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Laying the Foundation for a Mortgage Industry in Mexico

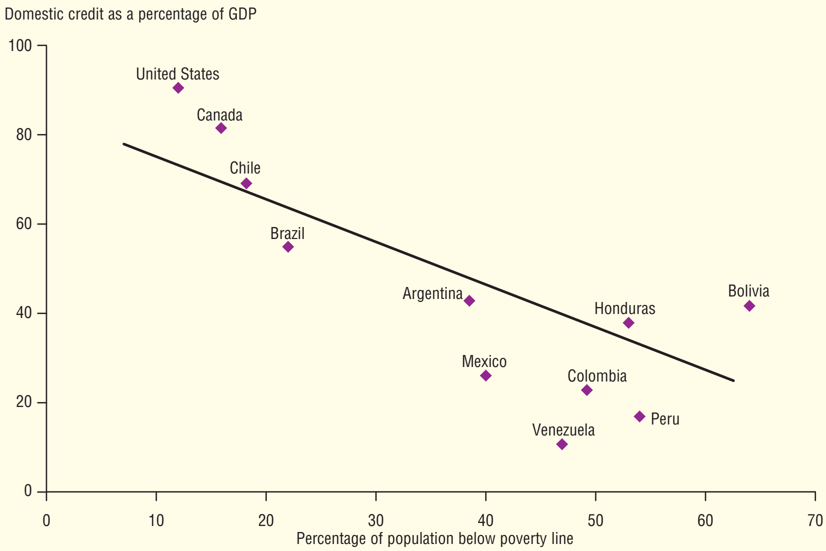
by Edward C. Skelton

The development of a mortgage industry should boost Mexico's economy by encouraging higher quality housing, increased savings and greater wealth creation.

Well-developed financial markets are indispensable to modern economies. It's hard to imagine the United States and other major economic powers without the web of financial products and instruments that connects savers and borrowers, promoting investment and efficiency. Countries with underdeveloped and ineffective financial markets face significant barriers to growth and competitiveness. Indeed, higher levels of financial service availability are generally associated with lower rates of poverty because credit creation facilitates development (*Chart 1*).[1]

Given the importance of well-functioning financial markets, surprisingly little attention has been paid to Mexico's recent progress in laying the foundation for a world-class financial system. A series of quiet reforms—

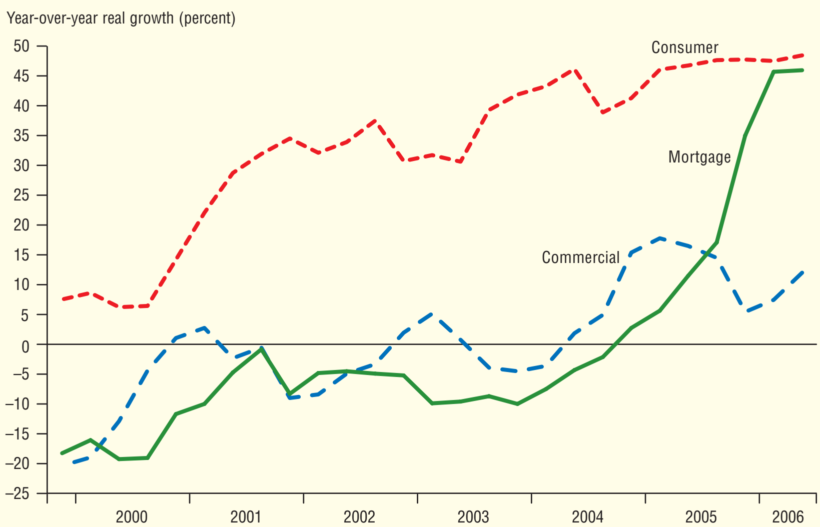
Chart 1
More Credit, Less Poverty



NOTE: The percentages of population below the poverty line are national estimates from the *CIA World Factbook*. The definitions of poverty vary widely.

