CASE STUDY IN FINANCIAL RESEARCH

Financial Development in Mexico between 1975 and 2009

Harald Habermann

1 University of Glasgow, Department of Economics

Kontakt

Harald Habermann, MSc
Baptist-Kraus-Str. 10
92665 Altenstadt/WN

Phone: +49(0)9602 6191155
Fax: +49(0)3212 1163560
E-Mail: habermann.h@web.de

Abstract

Mexico's financial sector transformed significantly over the last three decades. The shift from cross-border towards domestic financing and, domestically, from bank to bond financing can be seen as the main contributor to this development. The main challenge of attracting international and domestic investors to hold peso denominated debt is to overcome the so called "original sin". It means that emerging countries are unable to borrow in their own currency because of different macroeconomic problems and policy dilemmas. However, Mexico substantially developed its domestic bond market and is now after Brazil the second largest domestic debt market in Latin America in absolute terms. Moreover, since the pension system has been implemented in 1997 it has experienced rapid growth. The financial market liberalization stimulated the derivatives markets in Mexico, especially the issuance of mortgage-backed securities (MBS), called Borhis, increased enormously. However, these derivatives were one reason for the worldwide financial crisis. Moreover, due to structural problems in the Mexican economy it seems that the trade of derivatives undertaken by Mexican corporations deepened the effects of the actual recession. Thus, this hypothesis has to be proven empirically when reliable data are available.

Keywords: financial market liberalization, debt market, Mexico, financial crisis, original sin

Entwicklung des Finanzsektors in Mexiko zwischen 1975 und 2009

Zusammenfassung

Mexikos Finanzsektor hat sich im Laufe der letzten drei Jahrzehnte bedeutsam verändert. Die Verschiebung von grenzüberschreitender zu heimischer Finanzierung und, innerhalb Mexikos, von Banken- zu Anleihenfinanzierung, kann als der Hauptgrund für diese Entwicklung angesehen werden. Die größte Herausforderung für Mexiko bestand darin, die so genannte "Original Sin" zu überwinden, denn nur so können internationale und nationale Kapitalanleger überzeugt werden in

Schlüsselwörter: Finanzmarktlabilisierung, Anleihenmarkt, Mexiko, Finanzkrise

Introduction

Mexico's financial sector transformed significantly over the last decades. The shift from cross-border towards domestic financing and, domestically, from bank to bond financing can be seen as the main contributor to this development (Ocampo and Tovar, 2008). The government decided to promote the Mexican Stock Exchange, called Bolsa Mexicana de Valores, as an alternate instrument of finance for domestic companies as well as to expand the market for short-term government securities. Structural change in the financial sector was complementary to changes occurring in the international economy. However, this development changes can be mainly explained with domestic political reasons (Minushkin, 2002). Thus, the financial crisis starting in 2008 challenges this development.

As far as the author is concerned there is no case study that focuses explicitly on the transformation of the financial sector and the consequences of the actual financial crisis in Mexico. Therefore, this article aims to shed light on Mexico’s financial market development between 1975 and 2008. Furthermore, it pays attention to the relationship between the historical progress and the recent problems in the financial sector.

Literature review

Although there are many articles about the Mexican financial crisis in 1994 (Calvo, 1996; Mishkin, 1999), it was Minushkin (2002) who started to summarize the experiences of the Mexican financial sector over a longer period. She argued that the positive development of the financial market was rooted in a conflict between powerful oligarchic bankers and financial entrepreneurs, which led to a structural change. The Mexican financial system moved from a bank-dominated one to securities market one. Therefore, the structural change of the financial sector in Mexico was mainly successful due to domestic political changes accompanied by changes occurring in the international economy. Similarly, Jeanneau and Verdia (2005) and the Deutsche Bank Research (2006a) investigated that after the “tequila crisis” in 1994 the Mexican government introduced macroeconomic and structural reforms to strengthen the demand for domestic debt. Venegas F Tinoco and Torres-Preciado (2009) separated the Mexican financial development into two main stages: regulation until 1988 and liberalization after this date. They found out that financial development had a positive impact on productive activity.
**Method**

To understand the history of the Mexican financial market the article continues with an explanation of the structural change and financial market liberalization. This provides the basis for the assessment of the most important sectors of the financial systems. The article follows the specification of the Mexican Central Bank (Banco de Mexico, 2008) and is, therefore, divided into:

- banking sector
- private pension market
- debt market
- derivatives and financial asset securization

Different from Venegas F Tinoco and Torres-Preciado (2009) three different stages of financial development can be distinguished. Based on these three periods a narrative method is chosen to describe the process of development.

