Chapter 19
Global Financial Crisis and Bank Productivity in Mexico

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ABSTRACT
This chapter presents an attempt to compare the productivity of the Mexican banking sector in two different periods: the 2007-2011 period of global financial crisis and the 2003-2006 stage, which can be regarded as a relatively stable period. The purpose of this study is to disclose whether the global financial crisis affected Mexican banking productivity. Three Data Envelopment Models (DEA) are tested in order to assess whether there is a significant difference between the productivity patterns of Mexican banks before and after the financial crisis. Such models are the radial Malmquist Index, the non-radial and slacks-based model, and non-radial and non-oriented. Essentially, no significant difference of productivity indicators for both foreign and domestic banks was found. Likewise, no significant difference between the pre- and post-crisis periods was perceived, as far as productivity indicators are concerned. Therefore, the global financial crisis was effectless in banking operation.

INTRODUCTION
In the summer of 2007 the first global financial panic of the 21st century was sparked. In January 2009, losses of financial institutions assets were estimated at 700 billion dollars. The global stock market losses exceeded thirty billion dollars. The stock market index of the five hundred largest companies in the world, the S&P500, had fallen 39 percent in 2008, the NASDAQ 42 percent and 35 percent the Dow Jones.

The financing capacity of global financial system had declined significantly in 2008 compared to 2007. The issuance of securities for debt funding fell 37.7 percent compared to previous year. Indeed,
an unprecedented decline in the last twelve years. The stock issuance was dramatically reduced by 73 percent for the same period specified above. This implied a reduction in bond issues of 269.86 billion dollars and 148.1 billion decline on stock financing.

The goal of this study is to find out whether the global financial crisis affected the Mexican banking productivity. Firstly, this paper deals with the models to measure productivity. The second part presents some results on banking productivity. The third element offers some lessons from the Mexican case. Finally, some concluding remarks are given in the last section.

**MEXICAN BANKING SECTOR BACKGROUND**

In the last decades the Mexican banking system has undergone several transformations. Private banks were nationalized in 1982 and in the period 1991-92 the banking system was privatized. In 1994 the North America Free Trade Agreement (NAFTA) was in force. From 1994 onwards banking investment was opened to foreign capital. Several restrictions were imposed under NAFTA covenants for overseas participation in the banking sector. While such limitations were supposed to last until 2000, they in fact were lifted during the Mexican financial crises that took place in 1995. After the crisis, foreign investment became predominant in the Mexican banking sector. Nowadays, the Mexican financial system includes 42 private banks, most of them foreign.

The financial liberalization process encompassed several reforms in order to enhance efficiency as well as to increase productivity in the financial system. Although 1989 is established as the year of the beginning of financial liberalization, in fact, since 1979 the Bank of Mexico introduced an auction system to determine the interest rate that would be paid to commercial banks for deposits they hold in the central bank. The financial liberalization process led to market based mechanism instead of a system based on quantitative credit controls and interest rate regulation. In 1989 the Mexican financial system underwent several legal reforms. It is important to stand out the admissibility of foreign investment participation in Mexican financial institutions’ equity.

Financial liberalization took place at a moment when Mexican banks conditions were not the best. The banking system was suffering from a growth crisis as well a low degree of capitalization. Thus, making them vulnerable to the greater risk that liberalization involved.

During the financial liberalization period, not only growth of the banking system was furthered, but also the interest margin improved. In addition, a decrease on market concentration was observed. Despite the risk levels went up, operational expenditures efficiency improved. However, as there was a sharp increase in interest expenditures, bank capitalization deteriorated.

The process of banking privatization occurs from June 1991 to July 1992. Nine banks were privatized during the first year, and another nine, in the second year. The control recovery of banks by their shareholders modified their attitude on risk taking. Under control of government commercial banks tended to be relatively conservative. Nevertheless, more aggressive levels of credit risk were observed on the new conditions.

Bank privatization increased interest margin, as well as profitability. Likewise, bank capitalization improved, and greater operational efficiency was achieved. Although interest expenditures declined in comparison to interest income, higher level of credit risk showed up. At the same time, a decrease in asset growth was experienced.