SOURCES: *CIA World Factbook*; *International Financial Statistics*, International Monetary Fund.

Chart 2
Mortgage Lending Takes Off



NOTE: Some of the growth reflects purchases of existing mortgage portfolios from nonbank lenders.

SOURCE: Comisión Nacional de Bancaria y de Valores.

many enacted in just the past few years—points to a financial big bang in the making.

A prominent example is securitization, which some consider financial innovation at its best. By pooling previously illiquid assets and selling their future income streams to investors, securitization unlocks value and promotes a free flow of capital, spreads risk and boosts credit availability for consumers and businesses. Mexico issued its first mortgage-backed security—for $178 million—in December 2003. Since then, the market has expanded to approximately $1.5 billion a year, a total expected to double over the next year, then double again in 2008.

This rapidly growing market for mortgage-backed securities is a prime example of Mexico's success in financial development. Not long ago, financing for home purchases was scarce, and obtaining it typically required a down payment of 50 percent or more for a relatively costly adjustable-rate loan. Today, a rapidly growing number of people have access to competitively priced, fixed-rate mortgages.

The development of a mortgage industry should boost Mexico's economy by encouraging higher quality housing, increased savings and greater wealth creation (*see the box "The Payoff from Mortgage-Backed Securities"*). At the same time, making it easier to buy and sell homes will promote household mobility, a key factor in freeing labor resources to move from slow-growing to more dynamic parts of the country.

Reforms Supporting the Mortgage Market

Recent loan growth at Mexican banks has been robust in the three major categories (*Chart 2*).[2] Consumer lending has risen dramatically for the past six years, albeit from a low base. Commercial lending, largely nonexistent since 1994, resumed growing in 2004, a movement expected to accelerate. Most remarkable, however, is

The Payoff from Mortgage-Backed Securities

In addition to freeing up funds, reducing borrowing costs and deepening financial system penetration into the housing sector, securitization promises other benefits for Mexico.

Investment opportunities. Aside from government paper, Mexico has few options for attractive, fixed-income products. As a result, pension funds, insurance companies, money managers and other institutional investors have limited ability to diversify their portfolios. Currently, private pension funds hold more than 80 percent of their assets in government debt.

Given these funds' growth rates and lack of diversification, mortgage-backed securities—whose underlying assets often carry a government guarantee or mortgage insurance—should be particularly attractive. Perhaps more important, mortgage-backed securities typically carry an investment grade, an important distinction in Mexico's market for private debt.

Macro-level risk diversification. By isolating risk and repackaging it for investors, securitization helps redirect financial risk to those more able to bear it. Spreading risk helps make the financial system as a whole more stable.

Micro-level risk diversification. The availability of a wider range of financial assets enhances institutional investors' ability to create stable, diversified asset portfolios, especially when issuers can meet specific investors' needs by varying the risk characteristics of mortgage-backed securities. A pool of mortgages, for example, can be grouped by risk, so a subordinate issue absorbs any losses before a senior interest is affected. The subordinated debt holders agree to greater loss exposure in exchange for a higher return.

Specialization. Securitization can enhance the financial system's specialization. As securitization markets develop, specialized companies typically compete to service financial institutions' loan portfolios. Institutions then have the option of outsourcing their own portfolio supervision, collection and customer service operations. In the United States, data suggest this specialization improves loan portfolio performance.

the surge in home mortgage lending that began in 2005. The upturn reflects a continuing trend in Mexico's home mortgage industry: explosive growth in the total number of mortgages originated by bank and nonbank lenders since 1999 (*Chart 3*).

Compared with the previous high-growth environment of the early 1990s, today's lending risk is much better contained and monitored. The improvement results from advances in accounting rules, capital adequacy measures, loan classification requirements, and auditing and risk management procedures—all of which now meet or exceed international standards. Mortgage lending has seen major structural improvement within each of the lending processes' critical dimensions: gauging creditworthiness, backing loans and obtaining funds.