**Structural change and financial market liberalization**

The Mexican financial market has developed through three stages (Venegas F Tinoco and Torres-Preciado, 2009):

- early liberalization policies between 1975 and 1982
- financial repression between 1982 and 1988
- liberalization after this date until today

Policy changes designed to move away from a bank-dominated to a more diversified financial system with a vibrant Bolsa started in 1975 with the Securities Market Law. On 22 November 1976 the Mexican Central Bank, called Banco de Mexico, reported that the banking system could no longer buy and sell foreign currencies and the National Securities Commission permitted the newly incorporated stock brokerage firms, called Casas de Bolsas, to be the single foreign currency transactors. In 1980 the Mexican government permitted banks to open international offices in order to facilitate foreign borrowing by the public and private sectors. Furthermore, the creation of the Mexican Fund, an instrument for foreign portfolio investment in the Mexican Stock Exchange, provided a permanent tool of money that would remain in the Bolsa and from which commission income could be earned. The Fund was listed on the New York and London Stock Exchanges and allowed foreign portfolio investment in Mexican equity securities for the first time since the 1930s. In February 1982 the Mexican Central Bank withdrew from the foreign exchange market because of persistent speculative attacks against the peso, continued capital flight and a growing balance of payments deficit.

On 1 September all Mexican banks were nationalized and strict currency controls were imposed. This nationalization was the trigger for structural change in Mexico's financial system, from bank-based system towards a securities market-based one because the Bolsa became a parallel financial system to the state-owned banking sector. Transactions on the Mexican Stock Exchange grew exponentially during the 1980s. The value of fixed-income securities traded on the Bolsa increased much more rapidly than the impressive gains in shares because Mexican investors searched for financial instruments for their savings whose returns would keep pace with the inflation. In December 1983, as part of a major financial reform, the Securities Market Law was changed to reduce asymmetric information about firms listed on the Mexican Stock Exchange.

In the first half of the 1980s the oil price fell sharply and, therefore, the government was forced to increase the peso's controlled devaluation and to raise interest rates in the following years. Although credit was in short supply, the increasingly undervalued peso led to a surge in exports as Mexican producers
gained international competitiveness from the exchange rate. Furthermore, high real interest rates led to capital inflows. On 1 April 1989 the Mexican government authorised banks to freely determine lending and deposit interest rates. Selective credit requirements were also abolished. In May 1989 the reform of the Foreign Investment Law allowed the Mexican Stock Exchange the opening to foreign portfolio investment through a new class of shares that granted ownership but not voting rights to foreign portfolio investors. The law permitted foreign portfolio investment in Bolsa-traded securities and removed all exit barriers for repatriation of foreign capital.

In December 1989 the government changed the Securities Market Law, authorising Mexican firms to list their shares on foreign stock markets and permitting Mexican stock brokerage firms to open foreign offices. In December 1990 the Mexican government opened the domestic money market to foreign portfolio investment by dropping restrictions on foreign purchases and sales of Mexican Treasury Bills, called Cetes.

The opening of Mexico’s capital account was completed by the elimination of remaining currency controls in November 1991 and a crawling peg, e.g. an exchange rate with a sliding band within the peso would float. In 1994 the issuance of short-term US dollar linked government debt securities, called Tesobonos, solidified Mexico’s reputation as market friendly to international investors. Beginning on 1 April 1989 the Mexican government also moved rapidly to liberalize Mexico’s domestic financial markets, including the privatization of the banking sector in June 1991. Since foreign investors were excluded from this process, the privatization maintained bank control in Mexican hands.

