BBVA | RESEARCH

Banking Outlook

Mexico

November 2012
Economic Analysis

- Total credit of the banking system: from April 2010 to September 2012 has registered 30 consecutive months of growth
- Economic Census figures indicate that in the construction and the transportation sectors, 53.3% and 40,8% of the companies obtained credit from banks and other sources in 2008. In the other sectors, the percentage of companies with credit or financing was less than 30%
- In Mexico in recent years has grown significantly the number of bank clients, in particular, and the number of persons that use financial services, in general
- This is the best moment for the Mexican banking system. In this issue, we present a review of the research that was First Place winner of the Manuel Espinosa Yglesias 2012 Award
- Financial activity in Mexico after the 1995 crisis has been characterized by the greater credit activity of some non-bank financial intermediaries and the public housing institutions

BBVA Bancomer

Content

Closing date: November 15, 2012

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Summary

Total bank credit from April 2010 to September 2012 has posted 30 consecutive months of growth

This time span, characterized by dynamic economic activity, has been sufficiently long to revert the adverse effects of the 2009 recession on credit activity and has allowed credit to flow to the private sector. To the extent that economic activity continues to grow at a rate of around 4%, bank credit is expected to maintain its growth at an annual nominal rate between 12% and 15%.

The expansion has been seen in all the components of bank credit

In the 21 months from January 2011 to September 2012, the average nominal annual growth rate for the three main credit categories was the following: consumer credit, 19.9%; credit to companies, 12.9%; and housing credit, 9.3%. In the BBVA Research macroeconomic base scenario, we expect GDP growth of 3.7% in 2012, and of 3% in 2013, with an upward bias. Consequently, we expect total bank credit to the private sector to register an average nominal annual growth rate of 14.7% in 2012 and of 13.8% in 2013.

Total deposits in the banking system (which is the sum of traditional deposits and debt mutual funds (DMF)) have posted an improved performance since January 2012

This aggregate, which allows for a better measurement of the evolution of total savings that economic agents channel to the banks, posted an average nominal annual growth rate of 9% during the second half of 2011, and for the first nine months of 2012, this rose to 10.3%. This was the result of a greater growth of debt mutual funds. In line with the BBVA Research base macroeconomic scenario mentioned, total bank savings are expected to register average nominal annual growth rates of 11% for 2012 and 2013.

The figures of the Economic Census indicate that in the Construction and the Transportation sectors, 53.3% and 40.8% of companies obtained credit from banks and other sources in 2008, while in the other sectors, the percentage of companies with credit or financing was less than 30%.

The Construction and Transportation sectors are characterized as having a greater percentage of medium and large size companies than the other sectors. However, the sectorial segmentation of the economic units indicate that there are various important factors that explain the distribution of financing, such as sectorial risk or risk associated with the development of each activity. Moreover, the intensity of use of the factors of production (which define the specific capital requirements in each sector) and other particular aspects of the development of the specific productive activity have an impact on generating income flows and other significant indicators that are used to evaluate companies' payment capacity.

The use of a more homogeneous definition to gather statistics on micro, small and medium size companies (MSMES) would allow capitalizing the effort to generate data to complement the various sources of information available and have a general overview of the MSMES universe and their main characteristics and needs, including financing.

Inspection of the various official sources of information on financing to micro, small and medium size companies shows that to date there is no single criterion to classify companies according to their size, although, generally, to do this segmentation, variables have been used, such as the number of employees, their annual sales, income or fixed assets. It is desirable to have more homogeneous definitions regarding companies' size, since this would facilitate followup and evaluation of the penetration of credit in the Mexican productive sector.

In México the number of bank clients in particular, and the number of persons that use financial services in general have increased significantly in recent years.

In this issue of ***Mexico Banking Outlook***, two indicators are presented that have been developed at BBVA Bancomer.

The first indicator measures the number of bank clients based on existing data on the banking system and from BBVA Bancomer

This is the indicator that the Banking Association of Mexico (Asociación de Bancos de México) has been using for some years to monitor its bancarization efforts. It is estimated that at the end of 2012, the total number of bank clients in Mexico will be 52.6 million. Considering that the estimated number of bank clients in 2006 was 32.7 million, if this forecast is met, the number of bank clients in Mexico will have grown by almost 20 million persons in six years.

The second is an indicator of financial inclusion, built through a specialized survey that BBVA Bancomer has carried out since 2009 with the GAUSSC survey company

The BBVA Bancomer and GAUSSC survey has as its aim to follow-up on the main variables that have a bearing on Financial Inclusion in Mexico of the various social groups: young people or adults, urban or rural, with higher or lower educational levels, with greater or lower income. In this sense, the concept is broad and refers to any person who has an account in a bank or in the savings system for retirement, has some type of insurance or uses one of the media of the payment system to receive government support, uses correspondent banks, carries out financial transactions via mobile phone, or uses prepaid cards to purchase goods or services. According to this broad definition of financial inclusion, the total penetration of banking and financial products and services in the country among the adult population rose from 48% to 58% between 2009 and 2011 and was due mainly to growth in the placement of deposit accounts by the banks. It is significant that the greatest increases were due to the introduction of low-income clients. Also, the use of new platforms of correspondent banks and banking by mobile phone, although still limited, is a viable alternative to increase the use of financial services among those segments that traditionally receive less attention, such as young people and women.

This is the best moment for the Mexican banking system.

The expansion of global banks has led to a number of studies regarding the importance of this phenomenon and its repercussions on the well-being of persons in the host countries of global banks. This interest was also spurred by the global financial crisis of 2009. Therefore, in this issue we present an account of the research that received First Place in the Manuel Espinosa Yglesias 2012 Award. This research, by professors Stephen Haber (Political Science Department of Stanford University) and Aldo Musacchio (Harvard University Business School) analyzes the transformation of the Mexican banking system as a result of the financial crisis of the nineties and the sale to foreign capital. The authors present statistics on the penetration of credit in Mexico, which shows that the banking system that emerged after the crisis of 1995, with the entry of the global banks, is much more solid than that before the crisis, and has also led to a dynamic and healthy expansion of credit to the private sector.

Moreover, the econometric analysis by Haber and Musacchio regarding the performance of the banking system from 1997 to 2011 reveals that the nationality of the banks is not a factor that influences significantly credit supply decisions in Mexico.

The above, once other factors are considered, such as the structure and risk of loan portfolios, administrative expenses, capitalization indexes, liquidity coefficients and economic disruptions that affect all the banks. From Haber and Musacchio's analysis, it can be concluded that an agenda of legal and regulatory reforms focused on closing the gaps that still exist in Mexico with regard to the compliance of agreements and the execution of guarantees, as compared with other countries, will have a positive bearing on the supply of credit.

Financial activity in Mexico following the crisis of 1995 has been characterized by the greater credit activity of some non-bank financial intermediaries and the public housing agencies.

In addition, new financing instruments have appeared that compete with bank credit (stock certficates) or reduce its balance (securitized bank loans for housing). These aspects have led the percentage of bank credit in terms of GDP to be 15.2%, while the percentage corresponding to financing by non-bank financial intermediaries rose to 19.1%. The sum of its two components brought the ratio of credit and total financing of credit to the private sector in 2011 to be 34.3% of GDP. This figure for Mexico is lower than that corresponding to Chile and Brazil and to a lower degree to that which exists in Colombia and Peru.

Neverthelss, another important item of credit and financing that the banking institutions and the national and international financial markets grant is that destined to the public sector, including the public debt.

For Mexico, the inclusion of the public sector's debt, along the order of 45.9% of GDP in 2011, increases the ratio of total indebtedness (public and private sector debt) in that year to 80.2% This last figure, although it "shortens" significantly the gap that Mexico presents compared with other important countries in Latin America, also suggests that credit to the public sector could partially displace that of the private sector. given a savings level.

The analysis of the experience of publc banking in Brazil, which has become a required reference on this matter, offers reflections for Mexico.

The existence of financial institutions that are owned by the public sector, could create rapidly the possibility of deepening the bancarization process among segments in which the benefit for society is considered especially high, through a greater supply of financial services or a reduction in its costs. This also provides an alternative of a counter cyclical economic policy, which could be beneficial in periods and geographic areas with a margin for adopting other fiscal stimuli and/or limited monetary policies. Nevertheless, the advancement of public credit could inhibit the evolution of private credit and in turn be susceptible to political rather than economic incentives. The Brazilian experience in the eighties and nineties indicates that the costs associated with this type of distorsion can be high, both in terms of financial as well as economic stability. For this reason the Mexican authorities must promote the expansion of public banking with complementary instruments for the expansion of credit through the commercial banks, such as guarantees.

2. Current situation

2.a Banking Loans to the Private Sector: Recent Evolution and Perspectives

2.a.1 Total bank loans and its components continue growing at high rates

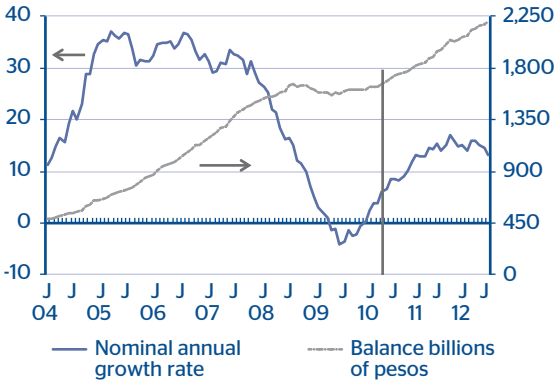
From April 2010 to September 2012, credit granted by the commercial banks to the private sector registered 30 consecutive months of growth (Graph 1). This period of two and a half years has been sufficiently long to revert the adverse effects of the recession of 2009 on credit activity and now allow credit to the private sector to flow, bolstered to a great extent by, among other factors, the growth of economic activity.

The above shows that the expansion process of bank credit has consolidated. This has occurred around an average nominal annual growth rate of 14%, from January 2011 to September 2012. Behind this average growth rate of bank credit is a process of sustained expansion of GDP. The real average growth of GDP from the first quarter of 2011 to the second quarter of 2012 was 4%. This figure indicates that to the extent that economic activity continues to grow at a rate of around 4%, it is expected that bank credit will also post a nominal annual expansion rate between 12% and 15%.

The expansion has been observed in all the components of bank credit. In the 21 months from January 2011 to September 2012, the average nominal annual growth rate for the three main categories of credit were the following: i) consumption loans, 19.9%; loans to firms 12.9%; and housing loans, 9.3% (Graph 2).

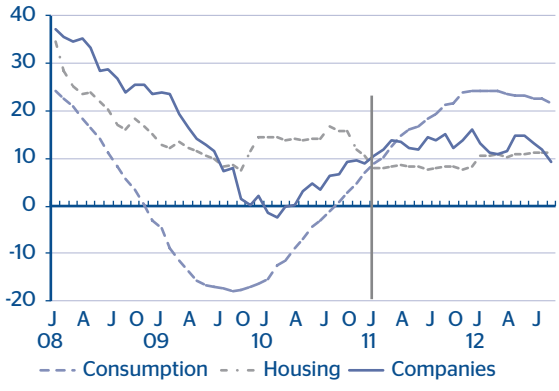
One way of seeing the importance of each component of bank credit to the private sector is through the contribution of each of these to the growth of total credit, since this illustrates the relative importance of each component within the growth rate of total credit (Graphs 3 and 4).

Graph 1
Total bank loans to the private sector (Outstanding balances in billions of current pesos and nominal annual growth rates, %)



Source: BBVA Research with data from Banco de México.

Graph
Total bank loans; consumption loans, housing loans and loans to firms (nominal annual growth rates, %)

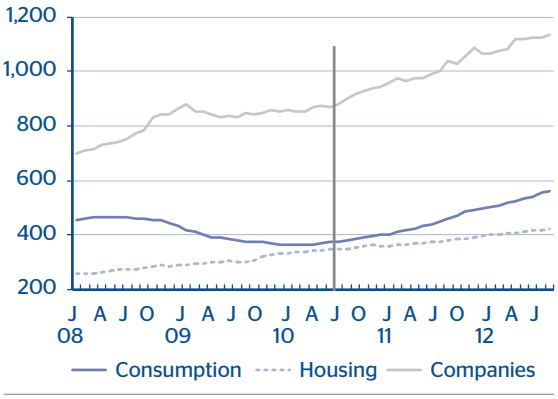


Source: BBVA Research with data from Banco de México.

As an example, in September 2012 the nominal annual growth rate of total bank lons to the private sector was 13.2%, while consumption loans was 5.1 percentage points (pp). In turn, the share of loans to firms was 5 pp, while housing loans was lower, at 2.2 pp. The credit component within total

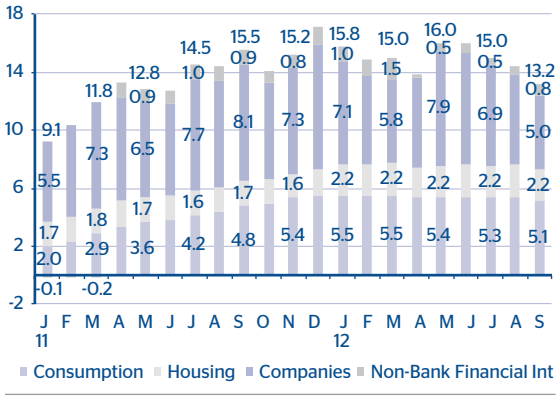
bank loans with the lowest share in growth was that which the banking system grants to non-bank financial intermediaries (IFNB), and was only 0.8 pp.[1]

Graph 3
Bank loans: consumer, housing and loans to firms (figures in billions of current pesos)



Source: BBVA Research with data from Banco de México.

Graph 4
Credit to the private sector: contribution to nominal growth of total credit by component (%)



Source: BBVA Research with data from Banco de México.

2.a.2 Consumption loans continue to grow at high rates, but with a trend toward moderation

Consumption loans is the credit category that has posted the highest nominal annual growth rate, and from January 2011 to September 2012 its average growth was 19.9%, and in September 2012 it was 21.7%. Consumer credit includes three components, which are: i) credit cards (TDC), ii) durable consumer goods (BCD), which includes automobile loans and iii) other consumer credits (OCC), which includes payroll credit and personal loans.

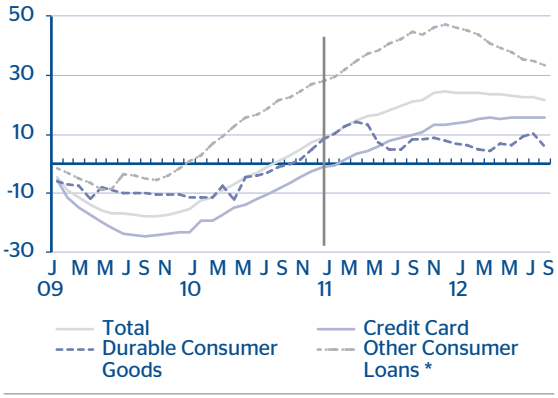
As shown in Graph 5, the most dynamic component of consumption loans has been the other consumption loans. (OCC) This type of credit grew in a highly dynamic manner from January 2010, a date on which its nominal annual growth rate was 0.7%; to December 2011, a month in which its growth rate reached 47.5%. This notable expansion is explained because its growth was based on an initial reduced balance and due to the great acceptance that this type of credit has had. Throughout 2012 the dynamism of OCC has moderated, and in September 2012 its growth rate continues to be high, despite the above, at a nominal annual rate of 33.7%.. To the extent that this credit category continues to mature (or its balance amount continues to grow), its growth rate will continue to moderate.

OCC is the credit category that contributed the most to the growth of consumer loans from January 2011 to September 2012, as shown in Graph 5. Only in September 2012, OCC contributed with 13.6 pp of the 21.7 pp of total consumer credit, while TDC (credit cards) and BCD (durable consumer goods) accounted for 7.4 pp and 0.7 pp, respectively.

It should be mentioned that throughout 2012, consumption loans have undergone a gradual process of moderation in its growth rate. As commented previously, to the extent that its components mature or satisfy to a great extent the financing needs of users, consumption loans will begin to grow at more moderate rates. In this sense, the growth rate of consumption loans is expected to be linked more with the expansion rate of formal employment in the country.

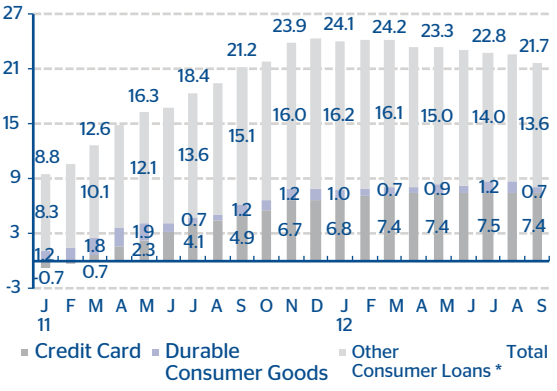
[1] The limited contribution of credit to non-bank financial intermediaries (IFNB), to total bank credit is due to the fact that this credit category represents only 3.8% of total bank credit. On the other hand, if we consider the averages of the contribution to growth of total credit by the four credit categories from January 2011 to September 2012, the most important category is that of credit to companies, which contributed 6.8 pp on average of the 14 pp of total average credit growth during that period. In this period, the contribution of consuemr credit was 4.6 pp, that of housing credit was 1.9 pp, and that of non-bank financial intermediaries was 0.7 pp.

Graph 5
Consumption banking loans: Growth by component (Nominal annual growth rates, %)



Source: BBVA Research with data from Banco de México..

Graph 6
Consumer credit: contribution to nominal growth by component (%)



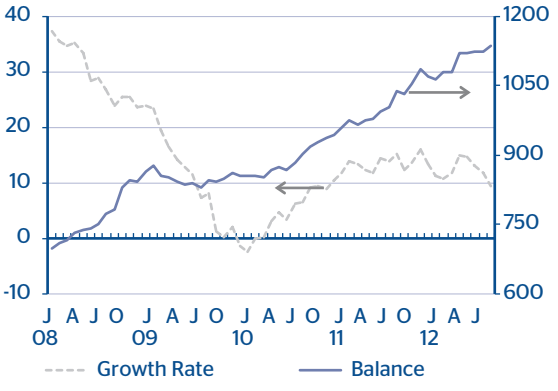
Source: BBVA Research with data from Banco de México.