Gauging creditworthiness. Mexico has made strides in collecting more and better information about borrowers' creditworthiness. Technological improvements and the development of reliable credit bureaus have contributed to better management information systems and speedier loan decisions. As a result, the cost of underwriting and originating home mortgages has declined.

In January 2002, Mexico introduced a revised legal framework for governing credit bureau operations. This law, coupled with supporting bank regulation, improved the timeliness of credit bureau data on the creditworthiness of potential borrowers, increased lenders' use of credit bureau information and strengthened privacy protections.[3] Partly because of the new law, the depth and quality of borrower information in Mexico now compare favorably with that of both regional peers and developed countries.

El Buró de Crédito, Mexico's most prominent credit bureau, was the only market participant until Círculo de Crédito's establishment in June 2005. Data from these two privately owned organizations is extensive, covering almost 40 million individuals and 1.6 million companies, or an estimated 70 percent of potential borrowers. Such penetration is remarkable, given that the credit bureaus themselves have only a 10-year history. Just as in the United States, households and businesses are entitled to one free credit report a year.

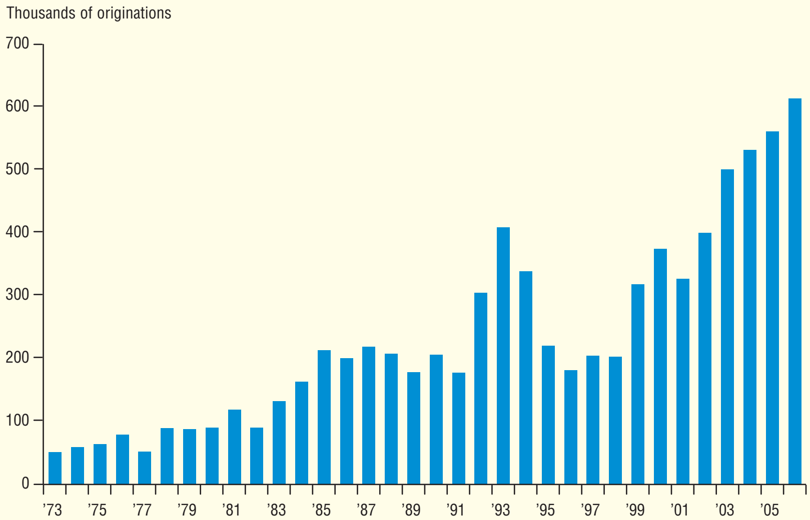
Backing loans. Even with abundant information on borrowers, full repayment of a loan, particularly a long-term mortgage, is seldom assured. For this reason, credit assurances are usually sought to reduce the expected loss should default occur.

One such assurance involves the mortgage itself. The home—generally an appreciating asset—serves as collateral, helping ease concerns regarding default, enhancing the availability of credit and cutting its cost.

Mexico has made important advances to enable the use of houses as collateral. In 2000, bankruptcy reform improved contract enforcement and creditor rights by clarifying and streamlining the process and strengthening lenders' ability to repossess assets. The collateral provisions were further strengthened in 2003.

Generally consistent bankruptcy rules now apply across the country, whereas previously they varied considerably from one jurisdiction to another. Moreover, the reform estab-

Chart 3
Mortgage Originations on the Upswing



NOTE: 2006 data are through June, annualized.
SOURCE: Comisión Nacional de Fomento a la Vivienda.

lished an extrajudicial mechanism for collateral repossession and bankruptcy resolution, alleviating the need for lenders to access a judicial system that at local and state levels remains inefficient and inconsistent in applying law and precedent. With homes serving more securely as collateral, lenders can extend mortgages with greater confidence.

Additional security for mortgages has come from the establishment of mortgage insurance, which offers creditors protection, within limits, if the underlying collateral doesn't cover a loan's unpaid balance. A government agency has offered mortgage insurance since July 2005. A reform this past March allows the private sector to provide it as well.

