencies through strong memoranda of understanding that set out clear responsibilities and accountabilities.
- Achieve full political and budgetary autonomy of Supervisory Commissions, subject to adequate accountability.

Pensions

- Individualize ranking of funds in individual statements on the basis of absolute peso amount of yearly fees and the amount of fees the worker would have paid had he/she been in another AFORE.
- Consider further centralizing in the PROCESAR those AFORE functions (e.g., record keeping and back-office account maintenance and management) that are subject to economies of scale.
- Further discourage the use of fees on contributions.

Disability insurance

- Enhance transparency in choosing benefits under the old and new system by putting in place a comprehensive election system for disabled workers.
- Clarify the IMSS' solvency concerns in the line of disability insurance and ensure that the IMSS be indifferent to whether disabled workers choose benefits under the old or the new system.

Development banks

- Establish a subsidy and guarantee bureau.
- Further rationalize operations of development banks.

Housing finance

- Establish plans for orderly consolidation of mortgage Sofoles once the SHF stops second-tier lending.
- Maintain the 2009 sunset date for SHF second-tier lending to fund moderate and high-income housing.
- Reduce distortions in primary mortgage market caused by interest rate subsidies in mortgage loans by INFONAVIT and FOVISSSTE by: moving to full market pricing of mortgages, replace existing interest rate subsidies with up front cash subsidies that equal the existing subsidies in present value terms
- Encourage FOVISSSTE to follow INFONAVIT by voluntarily accepting CNBV supervision.
- Implement an integrated, centralized housing subsidy policy.
- Foster the reduction of costs that hamper secondary housing markets.

IPAB issues

- Seek a suitable formula to alleviate the financial condition of IPAB, including the transferring of IPAB's debt to the federal government.
- Better align current deposit insurance features with sound international practices.
- Establish an effective framework for the liquidation of banks and enable partial deposit transfers under P&As.
- Introduce interagency contingency planning and develop internal protocols regarding emergency liquidity assistance.

2. Medium to Long Term

- Set up the preconditions (especially improved information) for a local credit derivatives market.
- Explore potential simplifications of the regulatory environment related to SME lending without undermining prudence.
- Improve information collection to facilitate the analysis of private-sector financing and competition in credit markets (identification and quantification of unofficial domestic financing sources, more detailed information on bank revenues by loan product, and analysis of the relationship between developments in the real sector and financing patterns).
- Strengthen state registries of commerce and property and reduce their user cost (notaries).
- Strengthen and harmonize the enforcement of creditor rights across different legal jurisdictions.
- Further foster cooperative agreements to enhance the achievement of economies of scale in retail payments infrastructures.
- Continue to reform governance and ownership of PROCESAR and then further concentrate in it the AFORE functions that are subject to economies of scale while promoting competition among AFOREs in the retail function of asset management.
- Redirect the mandatory contributions that private sector workers now make to INFONAVIT to their Afore-administered individual pension fund accounts.
- As the market for annuities grows, consider issuing zero coupon CPI-indexed government bonds as well as longevity bonds to facilitate asset-liability matching of companies of life insurance companies.
- Gradually move to promoting competition on net (risk-adjusted) returns.
- Allow specialized annuity providers to use OTC derivatives to hedge risks, subject to appropriate risk management standards.
- Consider modifying duration matching requirements for annuity providers by introducing key rate duration metrics (to enable hedging against nonparallel shifts in the yield curve).
- Consider relaxing the inflation matching requirements for short-term liabilities.
- Further consolidate the system of development banks.
- Redefine mandates of development banks, where needed, and continue with reforms to gradually convert development banks into development agencies.
- Develop and implement new financial indicators to better measure and reward performance of development banks in line with the redefinition of mandates and emergence of new instruments. Also, develop indicators to measure the impact of DBs market-friendly interventions.
- Streamline regulations in order to minimize inconsistencies and barriers to innovation and competition.
- Establish full consolidated supervision of financial conglomerates.
- Achieve political and budgetary autonomy of regulatory commissions.
- Consider possible consolidation of regulatory commissions.

APPENDIX III

Mexico: Key Milestones in the Reform of the Financial Sector (2001-2006)[49]

Credit Institutions Law and Financial Groups Law: aimed at channeling a greater proportion of national savings through the financial system; fostering long-term savings; strengthening banking regulation and supervision; promoting transparency and competitiveness; fostering new financial products and services; strengthening the credit institutions' corporate governance; and broadening the range of services offered.

Amendments to the Rules of Capitalization Requirements for Multiple Banking Institutions and Development Banks: aimed at advancing the convergence between banking regulation and international standards.

Amendments to the Miscellany on Credit Collateral: aimed at promoting bank lending by reducing transaction costs; widening the options to secured credit transactions; granting greater judicial certainty to creditors and borrowers; and promoting an orderly and sustainable recovery of defaulted bank loans.

Credit Information Institutions Law: aimed at regulating the establishment and operation of credit information societies; and ensuring proper access to credit information, while respecting valid privacy concerns.

Credit Institutions Law: established a prompt corrective regime consistent with international best practices.

Law of Transparency and Ordering of Financial Services: regulates commission fees, interbanking fees and other aspects related with the provision of financial services; prohibits discriminatory practices between credit institutions and between users; establishes transparency requirements in contracts and check account balances, credit and debit cards; foresees transparency mechanisms to allow clients of credit institutions to know the carried out transactions and their fees; and establishes sanctions for breaches of the law.

Organic Law of the Federal Mortgage Association: aimed at increasing the housing supply for wage earners and other workers; promoting the construction and acquisition of housing, preferably low income; and fostering mortgage securitization and increasing credit supply for housing construction and acquisition.

Popular Savings and Credit Law and Organic Law of the Bank of National Savings and Financial Services: strengthened the institutional and regulatory framework of popular savings and credit activities, increasing access of low-income sectors and small enterprises to the formal financial sector; established the conditions to foster the development of a popular savings and credit system; created the Bank of National Savings and Financial Services, which offers training and consulting

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[49] Sources: "Institution Building in the Financial Sector," G20, 2005; and FSAP Update team discussions with the Mexican authorities.

services to popular savings and credit entities, and promotes cost reduction through centralized provision of services subject to economies of scale.