2.a.3 Loans to firms: its expansion rate is due to the growth of economic activity and investment

The recession of 2009 affected loans to firms, and these adverse effects lasted until the first half of 2010. In the first quarter of that year, this type of credit posted negative nominal annual growth rates. In the first three months of 2010, the average nominal annual growth rate was -1.3% and this began to be positive as of the start of the second quarter (Graph 7). In this way, the average nominal annual growth rate of loans to firms in 2010 was 4%, and rose to 13.3% for 2011 as a result of the recovery of GDP and of gross fixed investment, since these two macroeconomic variables influenced to a great extent its performance.

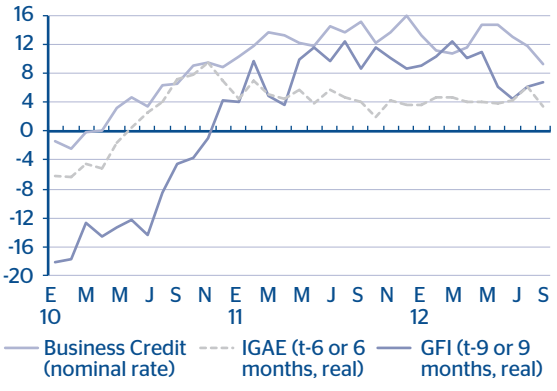
The average nominal annual growth rate of loans to firms from January to September 2012 was 12.3%, which is not too different from the average rate of 13.3% for the same period of 2011. It should be mentioned that in the first six months of 2012, the average growth rate for this type of bank loans was 12.7%, and in the third quarter of 2012, it declined to 11.3%.

Graph 7
Bank loans to firms (balance in billions of burrent pesos and nominal annual growth rate, %)



Source: BBVA Research with data from Banco de México

Graph 8
Bank loans to firms and gross fixed investment index (IFB) (Annual growth rate, %)



Source: BBVA Research with data from Banco de México and INEGI

On one hand, it is possible that the lower growth rate of loans to firms is associated to a certain extent with the lower growth of gross fixed investment in recent months. Graph 8 presents the nominal annual growth rate of bank credit to companies for the current period or month, together with the real annual growth rate of the index of gross fixed investment that INEGI publishes, with a nine-month lag. This graph indicates that it is possible that the recent slowdown in the growth rate of bank credit to companies in recent months is due in part to lower growth of gross fixed investment in past months.[2]

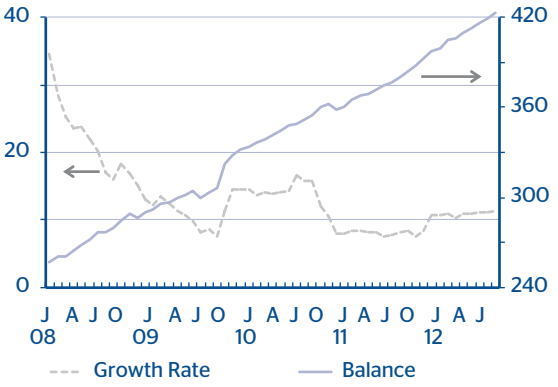
As also seen in Graph 8, the growth rate of the IGAE (Global Indicator of Economic Activity) of six months ago was reduced. This element, together with the lower growth of gross fixed investment could be one of the factors that explain the slowdown in the growth rate of credit to companies in the third quarter of 2012.

On the other hand, in Box 1 (The Statistical Series on New Credit to Businesses by Company Size) also approaches the subject of how bank loans have flowed to firma according to their size. This section complements the analysis of credit to firms presented here.

2.a.4 Housing credit will continue to be linked to the expansion of formal employment

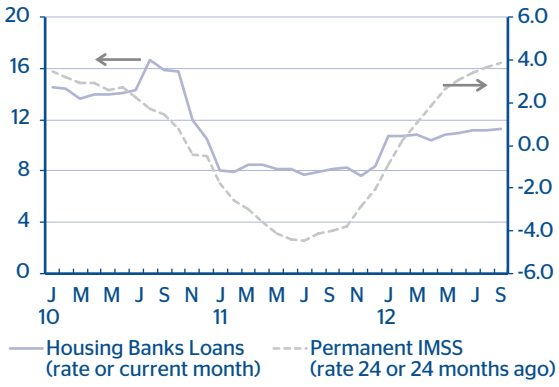
Bank loans for housing have also shown a favorable performance. Its balance was not reduced as a consequence of the recession of 2009 and its nominal annual growth rate has always been positive. This is due to a great extent that this is a long-term credit so its balance is not substantially modified in the short term, and demand continues to grow more as employment conditions are normalized.[3] Moreover, the performance of this type of credit in 2012 has been more favorable than in 2011. This is evident if we consider that its average nominal annual growth rate that year was 8.1%, while the average annual rate from January to September 2012 rose to 10.9%.

Graph 9
Housing bank loans (Balance in billions of current pesos and nominal annual growth rate, %)



Source: BBVA Research with data from Banco de México and INEGI

Graph 10
Housing bank loans and workers affiliated at IMSS (Mexican Social Security Institute) (Annual growth rate, %)



Source: BBVA Research with data from Banco de México and INEGI

It is possible that the better performance of housing loans in 2012 is because it is currently reflecting the recovery and expansion of formal permanent employment, which had shown an important lag. It should be recalled that there is a positive association between bank loans for housing and formal employment, with the latter considered as the number of workers permanently affiliated at IMSS (the Mexican Social Security

[2] It should be mentioned that the correlation coefficient for the period from January 2010 to September 2012 between these two growth rates is high and of 0.92. This level of association between the growth rates reinforce the idea that the lower dynamism of the expansion of investment translates into lower growth of credit ot companies. Also, another factor that could have influenced the lower growth rate of credit to companies is the performance of the global indicator of economic activity (GIEA or IGAE in Spanish), which is a monthly measurement of GDP. It should be mentioned that the same as in the case of gross fixed investment, the annual growth rate of credit to companies, and that of the GIEA six months ago present a relatively high correlation coefficient, of 0.76.

[3] For more details see ***Situación Inmobiliaria México*** (Mexico Real Estate Outlook) of June 2012.

Institute). Among other factors this is due to the fact that permanent workers in the formal sector represent a lower credit risk, since they have a stable source of income.[4] Also, those who have formal employment are also more confident that they can meet the payment of the mortgage loan they contract for housing.

To the extent that a favorable macroeconomic environment prevails for credit activity, characterized by GDP growth, employment and price stability, housing loans will also continue to flow uninterruptedly for the benefit of its users.

2.a.5 Perspectives for total bank loans: its growth will continue as a result of the favorable macroeconomic environment

The BBVA Research macroeconomic base scenario considers that in 2012 GDP will grow 3.7% and in 2013 growth will be more moderate toward 3% with an upward bias. The lower expansion rate of economic activity in 2013 will be reflected in a slight reduction in the growth rate of total bank loans year (a nominal 13.8%) compared to that of 2012 (a nominal 14.7%).

Table 1

Total bank credit and GDP
(real annual and nominal growth rates, % observed up to 2Q12, estimated as of 3Q12)

	Credit, Nominal Rate	Credit, Real Rate
I-11	10.9	7.6
II	12.4	8.8
III	14.3	10.8
IV	14.9	10.7
I-12	14.4	10.3
II	15.4	10.6
III	14.9	10.0
IV	14.2	9.8
I-13	14.1	10.0
II	13.9	9.7
II	13.4	9.8
IV	13.6	10.0

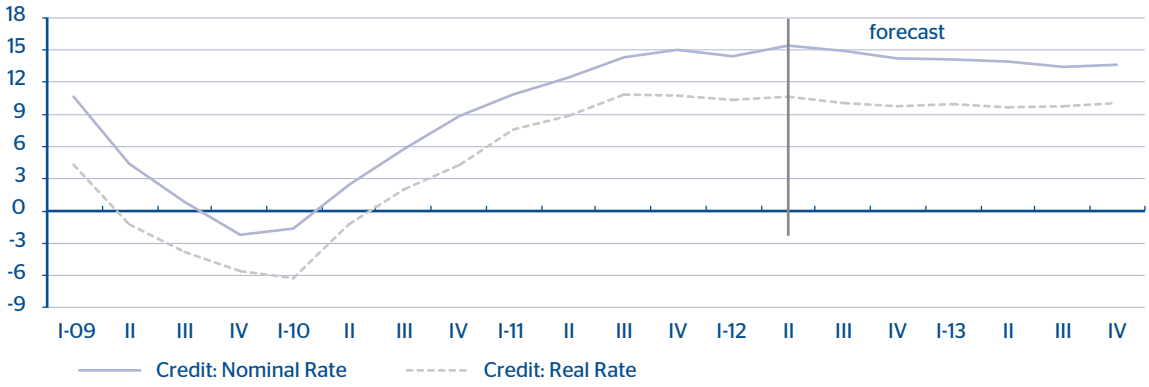
Average Annual Growth Rates , %		
	Credit, Nominal Rate	Credit, Real Ratel
2011	13.1	9.5
2012	14.7	10.2
2013	13.8	9.9

Source: BBVA Research with data from Banco de México and INEGI

To the extent that families and companies consider that GDP and employment growth persist in the medium term, within the context of price stability, credit demand by these economic agents will continue growing and the banks will continue in their effort to maintain the credit flow. This situation will be the result all economic agents' confidence on the favorable expectations for the economy and the fact that, given this environment, credit risk will remain limited.

Graph 11

Total bank loans and GDP (real annual and nominal growth rate, %)



Source: BBVA Research with data from Banco de México and INEGI.

[4] A possible explanation for the considerable lag that could exist between housing loans and formal employment is because the banking institutions require that those that apply for credit have a certain seniority in their current job and once this is complied the loan is granted.

2.b Bank Deposits: Recent Evolution and Perspectives

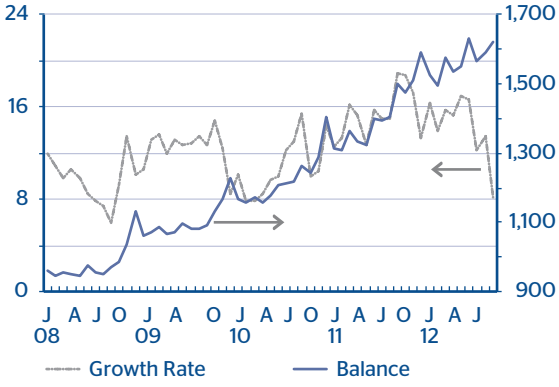
2.b.1 Traditional deposits: their performance continues to be positive

Throughout 2011, the performance of traditional bank deposits, or the sum of demand and time deposit bank instruments, was positive, with an average nominal annual growth rate for that year at 12%. However, throughout the first nine months of 2012, there was a slowdown in the growth rate of traditional deposits. In the first six months of 2012, the average nominal annual growth rate dropped to 10.9% and in the third quarter of the year it declined again, to 8.4%.

Graph 12
Total deposits in commercial banks (Balances in billions of current pesos, and nominal annual growth rate, %)

Source: BBVA Research with data from Banco de México.

Graph 13
Demand deposits in commercial banks (Balances in billions of current pesos and nominal annual growth rate, %)



Source: BBVA Research with data from Banco de México..

An element that explains the lower growth rate of traditional deposits is the significant moderation of the growth rate of its time deposits component. This point is further illustrated when it is considered, for example, that in the first six months of 2011, the average nominal annual growth rate for time deposits was 10.4% and for the first half of 2012 the average growth rate had dropped to 4.7%. As will be commented further on, time deposits have moderated their growth rate because the growth rate of debt mutual funds (SID for *Sociedades de Inversión de Deuda*) increased as of the early months of 2012. These are non-bank savings instruments, which tend to be substitutes for bank time deposits. This pattern of substitution is seen when debt mutual funds grow at high rates, causing a reduction in time deposits' growth rate or an outright decrease.

Another element that to a lesser degree also explains the slowdown of the growth rate of traditional deposits is that the component of demand deposits in banks only reduced its growth rate during the third quarter of 2012, compared to what it had posted in the same period of 2011. Thus, in the third quarter of 2011, the average nominal annual growth rate of demand deposits was high, at 16.4%. For the same period of 2012, it had dropped to 11.3%. That is, the combination of an important slowdown in time deposits, together with a similar, although not as intense decline in demand deposits caused the nominal annual growth rate of traditional deposits in September of 2012 to drop to 6.6% (Graph 12).

2.b.2 Demand deposits in banks: their growth rate has been high and will possibly begin to slow down in the next few months

In 2011 the performance of demand deposits was highly dynamic. In that year the average nominal annual growth rate was 15.3%. Throughout the course of the first eight months of 2012, the average growth rate of demand deposits moderated only slightly and was 15.1%. However, in September of that year, this was reduced to 8.1% (Graph 13).

It is possible that the lower growth rate of demand deposits in September of 2012 was due in part to the important growth that these deposits had shown in the same month of 2011. If we consider the monthly and not the annual growth rates, in September of 2011.these deposits registered a monthly nominal growth rate of 6.9%, which was greater than the average monthly growth rate of 1%[1] from February to August of that year. This rate was much higher than that reported in September of 2012, of 1.8%. That is, the high monthly growth rate of September of 2011 increased the level of demand deposits which produced an arithmetic effect that lasted twelve months. In September 2012 the arithmetic effect had disappeared and the annual growth rate of that month implied a comparison with a higher base, resulting in a lower growth rate. In this sense it is to be expected that a more moderate growth rate is observed in demand deposits in the following months.

2.b.3 Time deposits in banks have grown at moderate rates, as a result of the higher growth rate of debt mutual funds

In 2011 time deposits in banks registered an average nominal annual growth rate of 8%, and for the first nine months of 2012, it had dropped to 4.7%. In September of 2012, its nominal annual growth rate was 4.4%, which was not too much lower than the average rate of 4.7% (Graph 14).

As was commented, the lower growth rate of time deposits has been the result of the expansion of debt mutual funds. Between bank time deposits and debt mutual funds there is an inverse relation, which indicates that when one of these savings instruments increases, the other diminishes. (Graph 15).[2]

It is also true that the intensity of the inverse relation that exists between time deposits and deposits in debt mutual funds changes over time. To the extent that the inverse relation between these savings instruments continues to prevail, the dynamic expansion of one implies to a greater or lesser degree, how it affects the growth rate of the other. This also means that this type of savings can grow at the same time when both do so at moderate rates.

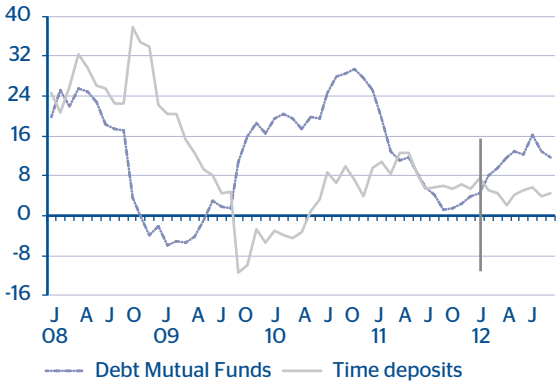
Graph 14

Time deposits in the commercial banks (Balances in billions of current pesos and nominal annual growth rate, %)

Source: BBVA Research with data from Banco de Mexico.

Graph 15

Time deposits and debt mutual funds (Nominal annual growth rates, %)



Source: BBVA Research with data from Banco de México.

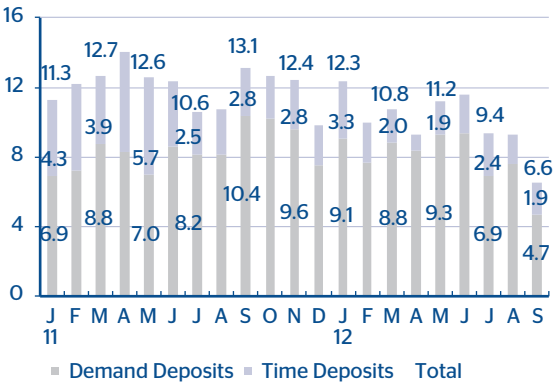
[1] The monthly rate for January is omitted because it is negative due to seasonal factors.
[2] This is seen, for example, in the correlation coefficient of these two variables, of 0.45, which corresponds to the period from January 2009 to August 2012. It should be mentioned that time deposits have grown when interest rates rise, which generates a depreciation of debt mutual funds and therefore time deposits become an attractive alternative for savers that do not want their resources to be exposed to this type of events.

2.b.4 Traditional bank deposits: demand deposits is the component that most contributed to their growth

The analysis of the contribution to growth of traditional bank deposits by its two components makes it possible to determine which of these has the greatest impact on their expansion. In this manner, from January 2011 to August 2012 the average nominal annual growth rate of traditional deposits was 11.2%, and demand deposits contributed 8.2 pp of this growth rate. In turn, time deposits contributed with 3 pp, which means that a great part of the impulse to traditional deposits is derived from time deposits.

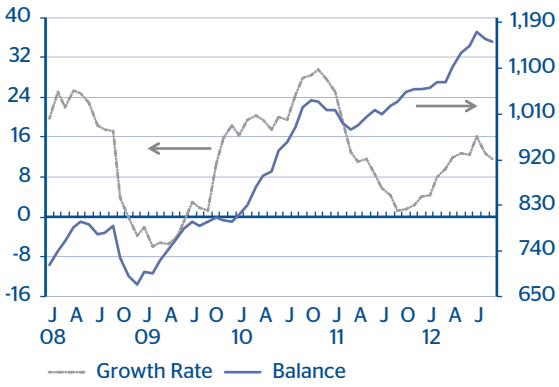
With regard to September of 2012, in that month traditional deposits grew 6.6% and demand and time deposits contributed with 4.7 pp and 1.9 pp, respectively, to this growth (Graph 16). It should be mentioned that one of the reasons why demand deposits contribute more to the growth of traditional deposits is because they represent the greater percentage of these deposits, that is, in September demand deposits represented 58.5% of traditional deposits, while time deposits the remaining 41.5%.

Graph 16
Traditional bank deposits: contribution to the nominal growth of deposits by component, %



Source: BBVA Research with data from Banco de México.

Graph 17
Debt mutual funds (Balances in billions of current pesos and nominal annual growth rate, %)



Source: BBVA Research with CNBV (National Banking and Securities Commission) data.