The availability of mortgage insurance opens the market to more people and promotes the supply of credit by lowering interest rates and down payments. In addition, it provides an important credit enhancement for Mexico's growing mortgage-backed securities market. Lastly, insurance makes borrowers with the highest loan-to-value ratios share the cost of servicing relatively risky loans.

Obtaining funds. Once adequate protections for lenders are in place, the mortgage market still requires the obvious: funds to lend. Mexico has enhanced the flow of money into home mortgage lending through securitization. The development of this market allows mortgage originators to remove loans from their books, freeing funds for new loans.

Securitization can also lower lenders' cost of funds. In deciding how to raise money, lenders may choose between issuing debt based on their own promise to repay or issuing securities supported by the future income of specific loan packages. Obtaining funds through securitization often means less expensive financing than would be possible based on the lender's own credit rating.

Mexico's first mortgage-backed securities were issued in December 2003, following years of improvements to the associated information systems. Other structural changes supporting securitization include uniform underwriting standards, consistent loan valuation standards and transparent foreclosure rules. As a result of these efforts, Mexico's mortgage-backed securities market now compares favorably with those of similar countries (*Table 1*).

The appetite for such securitized products is large, especially among Mexican institutional investors. Because of reforms liberalizing the industry, Mexico's pension funds have experienced explosive growth. Fund managers should continue to be eager buyers of mortgage-backed securities, which boast investment-grade ratings, as they continue to diversify away from government bonds.

However, foreign institutional investors have been mostly absent from the market, with the exception of some U.S. hedge funds. For now, the small size of Mexico's issuances relative to those in developed countries precludes widespread international interest in the securities. Problems with accurately forecasting cash flows are another limiting factor. Mexico's lack of historical data increases the difficulty of forecasting prepayment speeds, delinquencies and defaults. Such longer-run data will become available over time.

Building a Mortgage Industry

While structural reform of the financial markets has supported the component parts of mortgage lending, Mexico has been fostering the institutions that support homebuying.

The government runs the country's two largest mortgage lenders—Instituto del Fondo Nacional de la Vivienda para los Trabajadores (Infonavit) and Sociedad Hipotecaria Federal (SHF).

The federal government established Infonavit in 1972 as an autonomous agency to manage a workers housing fund and promote their housing rights. Infonavit finances mortgages for workers via a mandatory 5 percent payroll deduction that also helps fund other social programs. The agency held loans totaling $40.1 billion on June 30, the largest mortgage portfolio in Latin America.

Infonavit issued its first mortgage-backed security in 2004, with $68.2 million in 12-year bonds. The agency followed with a series of 20-year bonds backed by low-income mortgage portfolios, all purchased by Mexican institutional investors interested in long-term securities with stable, investment-grade ratings.

Payments on loans backing Infonavit's securities come via automatic deductions from workers' wages, which helps hold down delinquencies. The delinquency rate for Infonavit's initial issuance has hovered around 2 percent, consistent with the conservative loan origination standards needed to meet institutional investors' investment-grade demands.

SHF was created in 2001 to spur development of the secondary mortgage market by guaranteeing credits and creating a central database on borrowers, loans and mortgage-backed securitizations. The agency held $8.8 billion in directly funded home loans at year-end 2005.

Through partial guarantees, SHF has assumed a significant amount of the credit risk in securitized mortgage pools, lowering issuers' transaction costs and reducing the credit enhancements needed to meet a particular rating standard. The Mexican government, in turn, has explicitly guaranteed SHF's obligations through 2009.

In addition to originating mortgages, SHF has been a major funding source for Mexico's mortgage finance companies, known by their Spanish acronym, *sofoles*. Overall, 35 percent of *sofoles*' direct funding comes from government sources.