Under the North American Free Trade Agreement (NAFTA) Mexico allowed foreign banks to operate as subsidiaries. Each foreign bank was limited to 1.5 per cent of the market and to a total of eight per cent for all foreign banks. Until 2000 the permitted market share was allowed to rise to 15 per cent. Protection was granted to for additional four years if foreign banks controlled more than 25 per cent of the market. Foreign participation in Casas de Bolsa was limited to between 10 and 20 per cent during a six-year transition period before full competition could begin. However, the Mexican government unilaterally eliminated the remaining restrictions in late 1998 to open the banking market to additional capital, technology and banking expertise (Mushkin, 2002). Moreover, the government focused on improving the soundness of the banking system and restoring the confidence of foreign investors (Venegas F Tinoco and Torres-Preciado, 2009).

**Banking sector**

Since 2000 Mexico’s banking sector improved significantly which can be seen in the degree of concentration of the retail banking sector. 75 per cent of the market is controlled by the top five banks. Four out of these five banks were acquired by foreign banks in this period because transparency and competitiveness of the Mexican banking sector increased. Due to Citigroup's acquisition of Banamex, with BBVA acquiring Bancomer and HSBC and Santander both entering the market through mergers and acquisitions activities the consolidation was mainly led by foreign banks. This is not negative because greater openness created a more competitive and transparent financial environment and consequently altered banking practices and consumer choice. These developments resulted in growth of the Mexican bank sector headed by increasing lending. Total assets held by commercial banks increased by over MXN 1000 billion to MXN 2314 between 2001 and 2008. Credits to the private sector raised with an average growth rate of 15.3 per cent and
amounted MXN 1876 billion. Between December 2001 and December 2007 an extreme boost of 731 per cent in consumer credits with a yearly 43.6 per cent average rise can be seen. Due to the fact that consumer credits were mainly given in the form of credit card loans, these loans were boosted over 700 per cent over the same period. Therefore, it can be argued that the confidence of the Mexicans in the banking sector increased and banks were willing to lend to the public.

With a 244 per cent increase mortgage lending also experienced a sharp rise between 2001 and 2008 (Business Monitor International, 2008). In 2006 Deutsche Bank Research (2006b) forecasted that the mortgage market can more than triple in size by 2020, from USD 64 billion in 2005 to USD 216 in 2020. Due to the rapid increase of consumer credits lending to the business sector declined from over 70 percent in 2000 to under 46 per cent in 2008. However, loans to firms more than doubled between 2001 and 2008, with an enormous 30 per cent yearly growth from 2005 onwards.

While loans as a percentage share of GDP increased from 13.7 per cent to 18.5 per cent, total assets of commercial banks did not rise relative to GDP since 2000. The growth in overall lending shows that how far the Mexican banking sector has developed since the pesos crises in 1994, driven primarily by a strong increase in local demand (Business Monitor International, 2008). However, the actual crisis showed that mortgage lending can lead to heavy imbalances of the financial system. Therefore, prudent supervision is necessary to guarantee a solid banking sector.

**Private pension market**

The social security reform in 1997 led to the implementation of the private pension fund. Since then the pension system has experienced rapid growth. It rose from USD 40 billion in 2000 over USD 65 in 2003 to USD 95 billion in 2006, which represents eight per cent of GDP (CONSAR, 2006). Standard and Poor's calculated that the pension fund could increase to 50 per cent of GDP by 2050 (Deutsche Bank Research, 2006a). In 2004 around MXN 400 billion of the fund's assets were invested in the government bonds market (Jeanneau and Verdia, 2005).