Organic Law of the Financiera Rural: aimed at supporting the development of agriculture, forestry, fishing and other rural activities. The *New Financiera Rural* replaced the former Rural Credit Bank (BANRURAL). *Financiera Rural* does not take deposits from or issue debt to the public, it is financed by the government through the budget with all appropriations, allocations, financing, and guarantees properly and explicitly accounted for in the budget and approved by Congress.

Amendments to the Securities Market Law (2001): aimed at promoting the development of the securities market by making it more transparent, efficient, and accessible. The 2001 amendments enhanced information, disclosure, minority stockholders rights; improved corporate governance practices; introduced a new versatile instrument (*certificado bursatil)*, a security note that can be issued by private and public debtors; incorporated the central counterparty (establishing lender and borrower rights and obligations in securities transactions) to the market structure, reducing systemic risk in the securities market; introduced a consolidated regime applicable to public companies; redefined the functions and responsibilities within the corporate structure; introduced audit and corporate governance committees with independent board members; included clear mandates and fiduciary duties for board members, managers and external auditors, and further improved minority shareholders rights. It also promoted access to broad securities markets to small- and medium-size firms through new corporate vehicles.

Mutual Fund Law: aimed at facilitating the access to the stock and debt market of a wider range of investors. It improved mutual funds corporate governance practices; allowed for a mutual fund to change from one mutual fund operator to another with the aim of promoting competition and reducing investment manipulations not associated to maximizing the investors' returns; allowed for a more flexible investment regime; prohibited banks and investment banks to act as mutual fund operators but allowed them to carry out this function by establishing a subsidiary.

Amendments to the Law of Mutual Insurance Institutions and Associations and the Federal Sureties Institutions Law: aimed at strengthening the institutional and regulatory framework for the activities of insurance institutions; increasing the efficiency of insurance institutions' operations; consolidating the insurance sector's legal framework with that in place for the financial sector; and developing best corporate practices among intermediaries. Recently, a new amendment introduced the Mortgage Credit Insurance (*Seguros de Crédito a la Vivienda*) and Financial Warranty Insurance (*Seguros de Garantía Financiera*).

Modernization of the legal framework for Sofoles, leasing, and factoring companies: aimed at enhancing competition in the credit market, reducing administrative costs, and fostering the legal framework applying to financial leasing, factoring and credit. This reform included the liberalization of leasing and factoring activities. Any company will be able to carry out such activities, and there will be no need for authorization nor supervision from the financial authorities.

Amendments to the Income Tax Law: established a fiscal regime that allows for the development of two investment vehicles, the FIBRAS (*Fideicomiso de Infraestructura y Bienes Raíces*), a vehicle similar to the Real Estate Investment Trusts in the United States, and private equity vehicles.

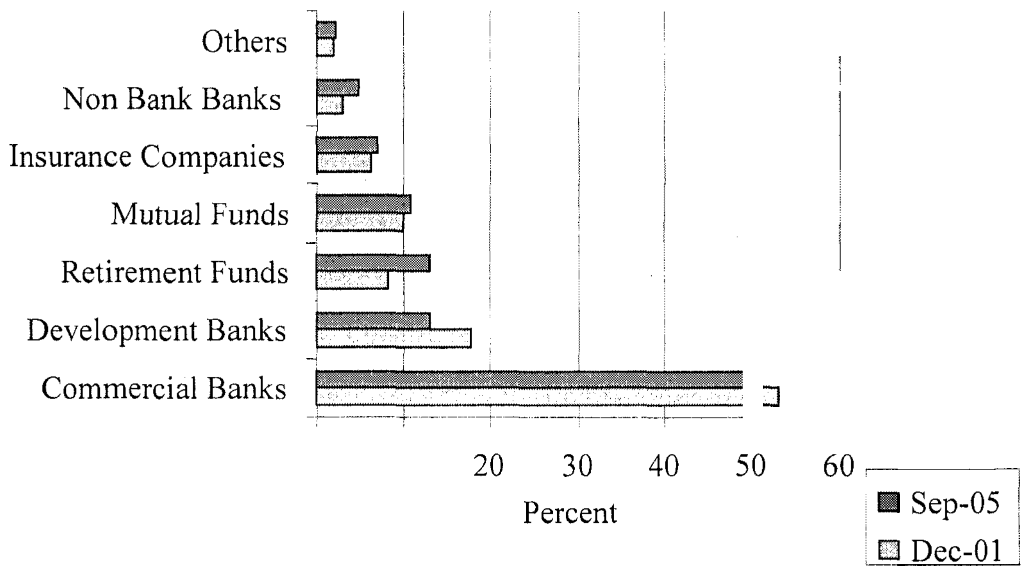
Amendments and Additions to the Retirement Savings System Law: opened the possibility for more workers to access the benefits of the New Pension System, including workers not registered in the social security institute (workers affiliated with the social security system for public sector employees, state and municipal governments, and public universities or working independently);

allowed complementary contributions for retirement for all workers; and allowed investing—up to a limit of 20 percent—in foreign securities.

Payment Systems Reforms: revamped the legal framework by enacting a Payment Systems Law in order to ensure payment finality and improve the execution of collateral and the oversight powers of the BOM; eliminated remaining credit risks in the large value payment systems, in line with the BIS CPSIPS; established a requirement for any overdraft in the large-value electronic payments system to be settled on the same day by using bilateral credit lines provided by other banks; improved the quality of collateral associated with BOM's credit; and consolidated the intraday credit into one payment system (from the previous three systems).