Although Infonavit and SHF have been the most active in Mexico's securitization market and maintain a dominant presence in mortgages, their market share has declined, even as the industry has grown (*Chart 4*). In terms

Table 1

Top 10 Emerging-Market Mortgage-Backed Security Issuers

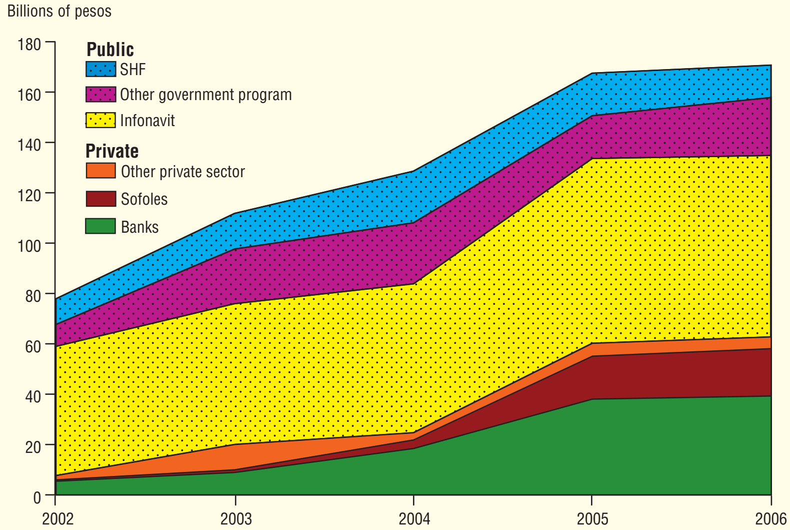
Rank		Deal value (millions of U.S. $)	Number of deals
1	South Korea	$9,850.4	21
2	Mexico	1,732.1	27
3	Malaysia	1,087.5	2
4	South Africa	988.4	4
5	Taiwan	729.5	5
6	China	362.3	1
7	Chile	51.1	2
8	Czech Republic	27.5	2
9	Latvia	15.0	1
10	Argentina	13.3	1

NOTE: Data are for June 2004–June 2006.

SOURCE: Dealogic.

Chart 4

Private Sector Posts Gains in New-Mortgage Volume



NOTE: 2006 data are through June, annualized.

SOURCE: Comisión Nacional de Fomento a la Vivienda.

Derivatives in Mexico

Another important, yet unsung, development in Mexico is the growth of a vigorous financial derivatives exchange.

Before the 1998 creation of MexDer, the country's organized exchange for derivatives contracts, Mexico had about 100 years' experience with unregulated, over-the-counter derivatives. These mostly consisted of mature foreign exchange and interest rate derivatives.

MexDer activity was anemic before 2001, when ongoing government efforts to develop a full yield curve for peso-denominated debt finally began to bear fruit. Since then, MexDer has experienced strong growth in interest rate futures and foreign exchange swaps. By 2004, MexDer had become the fifth most active futures exchange worldwide and the third most active for short-term interest rate futures.

In 2004, the exchange expanded its equity-related business by initiating trade in stock options, stock futures and index options. Mexico's relatively small equity market has yet to spawn much growth in these types of derivatives. Still, the impressive development of Mexico's derivatives market overall offers another example of the type of quiet reforms that are creating a world-class financial system.

of value, public institutions originated more than 90 percent of Mexico's mortgages in 2002, with Infonavit responsible for two-thirds of the total. By June 2006, the government lenders accounted for 63 percent of the value of new mortgage loans.

The government's lost market share has largely gone to *sofoles* and banks. A comparison of their mortgage origination growth with that of Infonavit and SHF shows the private-sector institutions gaining significantly on the government programs.

This trend will likely continue. SHF is phasing out mortgage originations and *sofoles* funding and plans to cease both operations by 2009. To help *sofoles* adjust, SHF will continue to provide partial mortgage guarantees, maintaining considerable credit enhancement and fostering mortgage securitization. To qualify for guarantees, mortgages must meet specific requirements for property type and value, as well as standards for debt-to-income and loan-to-value ratios. Such standardization in the underwriting process promotes homogeneity, another characteristic that facilitates securitization. In addition to the partial guarantees, SHF will be more active in the mortgage insurance market.