2.b.5 Debt Mutual Funds (SID): as of February 2012, they began to increase their growth rate

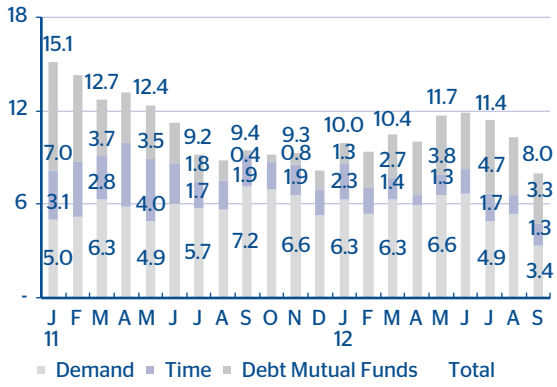
Debt mutual funds (SID) are non-bank savings instruments that compete with time deposits because the yield they provide and the flexibility of the instrument are attributes that have great acceptance among savers. To date there are only data available through September 2012 and these indicate that since February 2012 debt mutual funds (SID) increased their growth rate and that, in the ninth month of the year the nominal annual growth rate of these instruments was 11.6% (Graph 17).

One reason that could possibly explain the higher growth rate that debt mutual funds have shown from the second to the ninth month of 2012 could be the reduction of some interest rates. It should be mentioned that to the extent that interest rates remain stable or are reduced, debt mutual funds do not post depreciations and savers adverse to risk channel their resources toward these instruments. If this continues to happen in the future, debt mutual funds could continue to post relatively high growth rates, such as those seen in 2012.

Graph 18
Total deposits of commercial banks: demand + time + debt mutual funds
(Nominal annual growth rate, %)

Source: BBVA Research with data from Banco de México

Graph 19
Total deposits: demand + time + debt mutual funds, Contribution to their growth by their components, pp



Source: BBVA Research with CNBV (National Banking and Securities Commission) data.

2.b.6 Total bank deposits include the sum of traditional deposits and debt mutual funds and from January 2012, their performance has improved

Total deposits of the commercial banks include traditional deposits (Demand + Time deposits) plus what is invested in debt mutual funds. This aggregate allows measuring in a better manner the evolution of total savings that economic agents channel toward the banks, either directly through traditional deposits or indirectly through debt mutual funds (SID)..

The average nominal annual growth rate of total deposits during the second half of 2011 was 9% and for the period of the first nine months of 2012, this had grown to 10.3%. This indicates that the performance of total deposits seen in 2012 has improved (Graph 18), and this has been the result of the greater growth of debt mutual funds.

The above point is clear if we quantify the contribution to growth of each component of total deposits (Graph 19). For example, the average nominal annual growth rate of total deposits during the last half of 2011 was 9%. In that period, demand deposits accounted for 6.3 pp to 9% growth, while the contributions of time deposits and of debt mutual funds were 1.8 pp and 1 pp, respectively. In turn, for the first nine months of 2012, the average nominal annual growth rate for that period was 10.3%. In this case, the contribution of demand deposits was 5.7 pp; that of time deposits, 1.5 pp; and that of debt mutual funds rose to 3.2 pp. That is, as long as the components of total deposits of the banks register a higher growth rate their contribution to the expansion of total deposits will also be greater.

2.b.7 Perspectives for deposits: sustained GDP growth will also be reflected in sustained growth of total savings at relatively high rates

To the extent that economic activity continues to grow within a framework of price stability, the perspectives for total deposits of the banks and of its main components will be favorable. This is due to the fact that in general terms, greater income also allows for greater savings.

Table 2

Total deposits: Demand + Time + Debt Mutual Funds (SID)
(Real annual and nominal growth rates, % Observed through IIQ-12; estimated as of IIIQ-12)

	Deposits: Nominal Rates	Deposits: Real Rates
I-11	14.0	10.7
II	12.2	8.7
III	9.1	5.8
IV	8.9	4.9
I-12	9.9	6.0
II	11.2	6.6
III	11.2	6.6
IV	12.1	7.7
I-13	12.7	8.6
II	11.3	7.2
II	10.0	6.5
IV	9.8	6.3

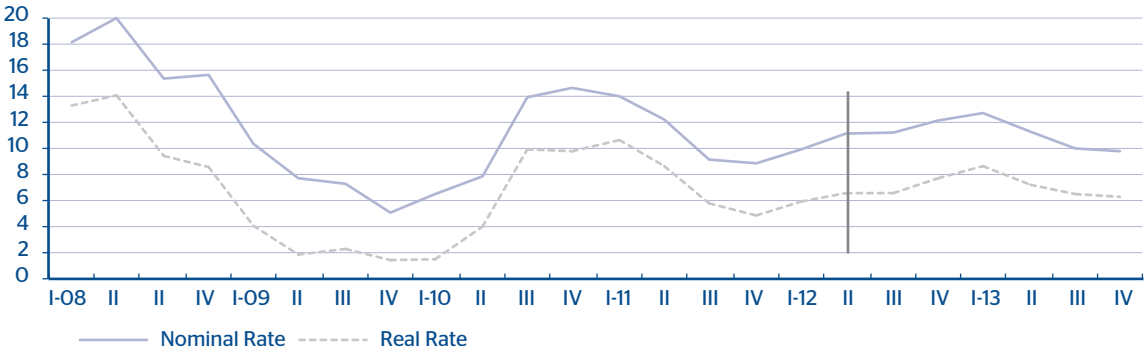
Annual Average Growth Rates, %		
2011	11.1	7.5
2012	11.1	6.7
2013	11.0	7.2

Source: BBVA Research with data from Banco de Mexico and INEGI.

According to the BBVA Research macroeconomic base scenario, we believe that in 2012 and 2013 the GDP growth rate will be3.7% and 3%, respectivley, with an upward bias. This growth in economic activity will allow total savings of the banks to register average nominal annual growth rates of 11% for those years (Chart 2 and Graph 20). These growth rates are similar to those observed in 2010 and 2011 and indicate that as long as GDP continues on a path of sustained and stable growth, so will savings.

Graph 20

Total deposits of the commercial banks
(Real annual and nominal growth rates, %)



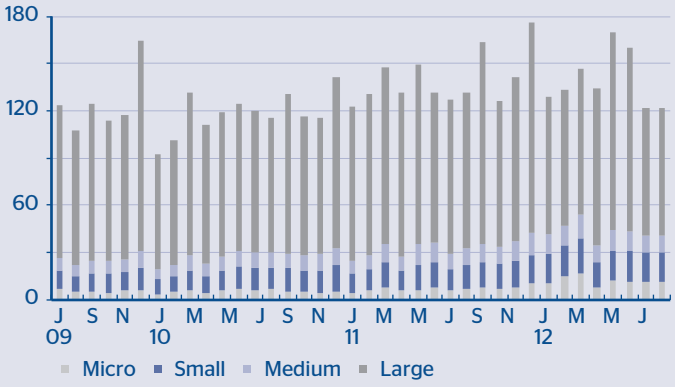
* Total Deposits = Demand +TimeDeposits + Debt Mutual Funds

Source: BBVA Research

Box 1: Statistical Data on Business Credit by Company Size

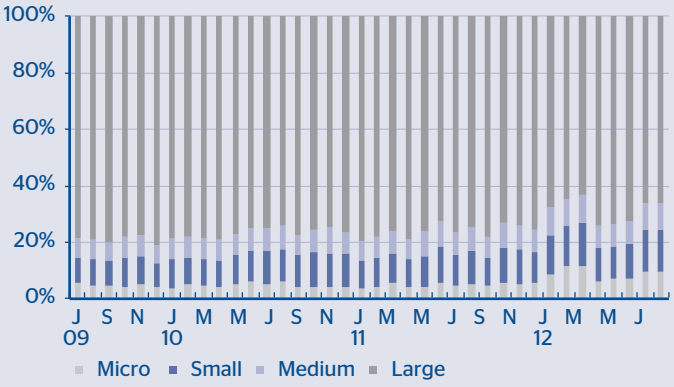
The National Banking and Securities Commission (CNBV) recently began to release monthly data on the amount of new loans that the commercial banks grant businesses in accordance with four company size categories: micro, small, medium, and large (see Section 3.b.: Considerations on Company Segmentation).[1] This information is available from July 2009 to August 2012 (Graph 21) and also includes data on the interest rates that banks charge companies, the number of loans granted, and the number of borrowers. Based on this information, the following is a description of the recent behavior exhibited by new credit to businesses.

Graph 21
Monthly amount of new bank loans by company size (Figures in billions of December 2011 pesos)



Source: BBVA Research with CNBV data

Graph 22
Percentage of the amount of new bank loans by company size, (%)



Source: BBVA Research with CNBV data

Monthly amount of new bank loans by company size

For the months in which information on credit received by companies in accordance with their size has been available, it can be seen that the amount of bank loans granted monthly to micro businesses has increased. This has particularly been the case since 2011 (Graph 22). For example, the percentage of credit received by micro businesses within the total averaged 4.7% during the second half of 2009, and it increased to 8.9% for the first eight months of 2012.

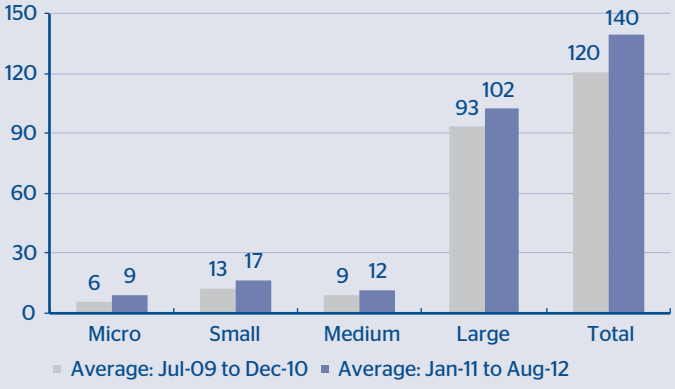
Meanwhile, the percentage of new bank credit obtained by small and medium size companies also increased, from 9.3% and 7%, respectively, on average, in the second half of 2009, to 13.6% and 8.9%, respectively, in the first eight months of 2012. The greater relative importance in the share of bank credit received by micro, small, and medium size companies resulted in a declining percentage of financing earmarked for large businesses, whose share declined from 79% to 68.5% during the period mentioned.

The greater relative importance of smaller companies in obtaining new credit is also reflected in the increase in the average monthly amount of financing that they receive (Graph 23). Based on the average monthly amount of such credits from July 2009 to December 2010 compared to the corresponding figures for January 2011 to August 2012, the growth in such loans in this period in real terms was 62.4% for micro, 33.6% for small, and 28.8% for medium size companies. During the same period, the real increase in the average monthly amount of credit to large companies was only 9.6%.

Graph 24 indicates that since the beginning of 2011, the monthly amount of credit that smaller companies have received has been on the rise. That is, the information available that the CNBV began publishing indicates that smaller companies in general and micro businesses in particular are increasing their access to bank financing, since the total monthly amounts of new bank loans for such companies increased in both relative as well as in absolute terms.

[1] In the preparation of these statistical data, the CNBV uses the definition proposed by the Ministry of the Economy (Diario Oficial de la Federación (Daily Gazette of the Federation), June 30, 2009) in which company size is determined based on a weighted average of the number of employees (10%) and the sales volume (90%).

Graph 23
Average amount of new bank loans granted according to company size
(Figures in billions of December 2011 pesos)



Source: BBVA Research with CNBV data

Graph 24
Average monthly amount of new bank loans granted to micro, small, and medium size companies
(Figures in billions of December 2011 pesos)

Source: BBVA Research with CNBV data

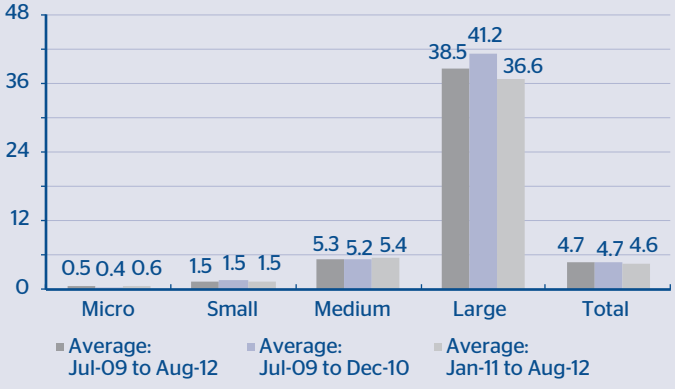
Number of borrowers and number of credits granted according to company size

The CNBV also reports on the number of borrowers in the course of a month that have received bank credit by company size as well as the number of loans granted. The number of loans is higher than the number of borrowers, which can possibly be attributed to the banks opening several credit lines for the same borrower (or the same company) with different characteristics, such as maturities, amounts, and others, and in accordance with how the loan resources will be specifically earmarked (working capital, investment).

Data on the average monthly amount of credit granted by borrower category (Graph 25) indicates that from July 2009 to December 2010 compared to the January 2011 to August 2012 period, an increase in real terms of 47.7% and 4.3% was posted for micro and medium size businesses, respectively. Meanwhile, the average amount declined by 1.2% and 11% for small and large companies, respectively.

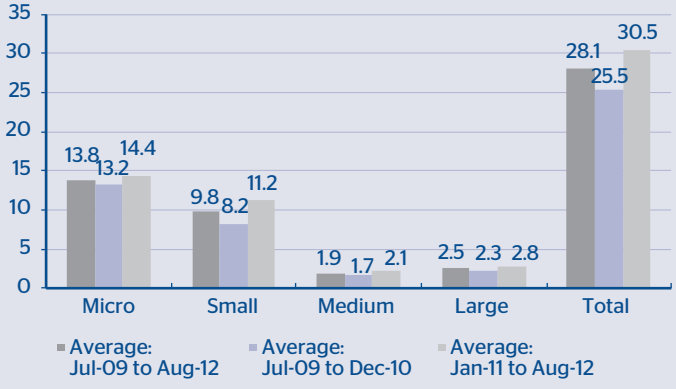
As indicated by the figures, the average amount of bank credit granted to micro companies posted strong increases in the period under analysis. Moreover, in addition to an increase in the average amount of bank credit to borrowers in this company size category, there was also monthly growth in the average number of borrowers. In the case of micro companies, this figure rose from 13,200 borrowers in average monthly terms from July 2009 to December 2010 to 14,400 from January 2011 to August 2012.

Graph 25
Monthly amount received per borrower based on bank credit granted by company size
(Figures in billions of December 2011 pesos)



Source: BBVA Research with CNBV data

Graph 26
Average monthly number of borrowers according to company size
(Figures in thousands)



Source: BBVA Research with CNBV data

Interest rates charged by banks by company size

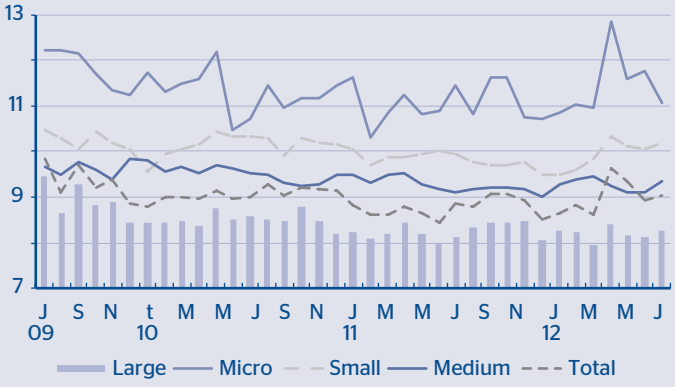
CNBV information also provides data on the monthly interest rates charged by each bank in domestic currency on the credits that they have granted to companies according to their size. Graph 27 was prepared on the basis of data for average monthly interest rates charged by banks to companies according to their size. Meanwhile, Graph 28 shows that the average monthly interest rate charged by banks to companies according to their size declined when factoring in the average data for the period from January 2011 to August 2012 compared to the corresponding figures for July 2009 to December 2010. It is possible that these average interest rates for the most recent period could have been lower, were it not for the significant increase in such rates in April 2012, which mainly affected micro, small, and large companies.

Valuation

The information that the CNBV began to publish on the amount of new credit granted to companies according to their size is very useful because it allows for a more detailed analysis of the matter. At the same time, and in order to broaden and deepen the analysis that can be undertaken in relation to the bank credit that businesses receive, it would also be necessary for the CNBV to expand the information that it publishes. In this regard, it would be very useful to publish the following additional information by size of business: delinquency rates, balances, write offs and average maturity, among others, for each company size category.

Graph 27

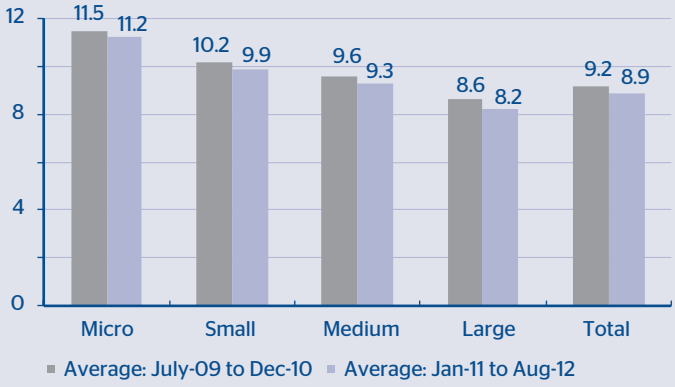
Monthly interest rates charged by banks to companies according to their size for new bank loans (%)



Source: BBVA Research with CNBV data

Graph 28

Interest rates charged by banks to companies according to their size (%)



Source: BBVA Research with CNBV data

3. Special Topics

3.a Use of Credit in the Different Productive Sectors: What does the 2009 Economic Census tell us?

Introduction

In previous issues of ***Mexico Banking Outlook*** (November 2011 and June 2012) the characteristics of companies that have access to credit or financing and that manage a bank account were analyzed, based on data from the 2009 Economic Census (Census). Emphasis is on company size, defined as the number of persons employed in micro (0-10 people), small (11-50 people), medium size (51 to 250 people) and large (251 or more) companies. To complete that review, in this issue we will analyze the Census data related to the economic sector that the companies belong to.

This scope of the information is relevant because the economic activity sector can be another useful reference point for identifying factors that could contribute to triggering the flow of credit to the country's productive sector. This is a major question if the credit is flowing to sectors that are undergoing greater expansion.

In this regard, one of the most notable results of the analysis of the Census data in previous issues of this publication is that the companies that in 2008 used credit or bank accounts are characterized by higher productivity, measured roughly through sales revenue and assets per worker ratios, than those businesses that received non-bank financing or did not obtain credit.