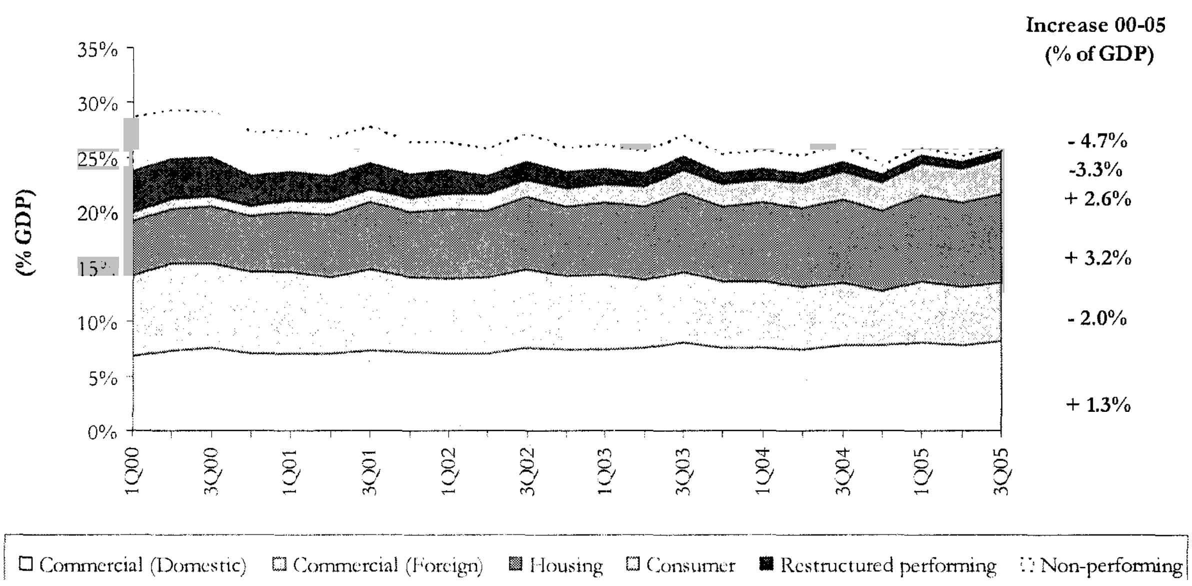
New Securities Market Law (2005): established a regulatory framework in line with international standards covering several aspects of the market, such as disclosure of information to investors, minority rights, and sound corporate governance. This framework supports the access of mid-sized corporations into the securities market and consolidates the rules applicable to issuers, in order to improve their organization and operations, through modern corporate structures and revamped liabilities. The new law updates the legal framework applicable to securities firms and those financial entities that participate in this sector, such as securities depository entities and central counterparties, among others. The law also seeks to update the regime of criminal offences and redefine the powers of financial authorities in order to make their functioning more efficient. The CNBV is enabled to inform the general public on the existence of inquiries and sanctions imposed.

Figure 1. Mexico: Share of Total Assets by Type of Institution



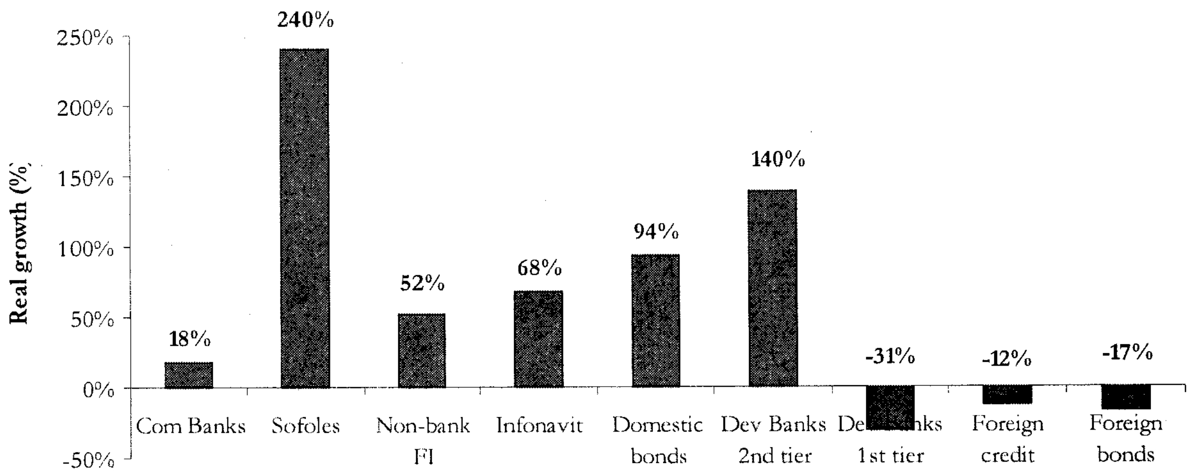
Source: CNBV.

Figure 2. Mexico: Total Debt Financing (Domestic and Foreign) to the Non-Financial Private Sector (Percent of GDP)



Note: Equity financing, FIRA and *Financiera Rural lending*, mortgage loans by FOVISSSTE, and asset-backed securities are excluded. Commercial, housing and consumer financing include only performing loans. Domestic bond issuance is treated as part of domestic commercial financing and only includes outstanding bonds issued by non-financial private sector firms. Foreign commercial financing consists of cross-border bank lending and bond issuance abroad.

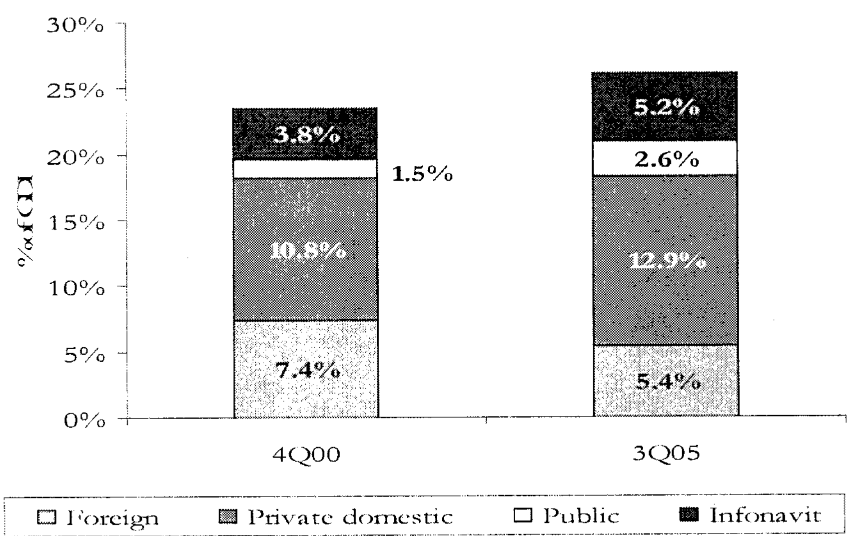
Figure 3. Mexico: Cumulative Real Growth in Financing to the Private Sector
(2000-Q1 to 2005 Q3)



Sources: BOM and SHCP.