Mexico's Housing Boom

When he took office in December 2000, President Vicente Fox promised that by the end of his term in 2006, the number of houses built annually would rise from 250,000 to 750,000. Analysts expect construction of roughly 800,000 units in 2006, up from 600,000 in 2005. All told, Mexico will have built more than 3 million houses from 2001 through 2006.

Despite this, Mexico still has a deficit of 5 million units, largely due to lackluster housing stock growth in the 1980s and '90s. Because of the pent-up demand, housing construction in Mexico will probably continue at a fast pace, with as many as 1 million homes built in each of the next few years.

Several factors are contributing to the strong demand. Official records put Mexico's homeownership rate near 90 percent, but that number is somewhat misleading. More than 60 percent of the homes were self-constructed, and quality is often substandard, prompting many residents to look for new places to live.

Demographic trends are also driving demand. In 2000, Mexicans ages 20 to 49 totaled 31 million. This population is expected to grow to 46 million by 2020, pulling housing demand up along with it.

At the same time, Mexico's middle class is expanding. Currently, those in the lower-middle and middle classes—households making $4,100 to $11,000 a year—account for 45 percent of the population, up 25 percentage points since the start of 2001. For the past decade, wages have risen faster than inflation, providing gains elusive in the crisis-prone years of 1975–95. In addition, birthrates have declined and more women are working. All these factors boost the ability to buy a house.

Regions with high labor demand are experiencing acute housing shortages, while many homes are located in areas of limited economic opportunity. Mexican businesses often fill jobs with workers from relatively distant locations. Given the lack of nearby housing, groups of workers often reside in a single apartment.

While many of these workers are homeowners, their houses may be hundreds of miles from where they work and live. They presumably would prefer to sell their distant homes and buy new ones closer to work—were the homes available. What's more, other family members could relocate to faster growing regions, with their better job opportunities.

Finally, the cost of home financing has dropped dramatically. Ten years of economic stability, declining inflation, financial market reform and banking-sector competition have greatly enhanced lenders' ability to offer longer-term loans at reasonable rates.

In September 2006, banks were offering fixed-rate, 20-year mortgages at roughly 9 percent, with a required down payment of 10 percent. Just two years earlier, the same mortgage would have carried an interest rate of 18 percent and required a 35 percent down payment.

Toward Modern Financial Markets

Mexico's step-by-step creation of the institutional infrastructure for mortgage lending illustrates how many interconnecting parts are needed for just one segment of a modern financial system. While improving mortgage finance, Mexico has adopted other financial sector reforms. Since 1998, for example, the country has established a more formal infrastructure for trading derivatives—financial instruments whose value is tied to the performance of interest rates, currency values, stocks or other assets (*see the box "Derivatives in Mexico"*).

Mexico has also bolstered confidence in corporate finance. As recently as 1998, the country issued no corporate bonds, and lending to the private sector had fallen to less than half its 1994 level. Now Mexican companies acquire financing of more than $10 billion annually from bonds, and bank lending is advancing rapidly.

Mexico implemented corporate governance standards for securities-rating agencies in January 2006. The new rules include an industry code of conduct and stronger measures to ensure the confidentiality of financial data and other sensitive information. These reforms bring the country in line with international standards, increase investor confidence in agencies' opinions and recommendations, and boost bonds' marketability.

Legislation passed this year is facilitating the development of a market for real estate investment trusts (REITs), promising greater access to funds for the real estate sector overall.[4] The legislation changed tax laws, with the goal of stimulating real estate investment by enhancing liquidity and diversification opportunities, while opening the real estate market to small investors. The first Mexican REIT was issued in March 2006.