3.a.1. Data from the Banco de Mexico on the credit portfolio by sector

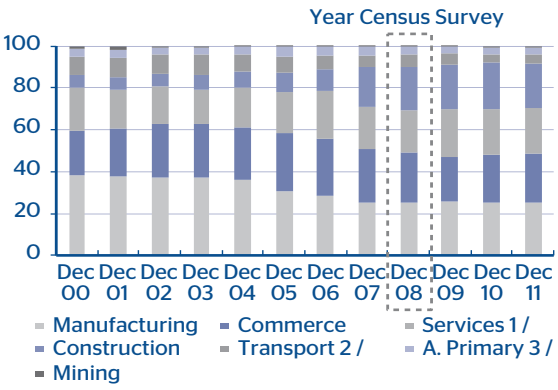
To contextualize the Census information on how credit was distributed during the year in which the survey was undertaken (2008), it is useful to review the information from the Banco de Mexico (Banxico, the central bank) on the commercial banking system's performing loan portfolio by economic activity, since it is issued on a more frequent basis than the Census data.

As shown in Graph 29, the performing loan portfolio of commercial banks corresponding to financing for the country's private sector[1] posted major growth in the past few years. In the 2000-2005 period, the real annual growth rate averaged only 0.7%, while in the 2006-2011 period, the growth rate was 14.1%. Although in 2009 the portfolio posted a slight 1.3% decline in real terms, in the following two years it has resumed its growth, reaching a balance of almost 1.08 billion pesos at the end of 2011.

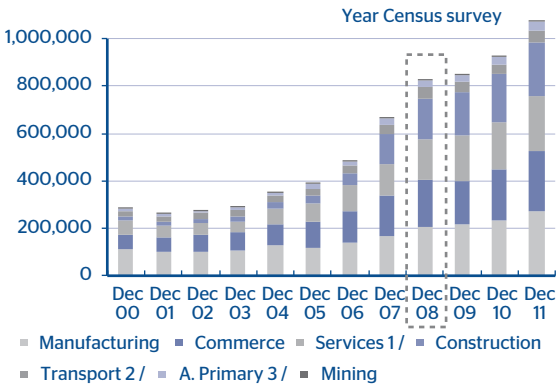
Based on the Banxico data, in Graph 30 can be seen that the commercial banks credit portfolio was concentrated in three sectors, Manufacturing, Trade, and Services (non-financial). These three sectors accounted for about 70% of the portfolio in 2011. However, the data show that the structure of the performing business loan portfolio of the commercial banking system has changed since 2000. While the Manufacturing industry is the sector that accounts for the highest percentage within the total balance, this figure has been declining, from 38.5% in 2000 to 24.1% in 2011. At the same time, between 2000 and 2011, the percentage share corresponding to the Trade and Services sectors has remained stable in this period, with Trade accounting for close to 22% and Services around 20% of the performing loan portfolio.

[1] Does not include performing loans to the Financial and Public Sectors.

Graph 29
Outstanding balance of the commercial banking system's performing loan portfolio. By main activity of the borrower, % of the total*



Graph 30
Outstanding balance of the commercial banking system's performing loan portfolio. By main activity of the borrower. Millions of pesos



Source: BBVA Research with Banco de Mexico data.
* Does not include the performing loan portfolio for the financial and public sectors.
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodations, food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture, livestock and forestry activities)

Among the four remaining sectors (Construction, Transportation, Mining, and Primary Activities), as can be seen in the graph, Construction is the sector that has most notably increased its percentage share of the performing loan portfolio in this period, from 5.6 % in 2000 to 21.3% at the end of 2011. In contrast, the percentage share of performing loans corresponding to Primary Activities has remained constant (at around 3.8%), while the corresponding figures for Mining and Transportation have declined.

Based on the Census data, the following sections will delve into some characteristics of the economic units that could explain the breakdown of credit among the different economic activity sectors. The Census included, for the first time, some questions that provide insight into the credit decisions of private sector companies and state owned enterprises that operated in 2008 and different characteristics of such enterprises that are associated with such decisions, including their sector of activity, can be identified.

Although the Census does not include information on the amount of credit obtained or portfolio balances among the economic units, data on certain characteristics at a given point in time compiled in the Census provide a new source of information for analyzing the factors that affect access to credit for companies that is not available in any other statistic on bank financing in Mexico. Thus, supplementing the information with these statistics allows for a better understanding of the productive units, which will prove useful for developing strategies to improve the attention provided to them in terms of financial services.

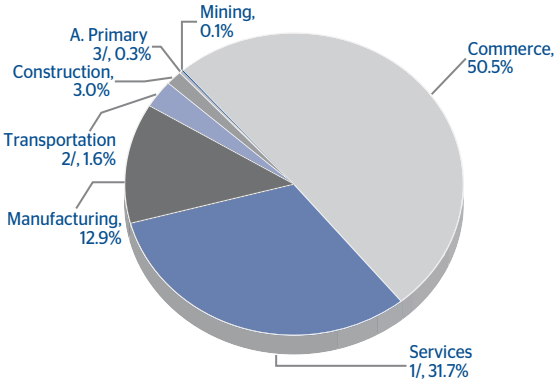
3.a.2. A high percentage of companies in the construction and transportation sectors obtain financing

According to the Census data, the three sectors that account for most of the commercial banks' credit portfolio also represent a significant percentage of the 3,437,645 private businesses and state owned enterprises[2] that were operating in February 2008, with 50.7% of them corresponding to Trade, 37.7% to Services, and 9.9% to Manufacturing (Graph 31).

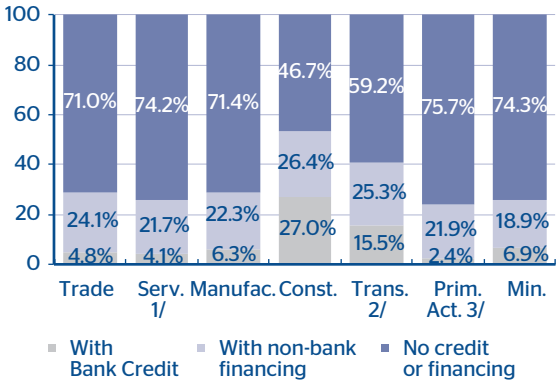
[2] These figures include economic units not engaged in the generation, transmission, and distribution of electricity, the supply of water and gas by pipeline to the final consumer, financial institutions, public sector companies, religious organizations, and households with economic activity in a shared location.

However, information on the number of companies classified according to whether they obtain credit or financing (Graph 32) indicates that in that year less than 30% of the businesses in several sectors had obtained loans. The percentage of companies in Primary Activities and Mining [3] that obtained credit was slightly below the average for the three sectors mentioned above. In contrast, in Construction 53.3% of companies obtained financing, while in Transportation 40.8% of businesses received credit from banks and other sources (Graph 32).

Graph 31
Percentage of economic units by sector of economic activity (% of the total)



Graph 32
Economic units according to whether they obtained credit and by sector of economic activity (% of the sector total)



Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate management units; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

It should be noted that as a percentage of the total number of companies in each sector, businesses engaged in Construction and Transportation receive more bank credit than companies in other sectors. At the same time, a higher percentage of companies engaged in Primary Activities, Trade, and Services obtained non-bank financing (Graph 32).

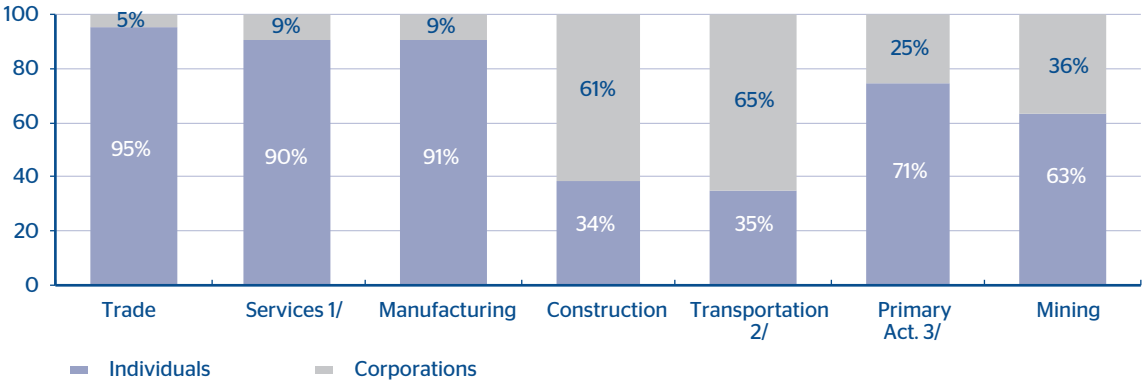
3.a.3. There is a higher percentage of companies with credit and financing in sectors of economic activity in which there is a greater presence of large enterprises

An analysis of the information on the type of company ownership, whether it corresponds to individuals with business activity or if the business is established as a corporation, indicates that more than 60% of such economic units in Construction and Transportation are corporations (Graph 33).

This is not the case with Trade, Services or Manufacturing, where more than 90% of the companies are run by individuals with business activity. In Primary Activities and Mining the percentage of companies registered in the category of individuals with business activity are 74% and 63%, respectively (Graph 33).

[2] For the information presented below, it should be taken into account that given that the Census includes private sector companies and state owned enterprises, within the mining sector it is not possible to separate the figures corresponding to Petróleos Mexicano (Pemex). As a result, some of this industry's indicators may be skewered and although they are presented, a detailed description of them is not offered.

Graph 33
Distribution of economic units by type of ownership
(% of the total number of economic units by sector)

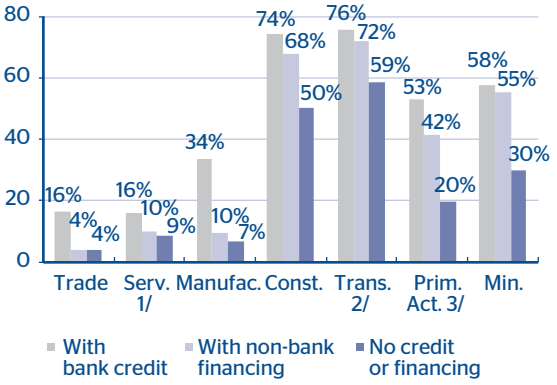


Source: BBVA Research with Banco de México data.
* Does not include the performing loan portfolio for the financial and public sectors.
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate management units; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

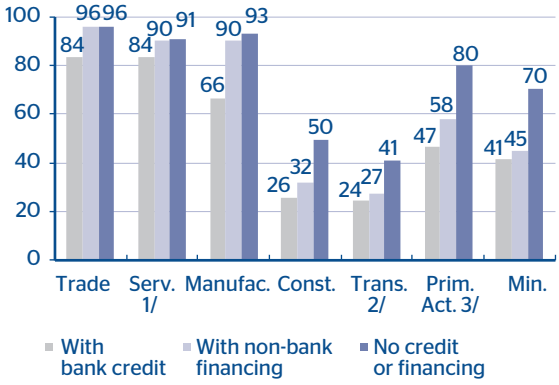
It is important to add that regardless of the sector of economic activity to which they belong, companies that are established as corporations tend to turn to bank credit more often (Graph 34). In both Construction as well as Transportation there is a high percentage of companies with bank credit that are established as corporations as compared to other sectors.

By the same token, a higher percentage of individuals with business activity obtained non-bank financing. Trade, Services and Manufacturing report a higher percentage of companies that resort to this type of financing than the others (Graph 35).

Graph 34
Percentage of corporations based on their access to credit or financing (% of the total number of economic units per sector)



Graph 35
Percentage of individuals with corporate activity based on access to credit or financing
(% of the total number of economic units per sector)

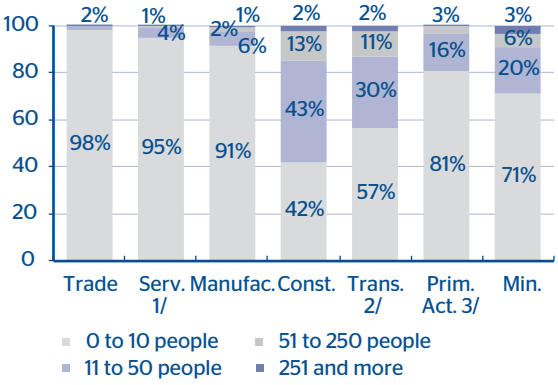


Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

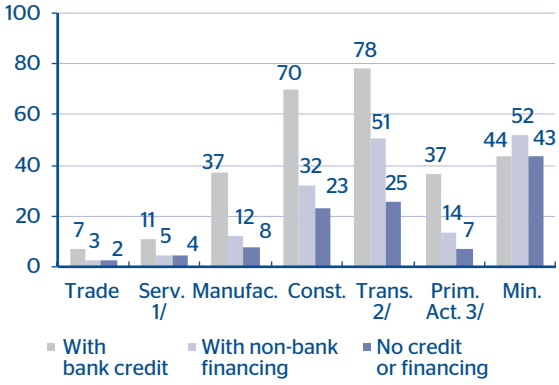
When defining company size based on the number of persons employed, as was done in previous issues of Mexico Banking Outlook (see Section 3.b.: "Considerations regarding company segmentation"), it can be seen that the percentage of micro, small, medium size, and large companies varies significantly between different sectors of economic activity. While in all these sectors micro and small economic units (with up to 50 employees) are the majority, in Construction and Transportation the mayority of businesses are small and medium size companies, while the other sectors are characterized by a relatively higher share of micro-businesses (Graph 36).

At the same time, the average number of employees is significantly higher in companies with bank credit, with the exception of Mining. In addition, Construction and Transportation companies, which proportionally receive more financing (Graph 32), as a whole, also have a higher average number of employees (Graph 37). Nevertheless, as will be seen in the next section, even though companies with access to credit or financing tend to employ a higher number of people (Graph 37), a larger size does not necessarily correlate with having obtained more credit.

Graph 36
Distribution of economic units by number of employees
(% of the total number of economic units)



Graph 37
Average number of employees per economic unit
(average number of persons per sector)



Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

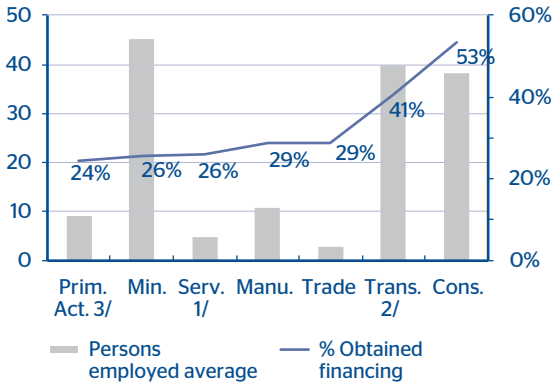
3.a.4. In an analysis by sector of economic activity, a greater size does not necessarily imply obtaining more credit

The size of the economic unit by sector, measured by the number of people employed, has no positive correlation with obtaining greater credit. For example, although, on average, companies in Primary Activities employ more workers than in Trade or Services, a smaller percentage of businesses engaged in Primary Activities receive financing, compared to those in Trade or Services (Graph 38).

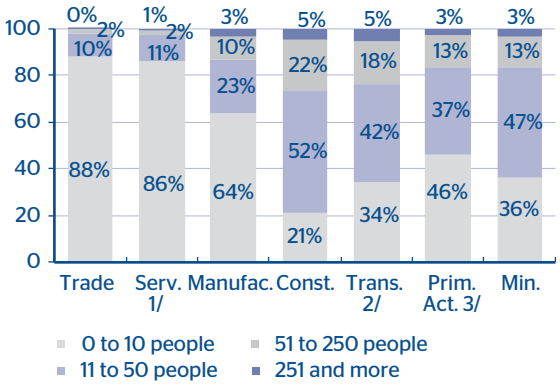
Furthermore, even though in Manufacturing and Retail Trade the same percentage of companies obtained financing (29%), the average number of employees in Manufacturing is more than triple that of Trade. For Mining, it should be noted that the Census data compiled for this analysis does not allow for distinguishing between private companies and state owned enterprises, so that the information on the number of persons employed can be upwardly skewered due to the presence of information from Petróleos Mexicanos (Pemex).

In the specific case of bank credit, in some sectors the statistical breakdown based on company size correlated with obtaining such credit is associated with the distribution of such financing in the economy as a whole. Indeed, most of the companies considered in Trade and Services are micro and small companies, while in Transportation and Construction small and medium size companies are the norm. In the case of Primary Activities, companies that obtain bank credit tend to be larger than the average for the economy as a whole, while in Mining they are likely to be smaller in size than the average (Graph 39).

Graph 38
Number of employees based on their access to credit or financing
(Average number of persons, % of the total number of companies per sector)



Graph 39
Percentage of economic units with bank credit by number of employees
(% of the total number of economic units with bank credit)



Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

Thus, the sectorlal segmentation of the economic units indicates that there are additional relevant factors, besides company size (measured in this case as the number of persons employed) to explain the distribution of financing.[4] The variation in the access of different sectors to credit could be related to sectorial risks or risks associated with the development of each economic activity, the intensity in the use of the factors of production (which define the specific capital requirements in each sector), and other elements specific to the development of a given productive activity that affect the generation of income flows and other relevant indicators to evaluate companies' payment capacity.

3.a.5. Indicators for cash flow and access to bank credit do not fully explain the differential of access to financing among sectors

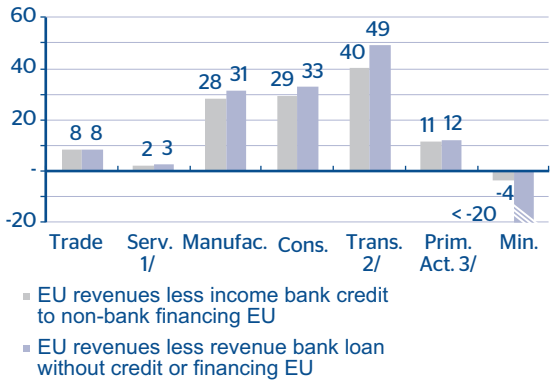
As was explained in the November 2011 issue of ***Mexico Banking Outlook***, economic units with bank credit are characterized by their posting of greater average revenue from the sale of goods and services and higher profit margins than companies with non-bank financing or no credit or financing. Information by activity sector shows that the difference in revenue and profit margins is more pronounced in Construction, Transportation, and Manufacturing (Graphs 40 and 41).[5]

However, in some sectors the simple difference in these indicators does not explain the disparities in obtaining credit. For example, the differential in average revenue for economic units in Services is much less than in companies engaged in Primary Activities, where a lower percentage obtain bank credit.