Note: FIRA and *Financiera Rural* lending, FOVISSSTE mortgages, and asset-backed securities are excluded. Only performing loans are included in the analysis. Domestic bond issuance only includes outstanding bonds issued by non-financial private sector firms. Non-bank Financial Institutions include SAPS, OACs and credit unions. Information for development banks is separated into first-tier and second-tier lending. Figures are deflated by the GDP deflator.

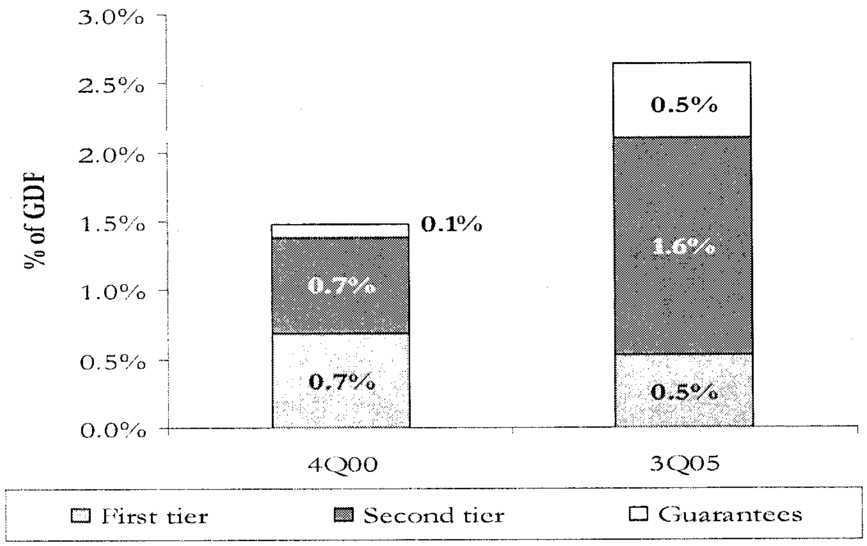
Figure 4. Mexico: Financing to the Private Sector, by Source
(Percent of GDP)



Sources: BOM and SHCP

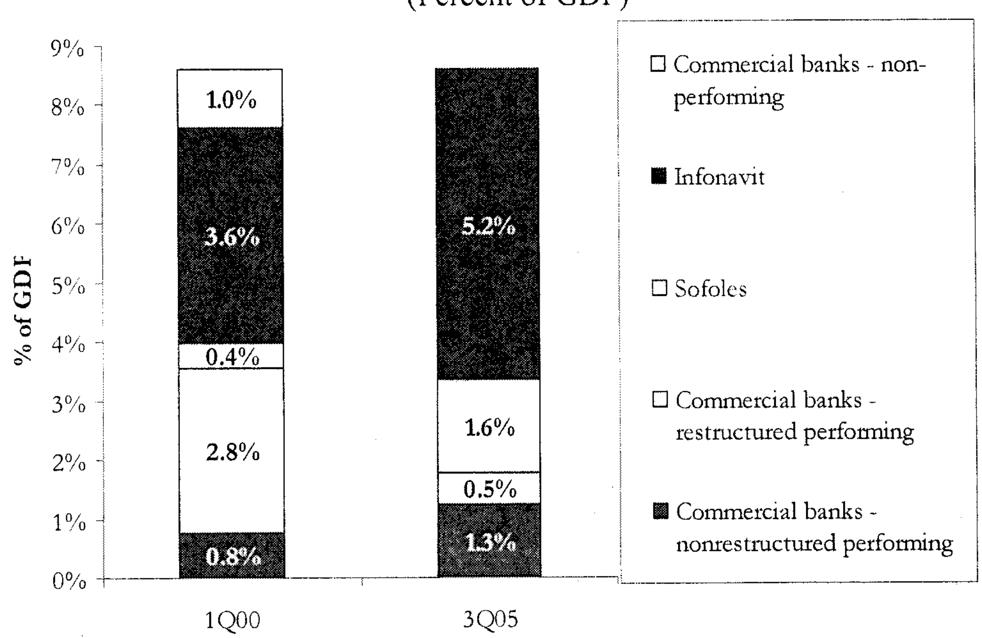
Note: Equity financing, FIRA and Financiera Rural lending, mortgage loans by FOVISSSTE, and asset-backed securities are excluded. Commercial, housing and consumer financing include only performing loans. Domestic financial includes bank loans and bond issued by non-financial private sector firms. Foreign commercial financing consists of cross-border bank lending and corporate bond issuance abroad.

Figure 5. Mexico: Financing to the Private Sector by Public Sector Entities
(Percent of GDP)