The creation of modern financial markets will have wide-ranging effects on the economy. By freeing up funds, reducing borrowing costs and deepening the financial system, Mexico's emerging mortgage-lending industry is already helping boost both the quantity and quality of the housing stock.

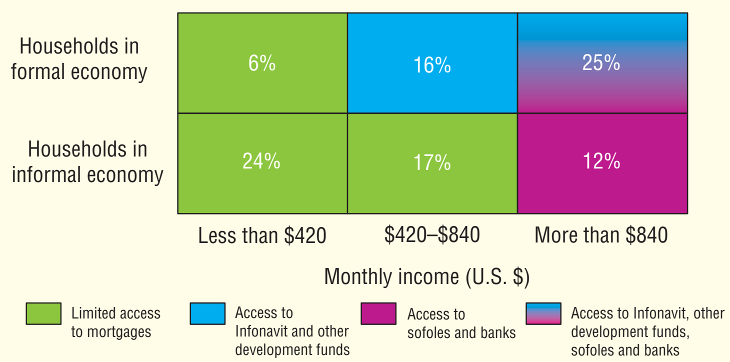
A possible longer-term benefit involves the country's still large informal economy, in which individuals and businesses operate outside official regulations. Monthly incomes as low as $420 qualify formal-sector households—which pay taxes—for government-originated loans (*Chart 5*).

The opportunity to obtain mortgage financing may represent a substantial incentive to report personal income and pay social security taxes. Over time, such a process could lead to a more inclusive formal economy in Mexico, coinciding with a continuing rise in the middle class.

The rapidly expanding home mortgage market could enhance

The creation of modern financial markets will have wide-ranging effects on the economy.

Chart 5
Who Qualifies for Mortgages?



SOURCE: Comisión Nacional de Fomento a la Vivienda.

Mexico's economic well-being in many other ways. The homestead is the primary savings vehicle for most Mexican families. With financing scarce in the past, the only way for many to save was one brick at a time, with the construction of their home spread over many years. Today, with greater access to mortgage credit, a growing number of households have the option of purchasing a completed house and paying for it over time—a process offering better shelter while allowing for the gradual accumulation of equity.

The flip side of enabling more people to purchase fully constructed homes is that those wishing to sell them should find that easier, too. This could reduce the tendency for people to find themselves tethered to a region by the untappable wealth accumulated in their home.

While families have often circumvented this problem by sending a breadwinner to live wherever work could be found, the ability to relocate families to regions offering better jobs may enable more Mexicans to improve themselves financially. By creating a more liquid housing market, the country's expanding mortgage market may reduce labor market rigidities as well, contributing to a more dynamic Mexican economy.

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Notes

[1] For more on financial development's role in economic growth, see *Saving Capitalism from the Capitalists: Unleashing the Power of Financial Markets to Create Wealth and Spread Opportunity*, by Raghuram G. Rajan and Luigi Zingales, New York: Crown Business, 2003, and "Finance and Growth: Schumpeter Might Be Right," by Robert G. King and Ross Levine, *Quarterly Journal of Economics*, vol. 108, August 1993, pp. 717–37.

[2] For more on Mexico's booming credit market, see "Mexico Emerges from 10-Year Credit Slump," by Robert V. Bubel and Edward C. Skelton, Federal Reserve Bank of Dallas *Southwest Economy*, May/June 2005, pp. 14–18.

[3] This law gave rise to the banking regulation seemingly most responsible for the increased use of credit bureau information. This regulation required a 100 percent capital reserve for loans made without consulting credit bureau information. The regulation was subsequently reformed so that credit extended to borrowers with a negative credit history would also require the 100 percent reserve coverage. Moreover, creditors are required to update information on their borrowers every month.

[4] A REIT, which often is publicly traded, holds the titles to real estate property and mortgages for the benefit of a large group of investors. A REIT is exempt from corporate income taxes as long as nearly all its income is distributed to the trust's investors.

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