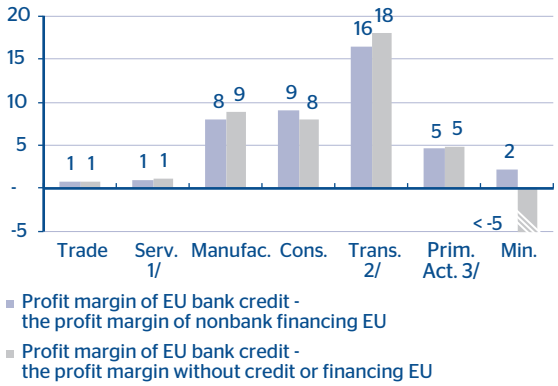
[4] A detailed analysis of the distinctive characteristics of companies that do or do not obtain credit based on their size as defined by the number of employees was published in ***Mexico Banking Outlook*** (November 2011).
[5] In the case of the Mining, the Census data do not distinguish between private companies and state owned enterprises, and therefore the statistics may be skewered due to the presence of information from Petróleos Mexicanos.

Furthermore, even though the differential in average revenue or the profit margin of companies in Manufacturing is similar to that of companies in Construction, the latter acquire financing more frequently (Graphs 32, 40, and 41).

Graph 40
Difference in sales revenue (Annual, average per economic unit, millions of pesos)



Graph 41
Difference in profit margin (Annual, average per economic unit, millions of pesos)

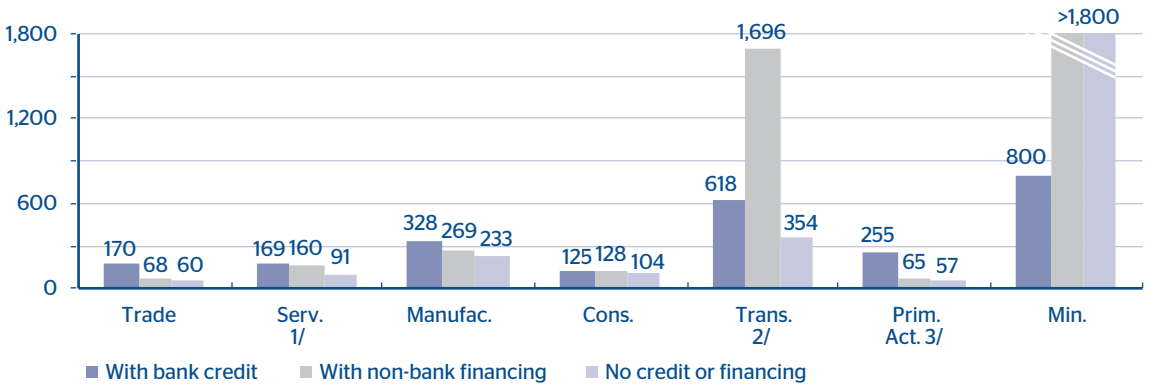


Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

3.a.6. Not only the value but also the type of assets can help explain the distribution of credit between companies in different sectors

To analyze fixed asset value, the average number of employees was calculated in order to make the corresponding amounts between the different sectors comparable (Graph 42). As a result, the Transportation sector stands out, because within it, the companies that obtained non-bank financing are those that report higher average asset value. As will be seen below (Graph 44), this data can be attributed to companies in this sector reporting a higher percentage of real estate properties within their total assets (which are assumed to be of greater value than other types of assets such as machinery and equipment).

Graph 42
Average fixed asset value per employee (thousands of pesos per person)

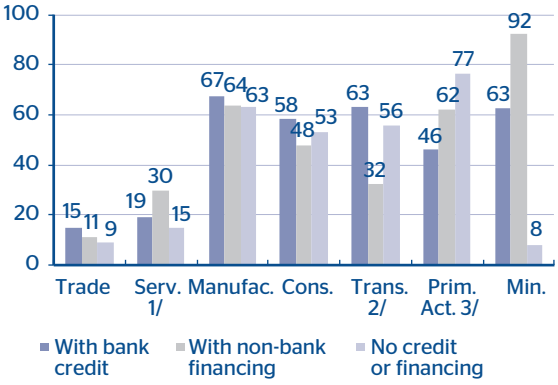


Source: BBVA Research with Banco de México data.
* Does not include the performing loan portfolio for the financial and public sectors.
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

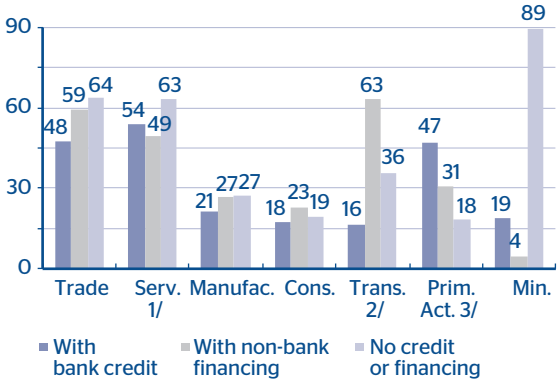
Meanwhile, companies in Manufacturing have a higher average asset value when compared with the mean for sectors such as Services and Primary Activities, which could explain the difference in the percentage of businesses that obtained financing between these sectors (Graph 32). It also should be noted that the average asset value per employee of companies that obtained bank credit compared to those that acquired non-bank financing is considerably higher in the Trade and Primary Activities sectors.

The asset value of a company is not only important because it can be used as collateral, but the type of assets that can be put up as a guarantee is meaningful as well. Graphs 43 and 44 illustrate the value of machinery and equipment, on the one hand, and real estate properties, on the other, as a percentage of total assets. For Trade and Services, machinery and equipment represent a relatively small percentage of their assets, while, in contrast, for these two sectors, real estate properties account for half or more of their assets.

Graph 43
Machinery and equipment as a percentage of total assets (% of total assets)



Graph 44
Real estate properties as a percentage of total assets (% of total assets)



Source: BBVA Research with 2009 Economic Census data
1 / Includes information services in the mass media; real estate and leasing and rental services; professional, scientific, and technical services; corporate services; business support and waste management; educational services; health care and social assistance services; entertainment services; accommodation and food preparation; and other services, except government. 2 / Includes mail and storage. 3 / Agriculture, livestock raising, forestry, fishing and hunting (only fishing, aquaculture and services related to agriculture and forestry activities)

In the case of Services, there is a perceptible difference between companies that obtain bank credit and those that acquire non-bank financing, since the former have a higher percentage of their assets in real estate properties (Graph 44).

Within Manufacturing, Construction, and Transportation, companies with bank credit had a higher asset value in machinery and equipment (as a percentage of the total) while the asset value of real estate properties is lower compared to businesses that obtain non-bank financing.

For Transportation, the asset value of machinery and equipment of companies with bank credit is almost double that of business that obtain non-bank financing. Companies in this sector that use non-bank financing have a high percentage of their assets in real estate properties.

This difference between the type of financing and the importance of each asset category seems to determine a distinction, since the companies in sectors that obtain greater bank credit seem to have assets that are not only more valuable but also have a higher percentage of assets that are often more specific for the development of a given activity (such as machinery and equipment). This could indicate a better understanding on the part of the banking sector to appraise such types of assets and it could also suggest that they could be susceptible to be sold in secondary markets (important in case of loan default for the collateral be redeemed). Thus, in the case of Trade and Services, with very different precise activities with which it would be very difficult to associate a specific use of machinery and equipment, the companies that obtain bank credit have a higher percentage of real estate properties as assets.

Conclusions

The Census data complement the study of the characteristics of companies that obtain financing. Nevertheless, such information is insufficient to establish how the distribution of such financing affects the growth of the economy.

As has already been highlighted in previous issues of ***Mexico Banking Outlook***, the sectoral information confirms that companies with bank credit tend to be organized as corporations, obtain higher revenue, and have greater profit margins and, in general, their average asset value is higher.

Meanwhile, the analysis by sector provides new elements for understanding the factors that influence the distribution of credit. It should be emphasized that it is the Construction and Transportation sectors that have a higher percentage of companies that obtain financing. These sectors are distinguished both for generating greater revenue and profits as well as having companies with a greater average number of employees.

In addition, the different indicators reviewed in this study demonstrate the importance of considering not only the size of the company as an important factor for obtaining credit but also the need to take into account the type of activity the business is engaged in, as well as the particularity of the production processes employed (labor intensity, need for specialized machinery, existence of real estate properties), since they can provide useful information on credit requirements and companies' payment capacity.

For example, the indicators reported for Primary Activities do not fully explain the low percentage of companies that receive financing in this sector, and therefore consideration should be given to the presence of other factors not directly measured by the Census data that may affect the flow of credit to this sector. In this case, the risk inherent in activities such as agriculture or livestock, prone to inclement weather and seasonal income variations, could be affecting their opportunities to access credit. From this derives the need to emphasize the importance that instruments such as guarantees and risk hedges can have in helping to increase lending to this sector.

In turn, the characteristics of the assets in each sector and their importance as collateral again highlight the importance of improving collateral registries and the development of secondary markets for such productive assets.[6]

In the future, the effort undertaken in the Census to gather information from companies that are users of financial services can be the starting point for assessing the impact of credit in businesses, since it would help to measure the increase in revenue generation, employment, productivity, etc., and in the process reformulate or adjust both government and private sector initiatives aimed at improving access to financing, particularly for micro, small and medium size enterprises.

Although information from the Census provides a first approximation for understanding the flow of credit to different sectors of economic activity, the data show that statistics are still required that would allow complementing the figures on patterns of access to credit for companies from different sectors, including the amount of the loan or financing obtained and the average terms and interest rates granted. With this in mind, the National Banking and Securities Commission has begun to publish such information, which contributes to improving companies' knowledge in the field and developing products that are more in accordance with their businesses' needs. (See Box 1: The Statistical Data on Business Credit by Company Size).

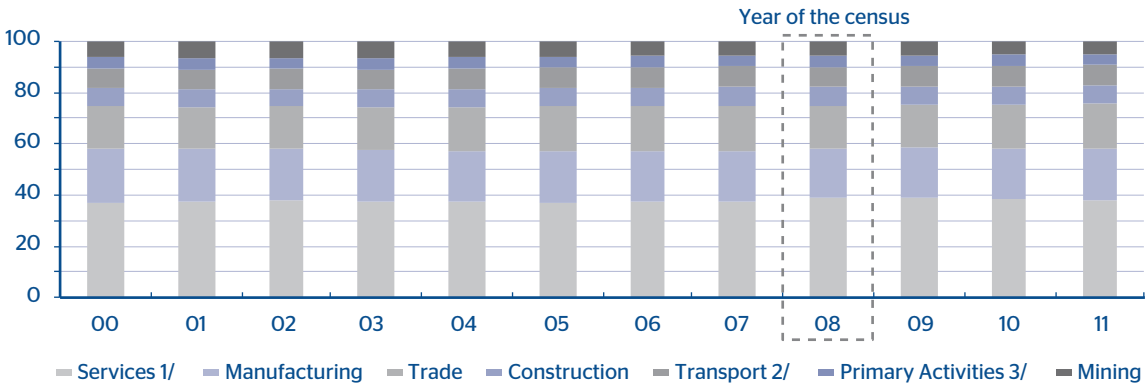
Meanwhile, the trends in the credit portfolio (Banxico information) and the characteristics of the financing obtained in a given year (Census data) do not allow inferences to be drawn on the effect of credit on the productivity of different sectors, measured through the contribution to value added of the different economic activities, since their percentage share has not undergone significant changes in the past few years. Nevertheless, as noted in the November 2011 issue of ***Mexico Banking Outlook*** it is the companies with the best performance indicators, including productivity, that have easier access to bank credit.

[6] A more detailed discussion on the creation of a single collateral registry can be found in ***Mexico Banking Outlook*** (November 2011).

In this case, it is the Services sector that most contributes to total value added, in the 2000-2011 period, providing, on average, 37.8% of the total. This sector has maintained a steady share within the portfolio and for the year in which the Census data was compiled, the companies engaged in these activities were those that received less financing. Meanwhile, the Construction sector has maintained a stable percentage share at close to 7%, which is different from the trend in its percentage share of the performing loan portfolio and the important percentage of companies within that sector that obtained loans in 2008.

This indicates that further analysis is still required not only of the impact of credit on particular companies, but also on its effect on different economic activities. The link between obtaining credit and the added value that is generated is of tremendous importance if, as the goal of financial inclusion, the aim is not only to bring financial services to a greater number of companies, but also to spur productivity in sectors that most contribute to the economy in order to achieve greater growth.

Graph 45
Gross Added Value by Sector
(% of Gross Added Value of Selected Sector*, 2008)



Fuente: BBVA Research con datos de INEGI.
* El valor agregado bruto total excluye al asociado a los sectores: electricidad, agua y suministro de gas al consumidor final, servicios financieros y actividades de gobierno ya que las unidades económicas de estos sectores no forman parte del universo de unidades económicas del sector privado y paraestatal conforme al Censo 2009.
1/ Incluye: Servicios de información en medios masivos; Servicios inmobiliarios y de alquiler; Servicios profesionales, científicos y técnicos; Corporativos; Apoyo a los negocios y manejo de desechos; Servicios educativos; Servicios de salud y de asistencia social; Servicios de esparcimiento; Servicios de alojamiento y preparación de alimentos y Otros servicios, excepto gobierno. 2/ Incluye correos y almacenamiento. 3/ Agricultura, cría y explotación de animales, aprovechamiento forestal, pesca y caza (sólo pesca, acuicultura y servicios relacionados con las actividades agropecuarias y forestales)

Acknowledgements

We would like to thank the INEGI personnel for their indispensable assistance, especially José Luis Mercado Hernandez and Susana Patricia Pérez Cadena, in processing the census data and for their valuable clarifications and suggestions.

3.b. Considerations Regarding the Segmentation of Firms

Introduction

The group of micro, small and medium size enterprises (MSMEs) has been the center of attention for the development of public policies due to the high percentage of these firms within the corporate weave, their current and potential importance in generating jobs, in addition to their contribution to national production. Their importance within the economy has spurred the gathering of statistics that allows analyzing in a more complete manner such a fragmented and heterogeneous group of enterprises.

In the case of the statistics generated by INEGI, the most common census stratification is based on the number of employees. This classification was maintained in the census periods of 2004 and 2009, in order to sustain a basis for the comparison of results between them.The INEGI classification is also the one used in the prior series of articles of ***Mexico Banking Outlooo***[1] which analyzes the use of financial services based on information gathered in the 2009 Census. However, this is not the only basis for stratification used by different institutions that compile economic and financial information on MSMEs.

To date, there is no single criterion to classify firms in terms of size and usually to carry out this segmentation, different variables have been used such as number of employees, annual sales, income or fixed assets. Although the relevant indicator for stratifying and defining thresholds at a given moment in time could respond to the punctual and specific needs of government programs, the diversity of classifications could generate difficulties in analyzing and knowing the sector better. This may be due to a lack of continuity of the statistical series, to internal inconsistency of the same source, or to complexity of trying to complement data from different sources.

The existence of a comparable definition among different sources facilitates a clear identification of the target population to be attended and obtain a complete diagnosis of its characteristics and needs. As Alvarez and Duran (2009) point out in regards to, analyzing the importance of the availability of statistics and the need of having a homogeneous methodoligical framework for studying SMEs (small and medium size companies); *"The effectiveness of public policies to support and help the SME sector will be directly tied to the level of knowledge of this and the fidelity of the data that is available; the statistical problem is therefore not less, either in the eyes of academic studies nor in those that diagram the policies or make decisions"*.[2]

Given the impact that the variation in different definitions could have, not only on the design and evaluation of the results of public policies, but also in the development of an adequate strategy of attention to MSMEs by commercial banks, this section of ***Mexico Banking Outlook*** briefly describes the evolution of the definitions of MSMEs in Mexican legislation, and compares it with the classifications that can be found in other statistical sources that exist in the country.

The various classifications of SMEs indicate the need of having a shared definition for this group of enterprises in order to coordinate efforts to provide financing to this group and eventually evaluate its impact not only on the companies in particular but also on the economy as a whole.

[1] "What does the 2009 Economic Census tell us about obtaining credit among Mexican companies?" ***Mexico Banking Outlook***, November 2011.
"What does the 2009 Economic Census tell us about the management of bank accounts among Mexican companies?" ***Mexico Banking Outlook***, June 2012.
"The Use of Credit in the Different Productive Sectors. What does the 2009 Economic Census tell us ?" ***Mexico Banking Outlook***, November 2012.
[2] Álvarez, Mario and José E. Durán, "Manual of the Micro, Small and Medium size Company. A contribution for the improvement of information systems and the development of public policies" Published together with the GDZ (German Technical Cooperation), CEPAL and CENPROPYME.