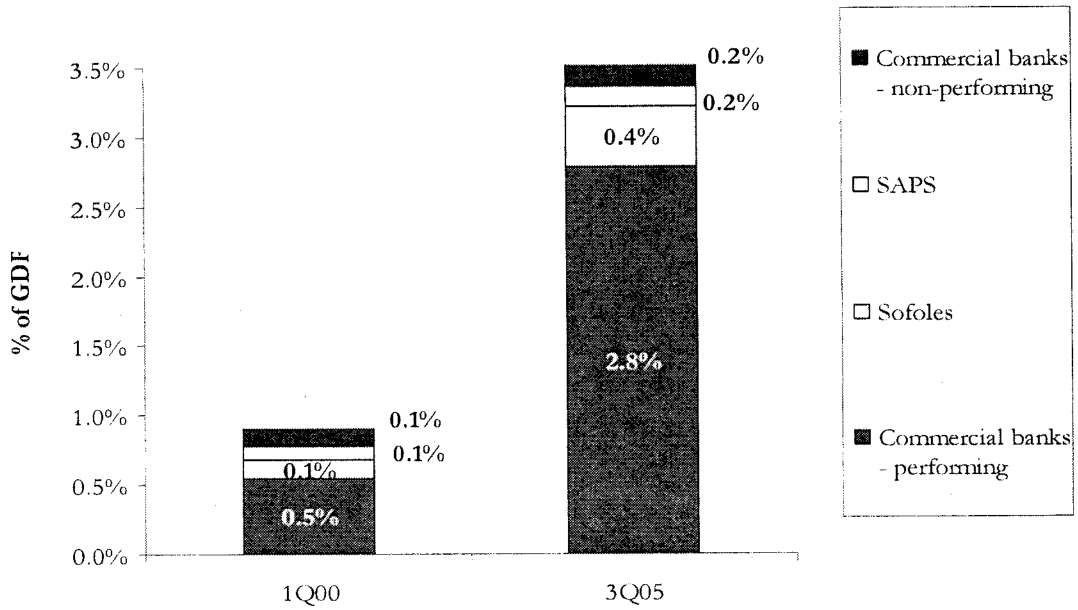
Sources: BOM and SHCP
Note: FIRA and Financiera Rural lending not included. INFONAVIT and FOVISSSTE are not included, as they are not treated public sector entities.

Figure 6. Mexico: Housing Financing, by Source
(Percent of GDP)



Source: BOM.
Note: FOVISSSTE lending is excluded.

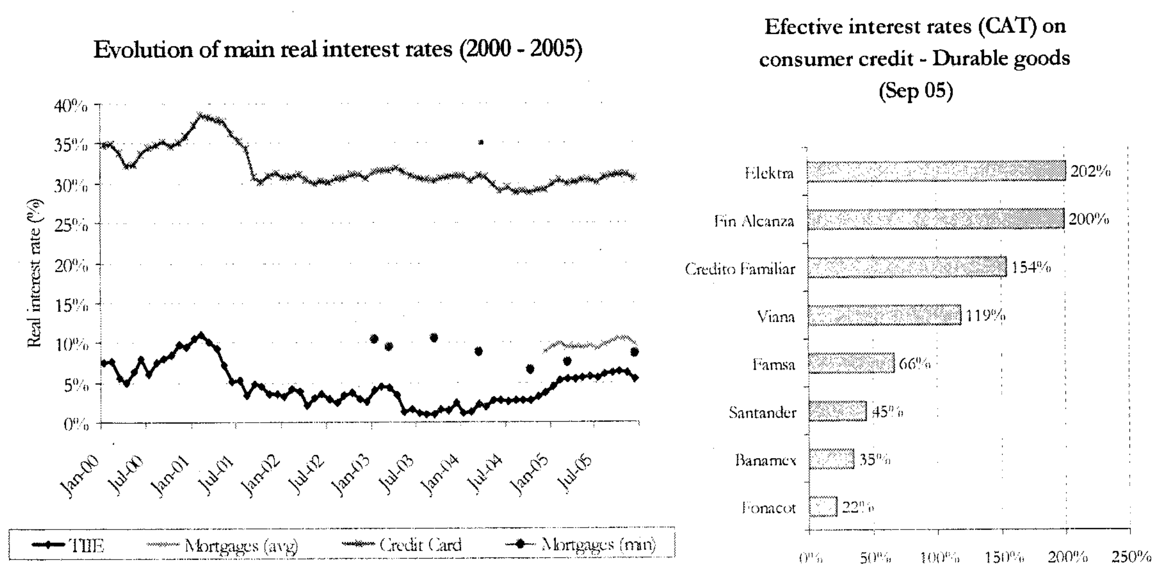
Figure 7. Mexico: Consumer Financing, by Source
(Percent in GDP)



Source: BOM.

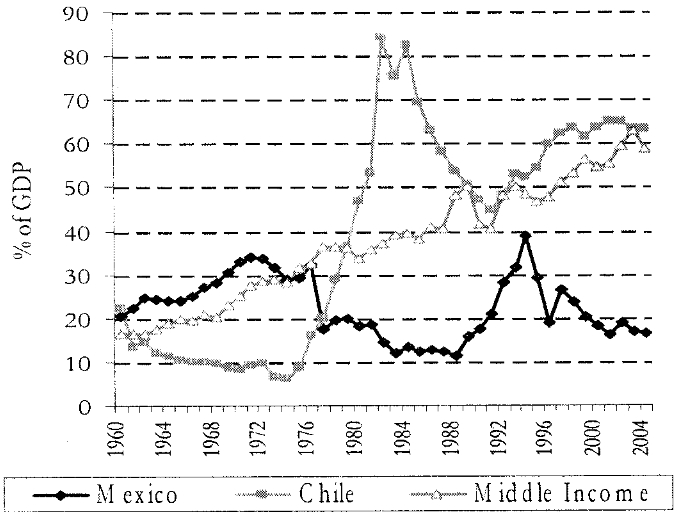
Note: SAPS are savings and loan associations. Securitized consumer credit is excluded from the analysis.

Figure 8. Mexico: Real Interest Rates and Comparison of Effective Rates (CAT)