**Debt market**

The main challenge of attracting international and domestic investors to hold peso denominated debt is to overcome the so called "original sin" (Eichengreen et al., 2003). It means that emerging countries are unable to borrow in their own currency because of different macroeconomic problems and policy dilemmas. However, Mexico substantially developed its domestic bond market and is now after Brazil the second largest domestic debt market in Latin America in absolute terms (Deutsche Bank Research, 2006b). The main factors that contributed to this development are the following:

Firstly, the start of the flexible exchange rate in 1994 created demand for peso denominated liabilities. Secondly, the structural decline in inflation increased the attractiveness of long-term fixed rate securities. Thirdly, after the financial crisis in 1994 the large restructuring costs and high fiscal deficits led to a larger market for public sector debt (Mihaljek et al., 2002). Fourthly, while the real exchange rate was undervalued, the commodity prices raised. This increased the attraction of financial assets because a currency appreciation could be expected.

All these factors reduced economic and financial stress in the light of potential external shocks. Especially the implementation of peso indexed liabilities erased a potential source of vulnerability of the fiscal accounts (Jeanneau and Verdia, 2005). During 2007 and the first
quarter of 2008 the amount of outstanding peso denominated liabilities rose by MXN 19,5 million to reach MXN 276 billion, which represents 16,5 per cent of GDP as of March 2008 (Banco de Mexico, 2008). Furthermore, the refinancing risks could be lowered by the shift to longer-maturity liabilities. In 2000 fixed rate bonds with maturities of three and five years were issued for the first time followed by 10-year bonds in 2001, seven-year bonds in 2002 and 20-year bonds in 2003 (Jeanneau and Verdia, 2005). Since 2006 Mexico has been able to issue 30-year bonds (Ocampo and Tovar, 2008). During 2007 and the first quarter of 2008 the average maturity of the peso-denominated liabilities rose from 12 months to 3,6 years (Banco de Mexico, 2008).

The term structure of interest rates, which gives information about the interest rates investors expect in the future, can be better forecasted with improved availability of longer-dated bonds (Ocampo and Tovar, 2008). Furthermore, the improvement of the domestic bonds market increased the secondary market liquidity, which lowers the cost of financing for the public sector (Jeanneau and Verdia, 2005). While at the end of 1999 foreign holding represented only two per cent of the total stock of domestic currency denominated government debt, the share grew to ten per cent in mid 2006. During 2005 foreign investors held more than 70 per cent of long-term fixed rate government bonds in the Mexican market because these bonds are associated with a decline of currency and maturity mismatches. Although the Mexican debt market is still largely dominated by government bonds, the domestic issuance of corporate bonds increased strongly over the past decade. The lack for the issuance of corporate bonds can be explained with the “crowding out” of the private sector through government borrowing in domestic currency (Deutsche Bank Research, 2006b) or to imperfect corporate governance and unreliable contract enforcement mechanisms (Borenzstein et al., 2006a). Furthermore, the Mexican tax structure weakens corporate bonds' attractiveness because investors do not need to pay taxes for government securities but investments in corporate debt are not free of taxes (Tovar and Quispe-Agnoli, 2008). Borenzstein et al. (2006b) concluded that Asian and Latin America countries with a larger size of pension funds tend to have a larger corporate bond market. Therefore, looking at the raising pension funds, it is understandable that the domestic corporate bond market and consequently the entire debt market in Mexico increases. Moreover, there is cross country evidence that a larger stock of domestic-currency government debt is positively correlated to a larger domestic currency corporate bond market (IMF, 2005).

**Derivatives and financial asset securization**

Local currency debt markets have stimulated derivatives markets in Mexico. As shown above the Mexican debt market can be seen as relatively good developed. Such a well functioning domestic currency bond market is a pre-requisite for derivative markets. While the Mercado Mexicano de Derivados, which is a derivatives exchange specialized in trading of contracts on financial assets, was launched at the end of 1998, the issuance of mortgage-backed securities (MBS), called Borhis, started quite recently in 2003 (Jeanneau and Verdia, 2005). Between 2004 and 2006 the amount of traded mortgage-backed securities increased more than tenfold to about USD 640 million due to the already described rise in mortgage finance (Deutsche Bank Research, 2006b). While there is a fast development in trading short-term interest rates or swap contracts, the trade of derivatives contracts on government bond benchmarks does not exist. Although trading fixed-income as-
sets does not extend beyond interbank rates, the market rose around USD one trillion between 2000 and 2005. Over-the-counter (OTC) currency forwards and swaps help investors and issuers hedge their currency and interest rate exposures to local currency bonds. These implementations were seen promising before the start of the actual financial crisis (Ocampo and Tovar, 2008). Different international peso denominated bonds were issued by foreign financial institutions. Consequently, these issuers act as a counterpart to foreign investors, which wish to hedge peso bonds because such foreign financial institutions tend to swap the proceeds of their issues into other currencies. The Mexican peso is now one of the few emerging market currencies in which there are active OTC derivatives trading (BIS, 2005).