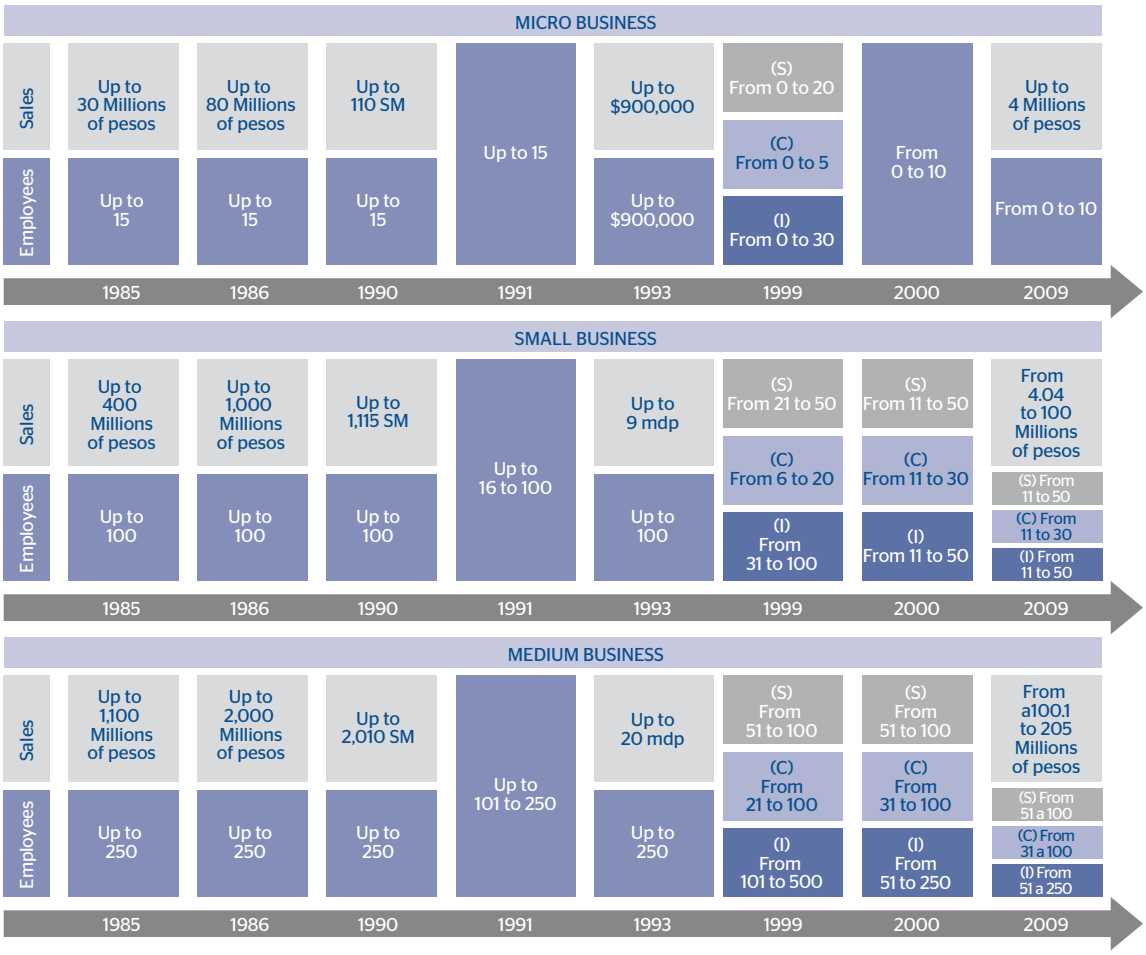
3.b1. Evolution of the official definitions

From 1985 to date, eight different definitions have been in effect in Mexican legislation regarding the size of firms, so the number of modifications has been greater than the changes in the federal public administration which occurs every six years. Up until 1999, the corresponding provisions were issued first by the Ministry of Commerce and Industrial Promotion, and later by its successor, the Ministry of the Economy, the main federal government agency for promoting firms .

As shown in Graph 46, the elements for defining the size of a company have varied. At first, the number of employees and the sales volume, were considered as the criteria for classification (1985, 1986, 1990, 1993); later, only the number of employees was considered (1991), and then the dimension of the sector of activity was added (1999, 2002). Finally the three dimensions were included: employees, sales and sector of activity (2009).[3]

Graph 46

Classification of fims by size



SM: (Salario mínimo general) general minimum wage, raised to the year, corresponding to Geographic Area "A" (S) Services (C) Trade, (I) Industry
Source: BBVA Research with INEGI data and the Official Gazette of the Federation (Diario Oficial de la Federación) (Various dates).

[3] In addition to considering these three variables in 2009, a maximum ceiling was introduced that weighs employment and sales indicators so that the size of the company is determined based on the points obtained according to the following formula: Company point evaluation = 10% X (Number of workers) + 90% X (Annual Sales Amount). This grade point must be the same or lower than the Maximum Combined Ceiling of each category. The Ceiling is established according to the following:

Size	Sector	Maximum Ceiling	Size	Sector	Maximum Ceiling
Micro	All	4.6		Trade	235
Small	Trade	93	Medium	Services	250
		95		Industry	

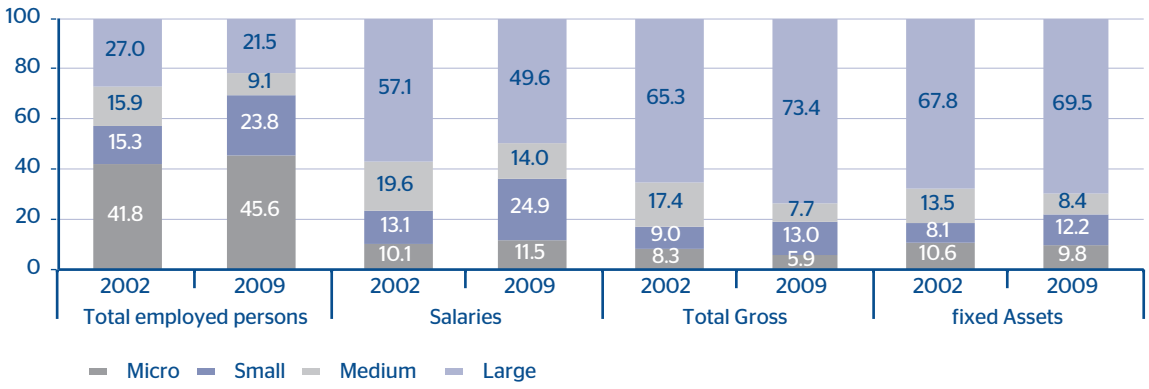
An example of the impact of these changes of definition in the size of the relative population of firms is illustrated in Graph 47, which presents an exercise done by INEGI with the data obtained based on the 2009 Census. In this exercise, some selected variables are compared, classifying the firms according to the criteria published by the Ministry of the Economy in 2002 (2002) and in 2009 (2009); the latter are currently in force.[4]

As can be observed, the impact of this modification is not trivial. In the case of micro and small companies, the increase in the share of representative indicators[5] is significant.

2002 Definition	2009 Definition
• Percentage of employed personnel: 57.1%	• Percentage of employed personnel: 64.9%
• Pay 23.2% of the wages	• Pay 36.4% of the wages
• Contribute 12.3% to gross production	• Contribute 18.9% to gross production
• Own 18.7% of the fixed assets	• Own 22 % of the fixed assets

A movement in a contrary sense occurs in the case of medium and large companies, which reduce their share in these indicators.

Graph 47
Percentage share of selected variables according to size and criteria used to stratify (%)



Source: BBVA Research with INEGI data.
2002: Corresponds to the definition published by the Department of the Economy in the Official Gazette of the Federation (D.O.F) on June 30, 2009..

The above illustrates the difficulty of analyzing and comparing the segment of MSMEs even with information from the same source. The change in the thresholds and the results observed do not allow establishing clearly if this modification would correspond to a) the operational or productive transformation of the companies that comprise each segment, b) the interest of focusing attention on sizes with particular characteristics, or c) the need to meet goals and budget allocations for a predefined program.

3.b.2. Differences in segmentation due to number of employees and sales volumes

The variable most commonly used by different sources when publishing information by size of company is the number of employees, which can also be considered as the easiest to observe. Graph 48 shows the existing variation in segmentations used by various official sources when this measure is used.

[4] Agreement by which the stratification of micro, small, and medium size companies is established, Official Gazette of the Federation, June 30, 2009.
[5] This increase in the share of micro and small companies attracts attention, since one of the reasons to implement the change in the definition was that it was necessary "to establish a stratification that, based on the number of workers, will take into account a criterion of annual sales, for the purpose of preventing discrimination against companies that are labor-intensive and prevent companies that have significantly high sales volumes from participating in programs designed for micro and small companies" (Official Gazette of the Federation, June 30, 2009., so that in order to improve focalization, a reduction of the universe of micro and small companies was to be expected upon incorporating the criteria of annual sales and not the movement of companies from the medium and large segment to the smaller segment where larger size companies can have advantages to obtain government support.

Graph 48
Comparison of the segmentation of companies by size, according to the number of employees

	MICRO	SMALL	MEDIUM
INEGI	0 to 10	11 to 50	51 to 250
Economy / CNBV	Services: From 0 to 10	Services: From 11 to 50	Services: From 51 to 100
	Trade: From 0 to 10	Trade: From 11 to 30	Trade: From 31 to 100
	Industry: From 0 to 10	Industry: From 11 to 50	Industry: From 51 to 250
BdM	Up to 100		More than 100

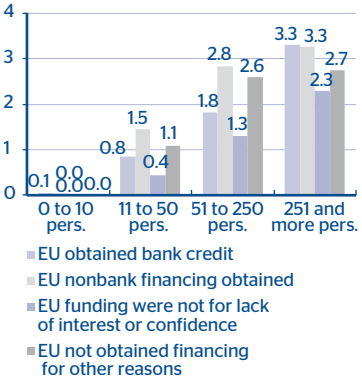
Source: BBVA Research with data from INEGI, Banco de México and the Official Gazette of the Federation, June 30, 2009.

In this case, although the segmentations among MSMEs coincide for the sectors of services and industry, in the INEGI census stratification and in the official definition issued by the Ministry of the Economy in 2009 (which is also used in the generation of statistics by the CNBV, the National Banking and Securities Commission), the INEGI census data do not include the dimension of sales volume incorporated by the Ministry of the Economy in 2009. Because of this, although the sources could provide complementary information, there is no full correspondence due to the lack of compatibility in the stratification criteria.

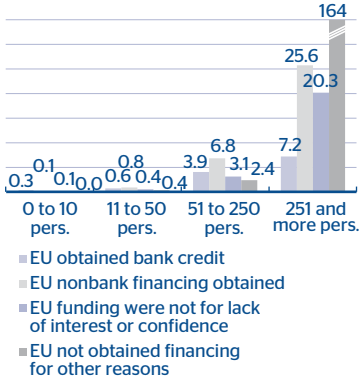
Also, although the Banco de México (BdM) does not specifically make reference to the size of companies in most of the statistics that it publishes, the Survey of the Current Evaluation of the Credit Market uses a classification in which the segment of the smallest companies includes the INEGI definition of micro, small and part of the medium size firms.

The importance that these differences could have on the design and evaluation of support policies to the MSMEs is illustrated with other information from the 2009 Census. Graphs 49, 50 and 51 present information on the subsidies received by the different strata of companies according to their condition of obtaining credit.

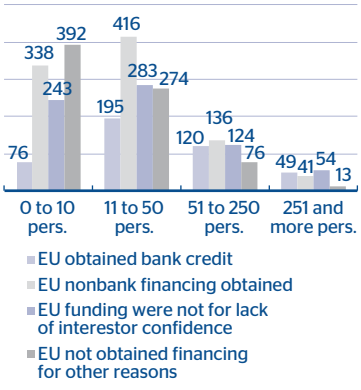
Graph 49
Percentage of economic units that received subsidies (%)



Graph 50
Average subsidies received per economic unit (Millions of pesos)



Graph 51
Number of economic units that received subsidies



Source: BBVA Research with data from the 2009 Economic Census.

Although Graph 49 shows that a lower percentage of micro and small firms received subsidies (compared with medium and large companies) and that the medium and large firms received on average a greater subsidy (Graph 50), upon reviewing the number of companies that received support, it is seen that it is the micro and small firms that in absolute terms receive more subsidies (Graph 51). In this case, the high number of companies in the smallest sectors tends to pulverize the percentage of companies that receive support and the amount of the subsidies granted.

Moreover, taking into account the condition of obtaining credit, it is seen that the percentage of firms with subsidies is lower among those that obtain bank credit that among those that only obtain non-bank financing (which includes the government source) or that do not obtain financing. Furthermore, based on the analysis of the characteristics of the firms by their condition of obtaining financing (presented in the issue of ***Mexico Banking Outlook*** of November 2011) it is known that, on average, firms that obtained bank credit have better indicators for generating earnings, fixed asset value, employment and productivity than the rest of the firms. Therefore, the pattern described of access to subsidies and financing is indicative of a complementarity between resources of private and public origin for the support of business activity and an appropriate focalization of subsidies.

However, due to its transversal nature, the Census information of just one year is limited in terms of answering questions regarding the effectiveness of programs to increase the productivity of smaller size firms or improve the conditions of access to credit over time. For example, if firms that received subsidies in 2008 improved and were able to grow (moving up in the segmentation scale) or if they have changed their financing sources and conditions compared to those of previous years. This type of analysis, which is desirable in order to have a more complete diagnosis of firms that have received subsidies and the results that have been obtained in terms of greater employment, higher sales, or greater productivity, requires completing the Census information with that of other sources.

Although the segmentation by number of employees is logical from the standpoint of public policies, due to the importance of the MSMEs sector as a generator of employment, this dimension might not be the most relevant in evaluating its potential to generate revenue and with this identify its demand for financing or saving products, or their quality as credit subjects. In this case, the value of sales, for example, is more important.

Upon reviewing bank statistics that define company size according to the value of its sales, there are also different criteria. As shown in Graph 52, the classification by BdM[6] used in the Survey of the Current Evaluation of the Credit Market for a small company would include the equivalent of a micro or a small firm as defined by the Ministry of the Economy and the CNBV (without considering the additional criteria of number of employees as also defined by these).

Graph 52

Comparison of the segmentation of companies by size according to annual sales volume

	MICRO	SMALL	MEDIUM	LARGE
SE/ CNBV	Up to 4 millon of pesos	From 4.01 to 100 million of pesos	From 100.1 to 250 million of pesos	More than 250 million of pesos
BdM	1 to 100 million of pesos		101 to 500 million of pesos	500 to 5,000 million of pesos
ABM	Up to 2 million of pesos	Up to 40 million of pesos / Up to 100 million of pesos	More than 100 million of pesos	

Source: BBVA Research with data from the ABM (Mexican Bank Association), Banco de México and the Official Gazette of the Federation (D.O.F., June 30, 2009).

[6] Results of the Survey of the Current Evaluation of the Credit Market (previous presentation, IQ98 to 4Q09).

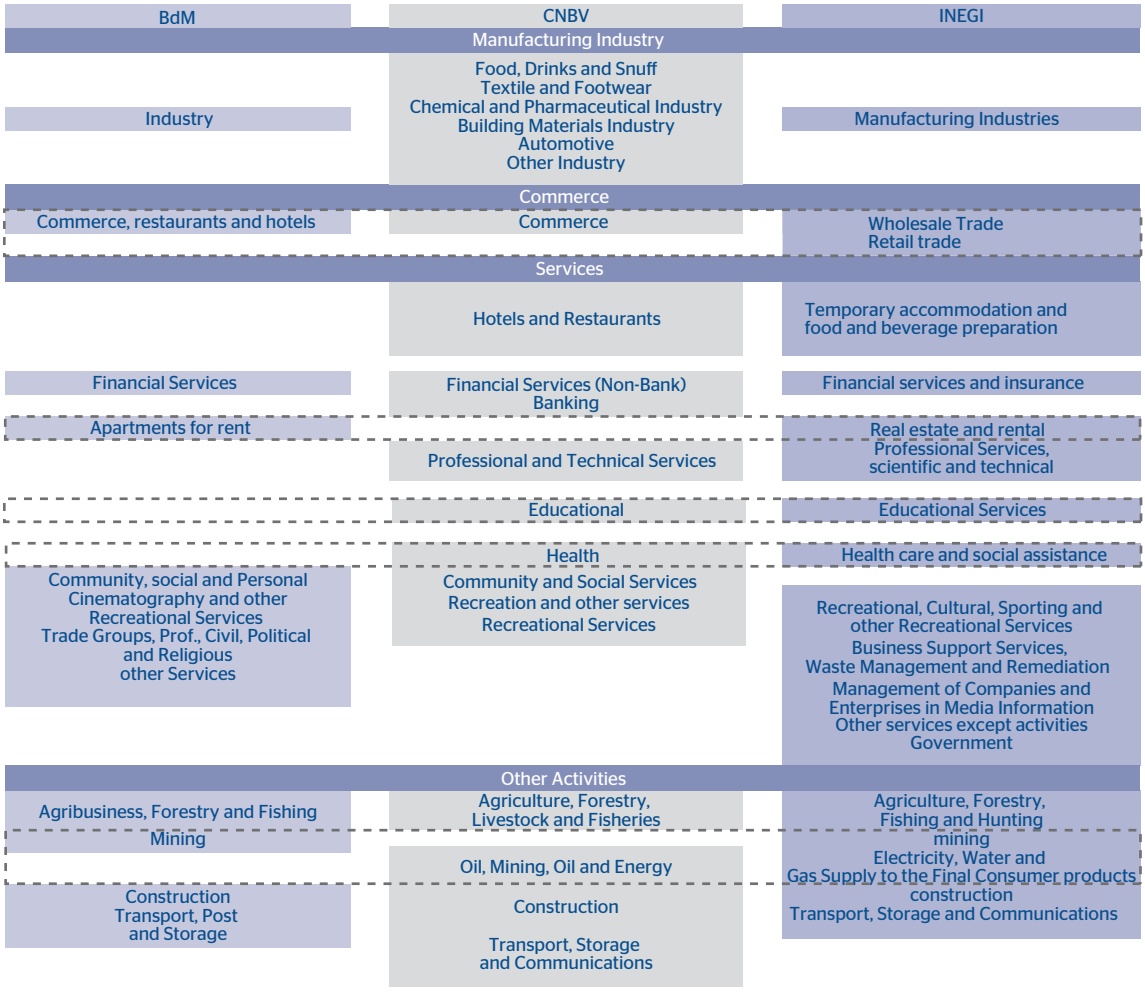
Also, this same group of small companies, according to BdM classification, would include micro, small and medium size firms according to the classification adopted by the Mexico's Banking Association (ABM for its Spanish acronym)) to provide follow-up to the credit flow provided by commercial banks. It is therefore difficult to compare the dynamic of bank credit flow in terms of company segments combining these three sources that gather information on different variables that are relevant for their activity.

Finally, when considering the sector of economic activity, variations are also seen in the classifications from different sources that also make it difficult to complement the information of economic and financial variables (Graph 53).

Upon reviewing the segmentation by sector of economic activity it is seen that INEGI has a broad classification of the sectors and subsectors of activity which allows grouping according to the most compact segmentations based on bank variables published by BdM and the CNBV. However, the most compact classification by BdM does not permit distinguishing between two sectors that are clearly separated in the other two sources, whereas the BdM statistics include in a single item, trade, restaurants and hotel activities, the CNBV and INEGI classifications place these activities in two different items. Something similar occurs with the classifications corresponding to health and education services: BdM does not distinguish between these two sectors.