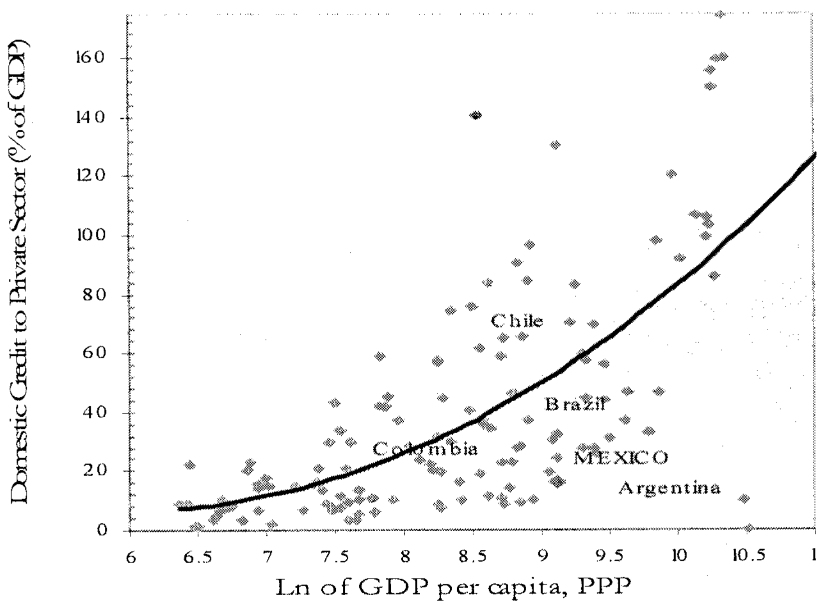
Sources: BOM, CONDUSEF, SHCP, and Infosel.
Note: CAT (*Costo Anual Total*) is the effective interest rate used for comparative purposes that includes all direct annualized costs of a loan excluding taxes and third party expenses (e.g., notary fees).

Figure 9. Mexico: Domestic Credit to Private Sector
(Percent of GDP)



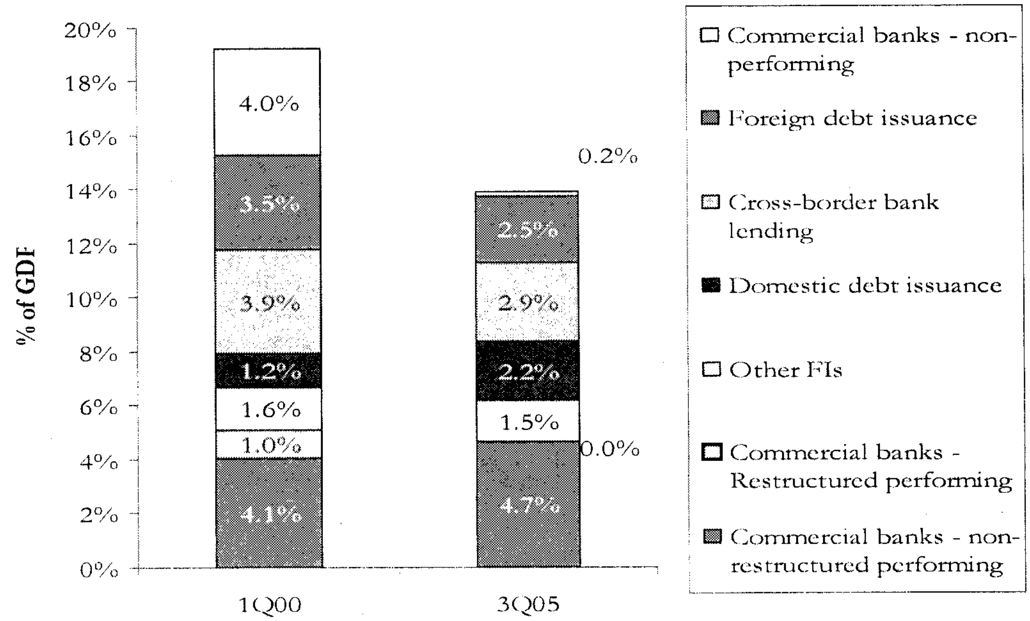
Source: World Bank World Development Indicators.

Figure 10. Mexico: Domestic Credit to Private Sector and GDP Per Capita (2004)



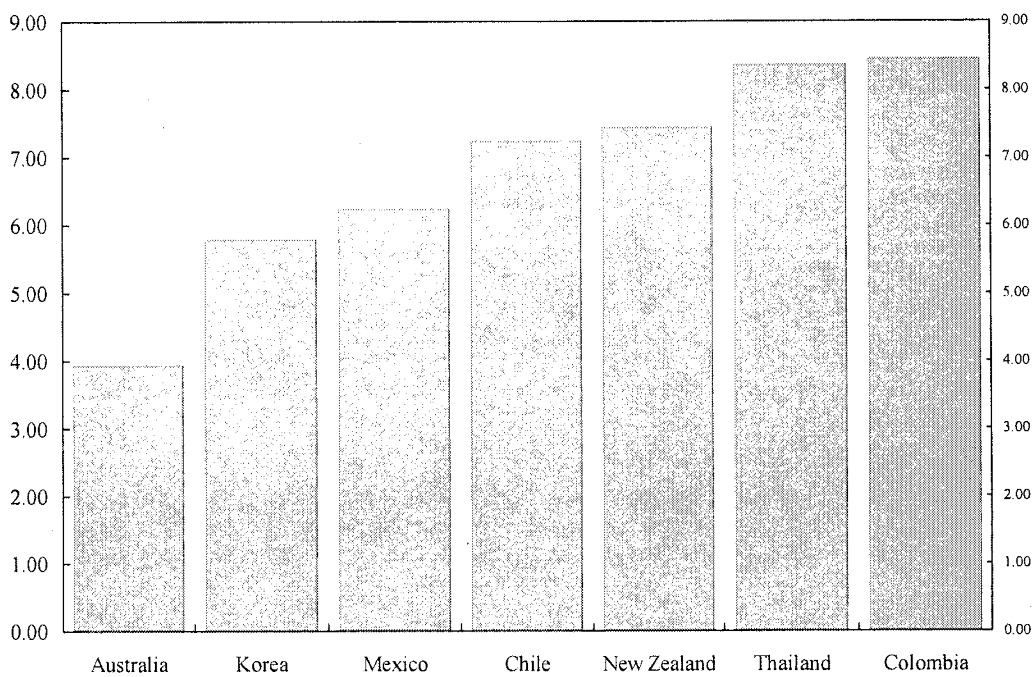
Source: World Bank World Development Indicators and GDF Database.