**Actual financial crisis**

Due to structural problems in the Mexican economy the trade of derivatives undertaken by Mexican corporations seemed to deepen the effects of the actual recession. These problems are:
- the stress that financial derivatives denominate in USD exert on Mexican peso,
- the concentration of market power in a few Mexican firms and
- the heavily reliance on American markets.

For example, while Cementos Mexicanos (CEMEX), the worlds' largest building materials supplier, gained profits by USD 300 million in 2007, CEMEX now owes USD 500 million in its derivatives operations due to the credit squeeze in the US and an increase in interest rates (Munoz-Martinez, 2008). While Citibank's future is unclear, it is likely that it will be forced to divest itself of foreign subsidiaries, of which Banamex is one. In March 2009 US government planned to increase its equity in Citi as much as 36 per cent. Therefore, Citi may be forced to sell its controlling stake in Banamex due to a Mexican banking regulation that prohibits foreign governments from holding equity stakes in local banks. This could help Citigroup to sell Banamex but would lead to a destabilization of the Mexican banking sector (El Universal, 2009). Furthermore, Banorte, the only domestically-owned bank in the top five, lost much of its share price, on fears of higher non-performing loan (NPL) rates and slower earnings growth. Banorte is seen as particularly at risk given its exposure to Mexico's northern regions, which are seen as more exposed to a recession in the US. With loans to the private sector exceeding deposits for the first time in 2007, the vast majority in the form of consumer credit, mortgages and corporate loans, a large increase in NPLs would lead to a further questioning of the stability of Mexico's banking sector (Latin American Monitor, 2009). Furthermore, the central bank intervened directly in the foreign exchange market at recent times. The central bank's daily sales of USD 100 million were hold with an exchange rate defined by an auction. In addition, the auction's amount will be lowered from USD 400 to USD 300 million in more than two per cent off the interbank parity reported on the previous working day. The central bank declared that the discretion sales of dollars will continue until it is considered appropriate to act directly in the currency market (El Sol de Mexico, 2009).

**Discussion**

The article clearly showed that Mexico's financial sector transformed significantly over the last decades. The shift from cross-border towards domestic financing and, domestically, from bank to bond financing can be seen as the main contributor to this development (Ocampo and Tovar, 2008). Therefore, this article is in line with researches on the financial development of Mexico. However, this research is more extensive because it of-
fers explanations how Mexico reduced economic and financial stress in the light of potential external shocks. Moreover, this article gives a first idea about the implications of the actual financial crisis for Mexico. Though, this case study is just a first attempt and an empirical research of the consequences of the crisis has to be followed.

Conclusion

This case study shows that Mexico's financial sector transformed significantly over the last three decades. The shift from cross-border towards domestic financing and, domestically, from bank to bond financing can be seen as the main contributor to this development. However, the “tequila crisis” in 1994 is a warning for other Latin American countries to liberalize the financial market gradually and slowly. Thus, Mexico’s crisis helped to overcome the "original sin" because the large restructuring costs and high fiscal deficits led to a larger market for public sector debt. The Mexican example clearly shows that the improvement of the domestic bonds market is important because the secondary market liquidity can be increased and the cost of financing for the public sector can be lowered. Furthermore, it seems that the trade of derivatives undertaken by Mexican corporations deepened the effects of the actual recession. This hypothesis has to be proven empirically when reliable data are available and is a case of further research.

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