Graph 53

Comparison of segmentation according to sector of sctivity



Source: BBVA Research with data from Banco de México (BdM), CNBV and INEGI.
BdM: Commercial bank credit by main activity of borrowers.
CNBV: Portfolio of information. Business activity portfolio by economic sector.
INEGI: 2009 Economic Census

Given that some support programs are focused on companies from specific sectors, it would also be desirable for these classifications to be rated as equivalent, if not under INEGI criteria, at least under similar criteria that will allow distinguishing their main aggregates.

Conclusions

It is desirable that homogeneous definitions exist with regard to firm size, as this would facilitate the follow-up and evaluation of the penetration of credit in the Mexican productive sector.

Currently, the diversity of definitions with which statistics are compiled with regard to MSMEs is a limiting factor to capitalize the effort of generating data, complementing the different sources and having a general overview as to which companies make up the universe of MSMEs and what are their main characteristics and needs.

Although it is important to maintain the definitions updated in order to reflect the changes in the organization and production forms of economic activity as well as compile different variables (for example, number of employees, wages, sales volume, use of credit, use of financing); also important is the use of comparable definitions so that all interested parties, both the government as well as the private sector, have a clear conception of what is the target population of attention, its characteristics and the credit risks that each category of companies could represent. In this manner, a series of indicators could be generated as a general guide to direct the policies to support and develop financial products for improved performance and competitiveness.

Despite being a simple concept, the sole definition of the company's size determines the analysis, diagnosis and design of the proposals for support toward a specific group. In this sense, a shared definition would allow directing efforts and capitalizing resources that both the public as well as the private sector have available to detonate growth of the country's MSMEs sector.

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Instituto Nacional de Estadística y Geografía (INEGI, National Institute of Statistics and Geography), "Micro, pequeña, mediana y gran empresa. Estratificación de los Establecimientos" ("The micro, small, medium and large company. The stratification of Establishments") . 2009 Economic Census, INEGI, 2011.

3.c Financial Inclusion: Two Measurement and Methodology Exercises for Mexico

Introduction

As a result of the growing economic literature that documents the benefits for persons and the economy in general from having financial services, there is a growing interest in measuring financial inclusion. In effect, there are various initiatives for its definition and measurement. For example, in Mexico, the National Banking and Securities Commission (the CNBV for its Spanish acronym) some years ago began the publication of reports on this topic which describes some of the efforts for the creation of financial inclusion statistics and indicators. Due to the fact that the private financial institutions are not oblivious to these concerns, in this section of ***Mexico Banking Outlook*** are presented two methodologies and indicators that have been developed at BBVA Bancomer on this topic.[1] The first is an indicator of the number of bank clients that is based on already existing data about the banking system. The second is an indicator of financial inclusion built on a specialized survey. In each of the following subsections, the methodologies are described and some results obtained for Mexico with these two indicators are discussed.

3.c.1 How many clients does the Mexican banking system have?

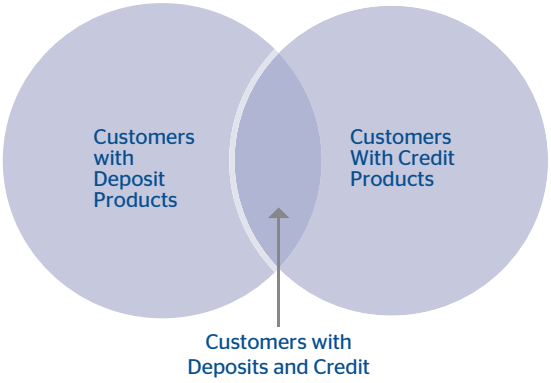
The answer to this question cannot be inferred easily and directly based on the statistics relative to banks that are usually collected by the financial authorities, not only in Mexico but also in other countries. This is because such statistics mainly refer to the number of accounts or balances of the various bank products and this information does not take into account that a client can have and use different deposit and credit products at the same time (multi-product clients. Graph 54).[2] In addition, a client can have such products contracted with one or several banks (shared clients. Graph 55). In effect, the clients of the banking system are those who have at least one savings or credit account in one of the banks of the country.

This is why Balmaseda and Necoechea (2012)[3] propose a methodology for estimating the number of banks' clients that takes into account these information and user characteristics, This methodology consists in estimating the probability that the clients are multi-product or shared, based on three types of information: 1) the deposit balances through deposit accounts and the credit balances on credit cards of the banking system, which, for Mexico, the CNBV publishes in its Statistics Bulletins of Multiple Service Banks; 2) the number of credit files in the registries of credit bureaus; in that case those from the Buró de Crédito (Credit Bureau); and 3) the breakdown of clients according to the number of bank products they used, from a relevant bank. This last information is used to make inferences at the banking system level based on four basic assumptions regarding the representativeness of the data from the relevant bank (Chart 3), which in this case is BBVA Bancomer.

Based on the information from the breakdown of the credit files and of clients of the relevant bank, Balmaseda and Necoechea first estimate the probability that a client is found in the relevant bank, and they use this information to determine the multiplicity of banks. This term refers to the number of banks to which a shared client belongs. This indicator is important because, in order to arrive at the final result of the number of users of the banking system, such multiplicity of the banks must be discounted from the shared clients in their count. For example, in December 2011, the estimated value of the multiplicity index was 2.99, and when dividing the number of shared clients on that date (45.6 million) between the multiplicity index, the number of single interbank clients is obtained (15.3 million). The sum of single interbank clients (15.3 million) plus the total number of clients of a single bank (32.2 million) gives us as a result the total number of users of the banking system (47.5 million).

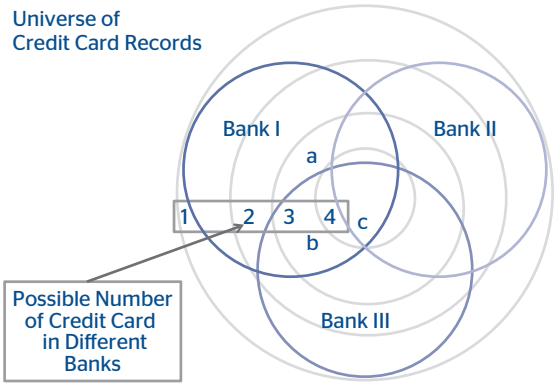
[1] The first Survey on Financial Culture in Mexico, conducted by Banamex and the National Autonomous University of Mexico in 2008 is another outstanding example of the initiative of the commercial banks on the subject of inclusion..
[2] An analysis of the use of credit and bank accounts among Mexican companies based on information of the Economic Survey 2009 is presented in ***Mexico Banking Outlook***, June 2012.
[3] This document is available as a Working Document of BBVA Research at the site.
http://www.bbvaresearch.com/KETD/fbin/mult/WP_1224_Mexico_tcm346-361431.pdf?ts=9112012

Graph 54
Example of types of bank clients according to their holding of deposits and credit



Source: Figure taken from Balmaseda and Necoechea (2012)

Graph 55
Example of distribution of the credit card file universe



Notes: Circles 1, 2, 3 and 4 are Level Curves (CN in Spanish) that correspond to the groups of clients with that number of credit cards in different banks. For the cases a, b, c that are Illustrated, the client count is done as follows:
a = 1 client, because even though he has three credit cards, the three are in the same bank.
b = 2 clients, because he has two cards in one bank and one in a different bank.
c = 3 clients, because even though he has four cards, the client belongs to three different banks.
Source: Figure taken form Balmaseda and Necoechea (2012)

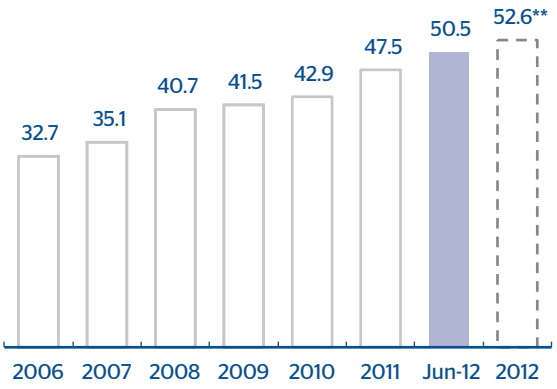
The estimates of the number of clients of the Mexican banking system, according to this methodology, are presented in Graph 56. In June 2012, the total number of clients of the banks in Mexico was estimated at 50.5 million, and it is forecasted that by the end of 2012, this figure will rise to 52.6 million. Taking into account that the estimated number of bank clients in 2006 was of 32.7 million, if the end of the year forecast is met the number of bank clients in Mexico will have grown by almost 20 million persons in six years.

Table 3
The four basic assumptions of the methodology for estimating the number of clients of the banking system

1.	The percentage of clients who have deposit and credit products at one of the largest banks of the country, compared to the total number of clients, is similar to that of the banking system.
2.	The balance of deposits per client of one of the largest banks of the country is similar in the banking system.
3.	The balance of credit per client of the one of the largest banks in the country is analogous for the banking system.
4.	The breakdown of the clients, as regards the number of their credit cards in one of the largest banks of the country, is similar to that of the rest of the banking system.

Source: Balmaseda and Necoechea (2012).

Graph 56
Estimate of the number of clients of the Mexican banking system, 2006-2012



Notes: The 2006 – 2009 estimates use data from the deposit accounts reports, ABM and Credit Bureau, while those of 2010 - 2012 use data from the balance reports of the National Banking and Securities Commission (CNBV), the Credit Bureau Cards and from the breakdown of clients according to the number of products owned of BBVA Bancomer.
** Forecast for the end of 2012
Source: Figure taken from Balmaseda and Necoechea (2012).

Assessment: the number of banks' clients in Mexico grew dynamically since 2006

Balmaseda and Necoechea (2012) propose a methodology for estimating the number of bank clients that seeks to incorporate two patterns that are very important in the analysis of the data. The first is that banks' clients can be multi-product, that is, they may have more than one bank product. The second is that clients can be shared, that is, they can be clients of several banking institutions at the same time.

This methodology has two advantages. The first is that it makes use of basic statistics that the financial authorities usually publish in many countries; except for the breakdown of clients according to the number of bank products they own. It should be observed that this last piece of information may be difficult to obtain, because banks can generate, organize and use the information for their business in ways that do not require linking the accounts with the clients, which is data of which the generation and storing can be costly. This is why for this exercise, BBVA Bancomer provided the estimated data required and the Mexico's Banking Association (ABM, by its Spanish acronym) for some years now has been using the estimated data obtained through this methodology to monitor their efforts to promote the use of banking services. [4]

The second advantage is that once the basic intuition of this methodology is understood, it is then easy to think of modifications to adapt it in other countries. In this respect, even though neither the intermediate steps of the methodology nor the data used are described here in detail, due to considerations of brevity (these can be consulted directly in the corresponding work document), it should be mentioned that for Mexico the use of credit card information is based on the preponderance that this banking product has had in the Mexican market with respect to others during the period of analysis.

To end this section, it should be emphasized that the two advantages of the methodology to calculate bank clients described before, in turn, also suggest what some of their limitations are. One of them, which will be illustrated more clearly in the next section, is the ever increasing and more diverse variety of financial products that are available to society and of institutions that offer such products, which can be measured more directly through surveys based on interviews of potential users.

3.c.2 How many persons in Mexico have and use financial services?

To answer this question, since 2009 BBVA Bancomer has carried out, together with the survey company GAUSSC, a follow-up of the main variables that have a bearing on the financial inclusion in Mexico from different social groups: young people or adults, urban or rural, with higher or lower educational levels, and with higher or lower income. Barriers and reasons, beyond the merely economic ones, for the financial exclusion of a part of society are also identified, as well as the impact on these groups of the development of new means or instruments that bring them close to the financial system, such as non bank correspondents and mobile banking. This allows estimating both the levels of financial inclusion according to the use of the various financial instruments and means, and also the potential or propensity among segments that still do not use them.

The follow-up surveys were carried out through face to face interviews in homes, based on a sample of 2,500 persons that are representative of the population over 18 years of age. A comparison of the methodological design of the BBVA Bancomer and GAUSSC Survey (Survey), with the survey that the World Bank has begun to conduct to prepare the Global Index of Financial Inclusion (Global Findex), is useful in illustrating their respective dimensions and scope, as well as the similarities and differences existing between them (Chart 4). [5] The following are some of the main results of the Survey:

[4] See, for example, "Estabilidad política y financiera en Mexico: Variables de éxito ante la incertidumbre global" (Political and financial stability in Mexico: Variables of success in facing global uncertainty") , Bank Association of Mexico, 75th Banking Convention, Press Conference to the Communication Media, May 17, 2012,

[5] For further details regarding the BBVA Bancomer- GAUSSC Survey, consult BBVA Bancomer and GAUSSC (2012). The details regarding the Global Findex may be consulted in the official Web site of the survey. http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTPROGRAMS/EXTFINRES/EXTGLOBALFIN/0,,contentMDK:23172730~pagePK:64168182~piPK:64168060~theSitePK:8519639,00.html

Table 4
Comparison of the methodological design of the financial inclusion surveys of BBVA Bancomer-GAUSSC and the World Bank

	BBVA Bancomer-GAUSSC	World Bank
Sample size	2,500 interviews	1,000 interviews
Representativity	National	National
Population under study	Population 18 years of age or older	Population 15 years of age or older
Technique	Face to face on housing	Face to face on housing
Selection of sample units	Random selection of sample units (AGEBs or Localities) proportional to the population of each state and urban strata and rural mix.	Random selection of sample units on a proportional basis
Selection of homes and persons	Random selection of street blocks (manzanas). In the field level, they are selected through systematic home jumps; age and sex quotas are used at the home to select the individual	Random routes are used; the home is selected at random; the person is selected according to the last birthday method; three visits are made to the home and if the visit is not carried out, It is substituted in a simple manner.
Margin of error	+/- 1.96	+/- 3.8
Indicator	It is structured with a series of 13 variables of holdings of financial products or services with the use of a support card. Do you have any of the bank services that appear on this card? 1) Savings account, 2) Checking account, 3) Debit or payroll card, 4) Personal credit or payroll, 5) Credit card, 6) Mortgage loan, 7) Auto loan, 8) Investment, promissory note or investment company, 9) Insurance contracted by you, 10) Insurance contracted by a third party, 11) Banking by Internet, 12) Department store cards, 13) Afore, 13a) Have you made voluntary contributions or have you changed Afore?. A "bancarized" person has banking services coverage through any of the 13 products; in the case of the Afore (the savings system for retirement), he would have had to make a contribution or changed administrator.	It is obtained from the simple frequency of the question: Currently, do you have a personal or joint account with another person in the following place? It can be an account to save money, to make or receive payments, or to receive wages or remittances Do you currently have an account in some bank (or any other financial institution, like for example cooperatives)?
Result	58%	27%

Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Financial inclusion: recent and potential evolution of banking services coverage ("bancarization")

As shown in Chart 4, for purposes of the Survey, the term financial inclusion (FI) refers to any person who has a bank account (who has bank services coverage), who has an account in the savings system for retirement or some insurance, who uses some of the means of the payment system to receive support from the Government, who uses non bank correspondents (for example, for the payment or services and utilities, cashing of checks, etc.), who makes financial transactions via mobile phone, or who uses prepaid cards to acquire goods or services.

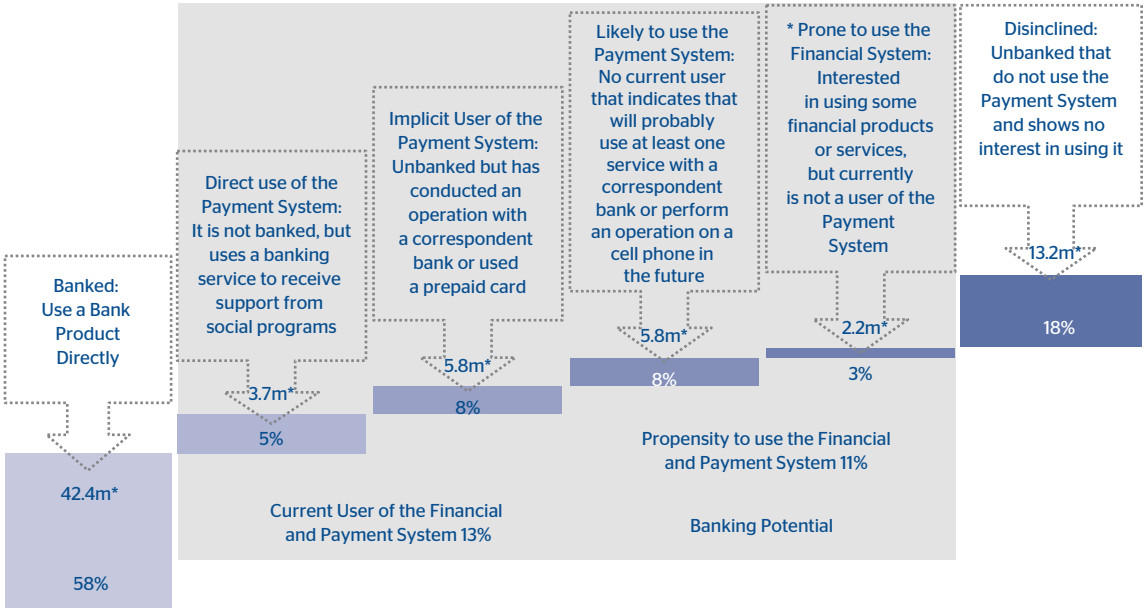
It should be noted that this definition is broader than the one from the Balmaseda and Necoechea methodology described in the previous section, which only considers two products; bank deposits and credit accounts through cards and it is also broader that the one of the Global Findex, which investigates the management of money savings accounts, to make or receive payments or to receive wages or remittances. However, the definitions of the Survey and of the Global Findex coincide on the importance of asking about the holding of products in any financial institution and not only in banks. This point is important in a country like Mexico where there are financial intermediaries of various types, even some for which no statistics are available of their activity analogous to those of banking.[6] Another difference among the samples of the Survey and of the Global Findex that should be pointed out is the age of the population surveyed, which in the latter is not 18 years old and more, but 15 years old and more.

[6] In the same sense, it should be observed that the CNBV, has recognized this situation. Although its Financial Inclusion data base started in 2009 with commercial and development banks data only,, and in subsequent versions, it has added information on infrastructure and accounts in the savings and popular credit entities (cooperatives and popular financial associations).

Thus defined, FI has two large components. The first component is the Traditional Population that has Bank Services Coverage; and t uses some bank services directly. On December 2011 they were 42.4 million persons (58% of the population over 18 years of age). The second component is Users with No Bank Services Coverage of the Financial and Payment System, who, on the above-mentioned date, were 9.5 million persons (13%).