Figure 11. Mexico: Financing to Firms, by Source
(Percent of GDP)



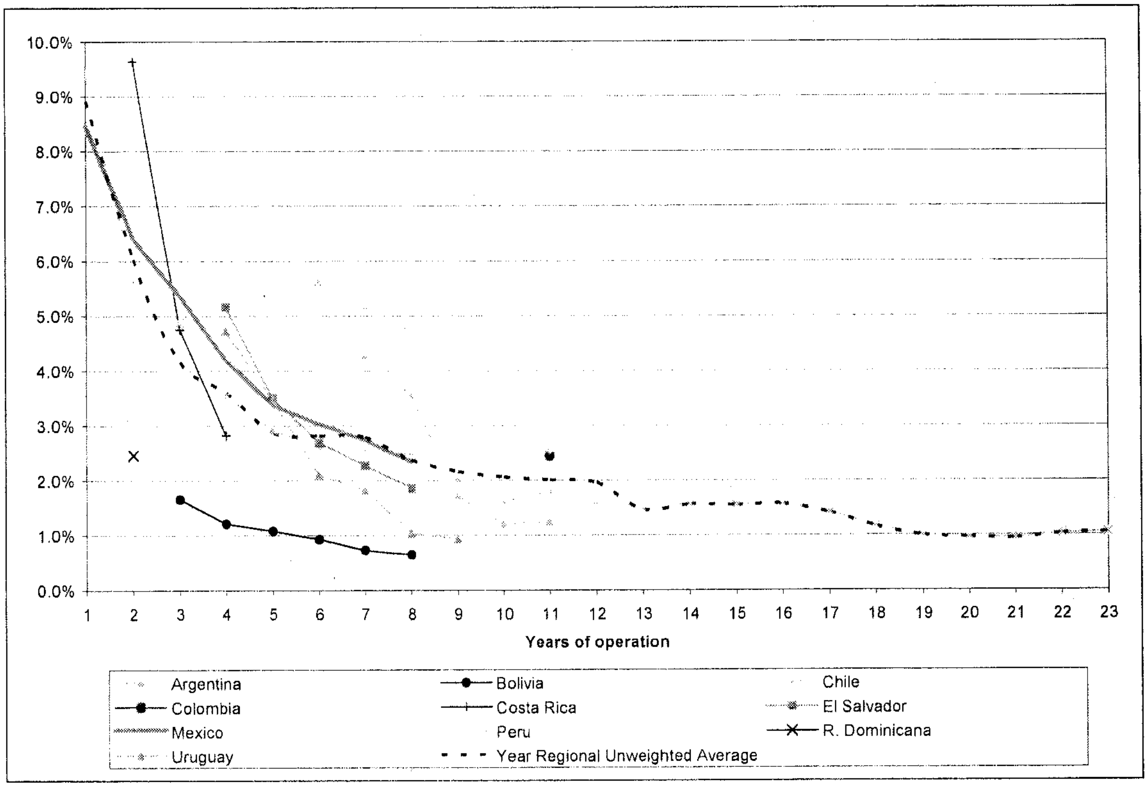
Source: BOM
Note: Equity financing, FIRA and Financiera Rural lending are excluded. Domestic debt issuance includes only bonds issued by non-financial private sector firms. Other Financial Institutions include development banks, Sofoles, OACs and credit unions. Restructured loans consist of commercial loans belonging to the FOBAPROA, UDIs and ADE programs.

Figure 12. Mexico: Average One-Month Forward Bid-Ask Spread in 2005



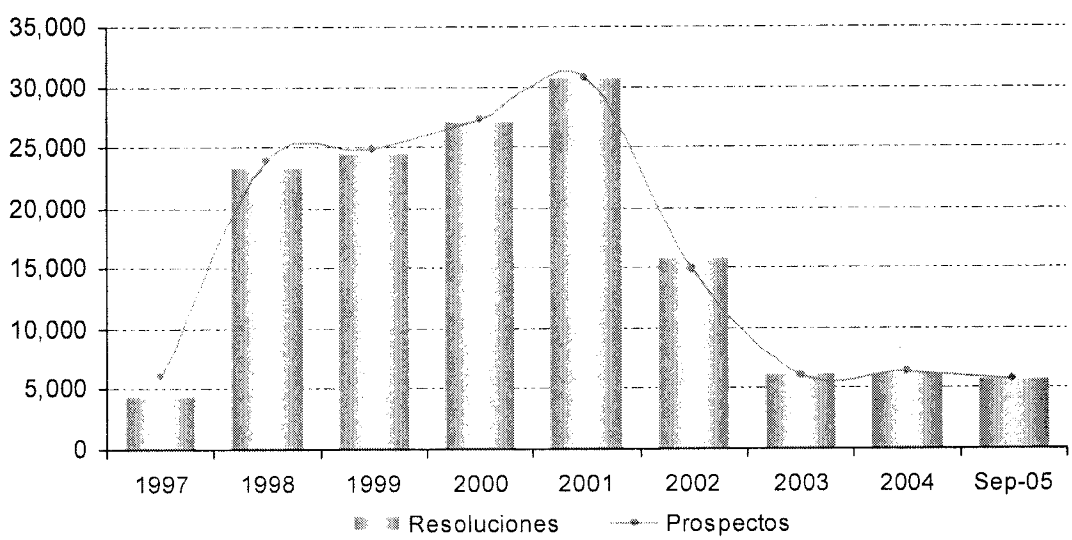
Source: Bloomberg LLP and staff calculations.

Figure 13. Pension Fund Equivalent Fees over Assets
in Selected Latin American Countries



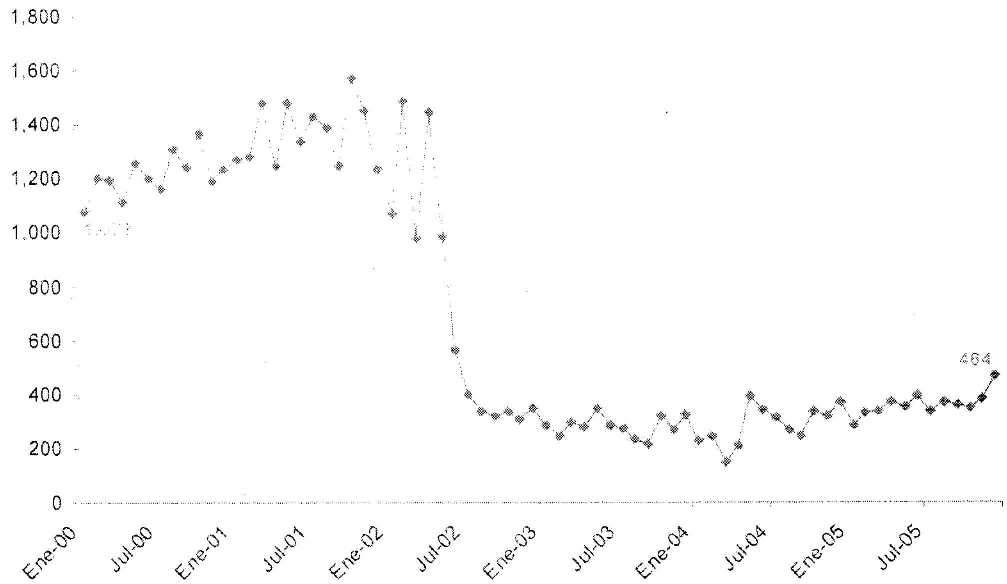
Note: Fees are net of death and disability insurance.
Source: AIOS and FSAP Team calculations.

Figure 14. Mexico: Number of New Annuitants



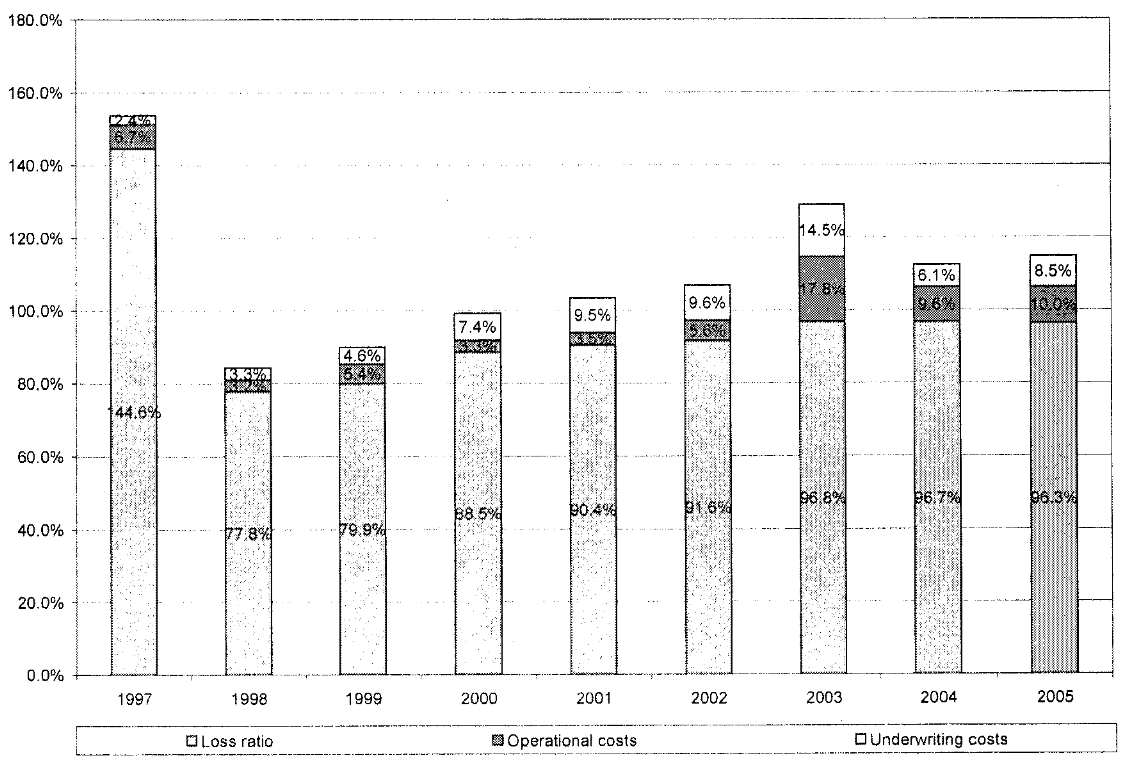
Source: CNSF.

Figure 15. Mexico: Monthly Disability Insurance Premiums
(In million Mexican pesos)



Source: CNSF.

Figure 16. Mexico: Underwriting Performance of Annuity Companies



Source: CNSF.

Table 1. Mexico: Switches to Lower Fee Pension Funds

	Lower Fee Funds
2001	61
2002	63
2003	65
2004	62
2005 (January–May)	69
2005 (June–December)	85

Source: CONSAR.

Table 2. Mexico: Regional Comparison of Equivalent Fees over Assets

2005 equivalent fee over assets at:	**One year**	**25 years**	**40 years**
Argentina	2.89	1.62	0.92
Bolivia	1.35	0.56	0.42
Chile	3.81	1.08	0.62
Colombia	3.47	0.91	0.52
Costa Rica	0.74	0.99	0.89
El Salvador	3.09	0.86	0.49
Mexico	*3.19*	*1.19*	*0.78*
Peru	4.59	1.54	0.88
Dominican Republic	1.47	0.14	0.91
Uruguay	4.31	1.18	0.76
Weighted average	2.89	1.17	0.70

Source: CONSAR and FSAP team calculations.

Table 3. Mexico: Monthly Disability Benefits under the 1973 and 1997 Laws
(In Mexican Pesos)

Average Salary	Benefits under: 1973 Law According to Years of Contributions					1997 Law
	5	10	15	20	25	
1,500	1,409	1,418	1,431	1,449	1,476	1,551
3,000	1,415	1,433	1,459	1,750	2,066	1,551
4,500	1,422	1,449	1,709	2,236	2,786	1,575
6,000	1,428	1,464	1,902	2,666	3,462	2,100
7,500	1,434	1,480	2,157	3,149	4,180	2,625
9,000	1,441	1,495	2,443	3,656	4,917	3,150
10,500	1,447	1,511	2,850	4,266	5,736	3,675
12,000	1,611	1,684	3,257	4,875	6,556	4,200
13,500	1,802	1,894	3,665	5,485	7,375	4,725

Source: CNSF and CONSAR.