This second component of FI is, in turn, divided into two: i) the direct user of the payment system who does not have traditional bank services but uses some bank service to receive support from social programs, and ii) the implicit user of the payment System who also does not have traditional bank services coverage but has carried out some transaction with a correspondent bank (for example, paying his light bill) or used a prepayed card (for example, a mobile phone card). These two groups in the period of analysis were estimated respectively at 3.7 million persons (5%) and at 5.8 million persons (8%) (Graph 57).

Graph 57
Financial Inclusion and potential bank services coverage (Bancarization) (December 2011 data)

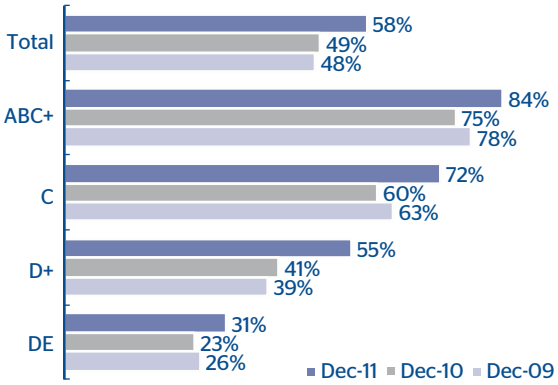


* Population in millions according to INEGI 2010.
Note: There is an additional 5% of users of the Payment System who also show an interest in using traditional financial services (they are included in the previous classifications).
Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Therefore, there are 51.9 million persons (71%) who, in some way, consider that they are included in the financial system. The remaining 29% of the population consists in two groups based on which it is possible to estimate the remaining potential of financial inclusion: i) 8 million persons (11%) who would be willing to use the payment system or traditional bank services and ii) 13.2 million persons (the remaining 18%) who are not very inclined to have bank services coverage. To summarize, it can be said that potential bank services coverage is estimated at 17.5 million persons (24%).

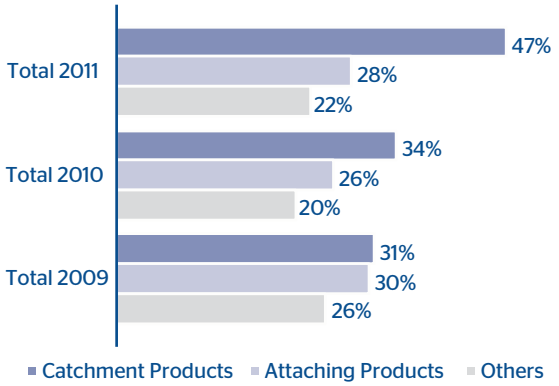
The comparison between the surveys taken in 2009, 2010 and 2011 shows that the total penetration of bank and financial services and products in the country among the adult population increased from 48% to 49% between 2009 and 2010 and from 49% to 58% between 2010 and 2011 (Graph 58), The increase appeared mainly among the medium-low socioeconomic segments “C”, “D”, and “DE”. On the other hand, the rise in FI was due mainly to the increase in the placement of deposit accounts by the banks. (Graph 59).

Graph 58
Financial Inclusion by socioeconomic segment



Notes: The socioeconomic levels are obtained from the application of the algorithm developed by the Mexican Association of Market and Public Opinion Research. The socioeconomic level is a segmentation that defines the economic and social capacity of a household. In Mexico, the Socioeconomic Level is measured through the AMAI 10X6 rule. This rule is an index that classifies households into six levels, taking into account nine characteristics or household possessions and the educational level of the head of the family or persons who most contribute to the household expenses. . In this classification, "A" corresponds to the highest socioeconomic level, and this decreases progressively down to "E", which corresponds to the lowest. For further details, see Lopez, H. (2009) "Los Niveles Socioeconómicos y la distribución del gasto" ("Socioeconomic Levels and Distribution of Expenses"), Social Research Institute, November 2009, available at http://www.amai.org/NSE/NivelSocioeconomicoAMAI.pdf.
Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Graph 59
Financial Inclusion by type of product



Notes:
Deposit Products: Savings accounts, Checking accounts, Debit or Payroll Card, Investment/promissory note/mutual funds
Investment Products: Personal or Payroll Credit, Credit Card, Mortgage Loan, Auto loan, Department Store Cards.
Others: Afore, Insurance that you have contracted; Insurance that a third party contracted, Banking by Internet
Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Relative to other demographic characteristics, the Survey reveals that men tend to use financial services more than women, although the differences are not significant. Also, persons with higher educational levels tend to have more bank services coverage, as well as those who live along the northern border and in urban areas compared to those who live in the northern central part of the country and in rural areas. In turn, no marked differences are observed due to age (Chart 5).

Table 5
Use of financial services by sociodemographic characteristics (December 2011 data)

		Population Total (100%)	Banked population (58%)
Sex	Mael	48%	52%
	Female	52%	48%
Age	18 to 24	20%	19%
	25 to 34	24%	25%
	35 to 49	30%	30%
	50 or more	27%	26%
Schooling	Elementary School	17%	9%
	High school	35%	29%
	High school	32%	38%
	Bachelor or more	16%	23%
Region	North Border	17%	23%
	North Center	20%	14%
	Center	30%	32%
	South / Southeast	33%	31%
Stratus	Urban	77%	82%
	Rural	23%	18%

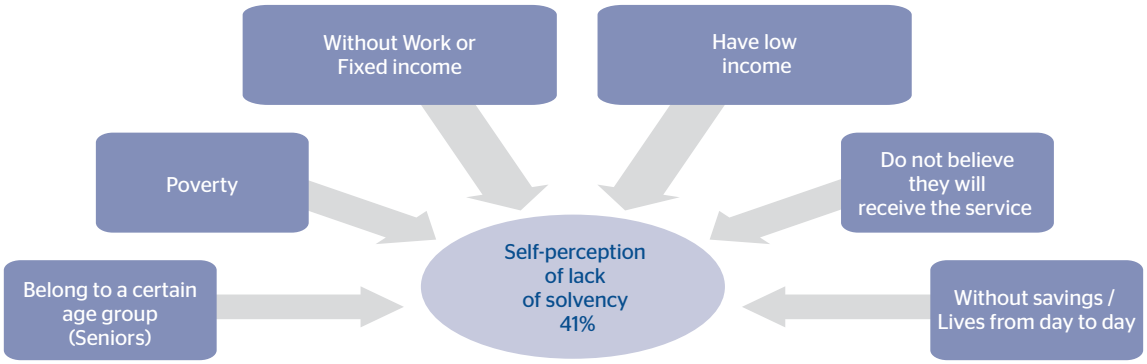
Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

The barriers to bank services coverage

The Survey asks about the reasons for not using bank services among the population who does not have bank services coverage (Graph 60). The main reason for not using a financial product or service is the self-perception of insolvency that the person interviewed infers from the requirements set by banks (41%). Secondly, it is the lack of interest or need (17%). The other reasons for not using financial services include high costs (8%), mistrust (8%) and lack of information (6%). On the other hand, the remaining 20% of the population with no bank services coverage (equivalent to 8% of the total population) does show an interest in having some product or services from the banks. Such an interest is greater among young people between 18 and 24 years of age (Graph 61).

Graph 60

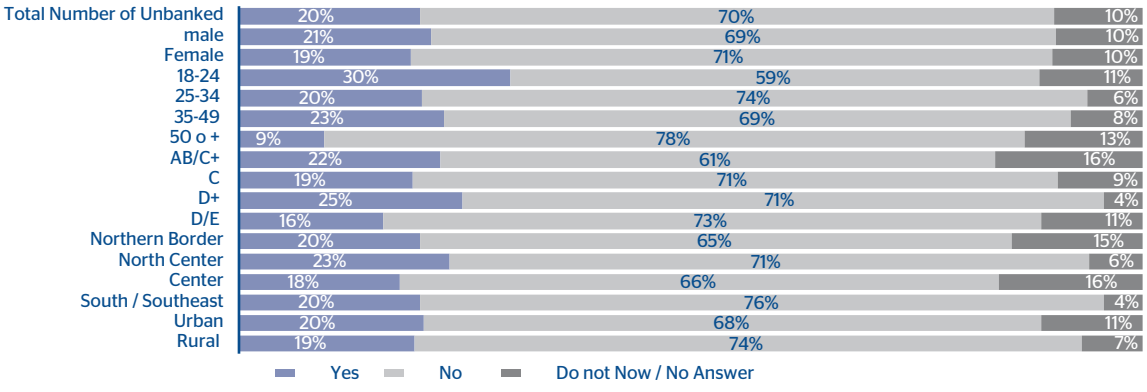
Reasons for not using financial services (December 2011 data)



Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Graph 61

Interest in bank services coverage (December 2011 data)



Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

So as to know more about the reasons why persons choose to use bank services, the Survey also reports an Index of Banking-Society Affinity (Index), which measures the perception regarding the operations, confidence, credibility and certainty that are derived from the actions, messages and discourse of the banksa.[7]

The comparison among the three surveys conducted shows that the value of the Index has increased with the passing of time. On the other hand, the degree of affinity varies according to the different socio-demographic characteristics. The group with the highest socioeconomic level (ABC+) stands out as the one that shows the most affinity with the banks. Also, men show a greater affinity with the banks than women, and young people between the ages of 18 and 24 also have a greater affinity than adults older than 50 years of age. To summarize, this indicator shows that banks face a great challenge to improve affinity with women, adults and low-income strata be they or not clients of the banks.

[7] The technical details regarding the structuring of the Index of Banking-Society Affinity can be consulted at BBVA Bancomer and GAUSSC (2012).

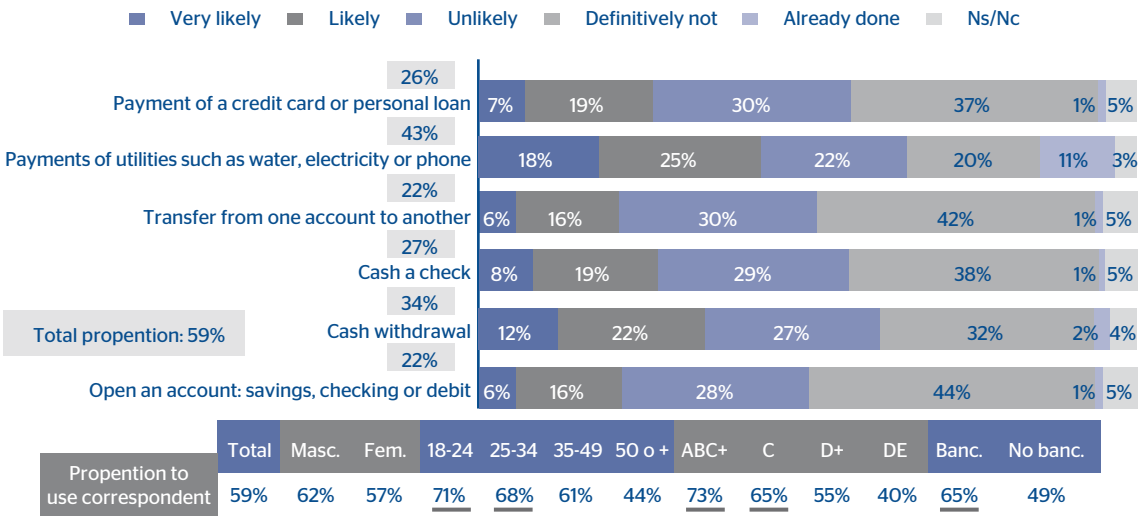
Use of New Platforms

The 2011 Survey included a section that inquires about the use of non-bank correspondents and mobile phones in order to carry out financial operations. The results indicate that use of these new platforms is still very low among the population. For example, 11% of the population reports using non-bank correspondents for the payment of services and 2% of the population reports using mobile phones to consult their balance without necessarily carrying out a banking transaction. Notwithstanding the above, the potential for these means is high: 59% of those surveyed showed an interest in using a non-bank correspondent and 46% the mobile phone (Graphs 62 and 63).

Graph 62

Use of non-bank correspondents (December 2011 data)

Banking Correspondent: In your case, How likely is that in the future you..... in places like these?

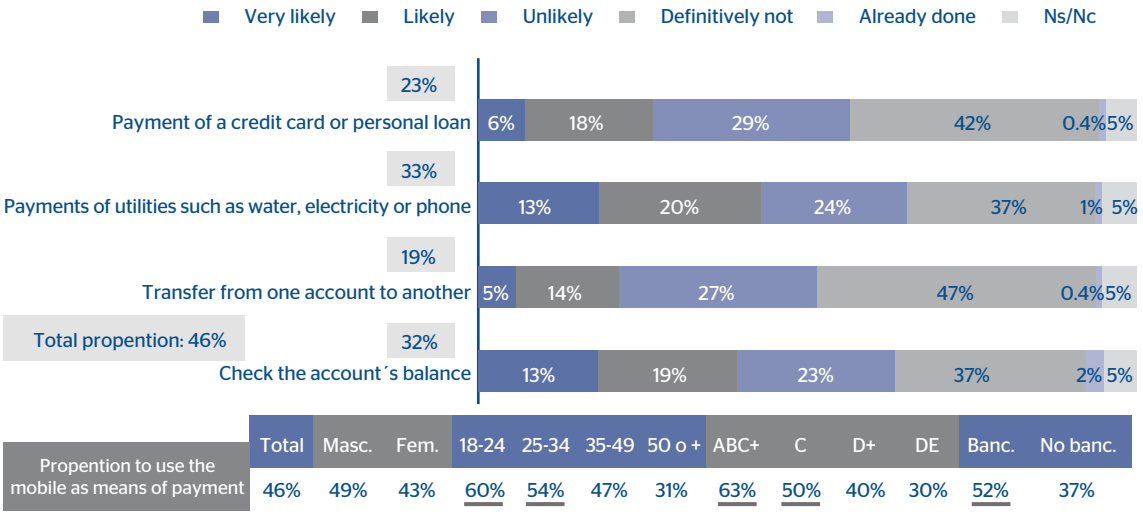


Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

Graph 63

Use of operations by means of the cellular phone (December 2011 data)

Mobile phone: In case you could..... using your mobile phone, how likely is for you to do it?



Source: Figure taken from BBVA Bancomer and GAUSSC (2012).

A greater propensity for the use of both means can be observed among the groups of young people and high and medium socioeconomic levels. However, those groups traditionally without bank services coverage and with a lower affinity toward using banks show high propensity levels for the use of these means; among women: 57% show a propensity for use of non-bank correspondents and 43% for use of mobile phones. Among older adults, 44% and 31%, respectively, and among the low socioeconomic levels, the propensities are 40% and 30% for each means. The above suggests that these platforms have an important potential for bringing the less-attended groups closer and helping to counteract the barriers for linking them with the banks.

Assessment: through periodic surveys, it is possible to measure financial inclusion in various dimensions

Surveys are a powerful and useful instrument that allows measuring the current situation, the rise in the use of financial instruments and services and the evolution of FI. If they are well designed, they can contribute a wealth of information about the characteristics of the population according to the use pattern of financial services and instruments. If, in addition, the surveys are conducted periodically, they can contribute information about the penetration patterns of the various products or institutions. The BBVA Bancomer and GAUSSC Survey seeks to delve deeply in the knowledge of this important topic by carrying out periodic surveys. The above, with the aim of constructively contribute both to measuring financial inclusion and to a better design of public policy and products to increase it. Comments and suggestions on how to improve FI are welcome.

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3.d Penetration of Credit in Mexico: Evolution and Comparison with Some Latin American Countries

Introduction

Bank services coverage ("bancarization") can be defined as the establishment of stable and ample relations among the financial institutions and their users regarding a series of available financial services.[1] The measurement of bank services coverage can be done in the following three dimensions: i) depth, of which the common way of doing it is to consider the proportion of credit in relation to GDP, which can also be referred to as credit penetration in a country's economy; ii) inclusion, which is considered in terms of the population segments that are served by the banks and their geographic range, which can also be interpreted as coverage of services; and, iii) intensity: of the use of the various bank instruments or products.

In this section of ***Mexico Banking Outlook*** the measurement of banks services coverage in Mexico is approached from the perspective of its depth, measured as the ratio of credit to GDP in recent years. It should be mentioned that, since 1995, this ratio was reduced as a result of the economic and banking crisis of that year. Because of this, the importance of certain non-bank credit and financing items is also considered, excluding financing by suppliers. When incorporating certain items of non-bank financing it is intended to have a broader definition of credit penetration in the country, which considers non-bank financing sources that have been institutionalized and which, in an integral manner, represent the existing financing sources. This ratio best reflects the credit and financing used in the country, for this reason it is more appropriate to use when comparing credit penetration in Mexico with other economies. This last point is important because some non-bank financing sources in the country besides being relevant, are already fully institutionalized. This is the case of housing credit through public housing institutes, such as Infonavit and Fovissste, of financing to companies from banks abroad and of financing from local financial markets.

3.d.1 Evolution of credit and financing to the private sector

Banco de Mexico (Banxico, the central bank) quarterly statistics of total credit and financing granted to the private sector has two components: bank and non-bank. These data indicate that after 1994, total credit and financing to the private sector as a proportion of GDP was reduced, and it was until 2006 that this proportion once again increased. Bank credit to the private sector lost the greatest percentage share of GDP in those years, but since 2006, it has shown the greatest recovery (Chart 6).

There are several reasons that explain the lower penetration of bank credit to the private sector until 2006. Some of the main causes that explain this evolution are the following:

i) **Deterioration of the macroeconomic environment in 1995.** That year GDP contracted 6.2%, inflation was once again of two digits (from 7.1% in December 1994, it rose to 52% at the end of 1995), and reference interest rates quickly rose (in December 1994 the 28-day Cetes rate was 18.5%, whereas in April of 1995, it was 74.8%). Moreover, from December 1994 to December 1995 the real average wage of workers affiliated to the Mexican Social Security Institute (IMSS, by its Spanish acronym), was reduced 22% and the total number of workers affiliated to the IMSS fell 6.5%.

[1] Morales, L. and A. Yañez, "La bancarización en Chile: concepto y medición" ("Bank services coverage in Chile, concept and measurement"), Superintendence of Banks and Financial Institutions of Chile, April 2006.

ii) **Long run effect of the 1995 crisis and its effects on payment capacity.** The 1995 crisis affected banking and credit activity for several years, with the inflation rate returning to one digit until April 2000, and until June 2001 the 28-day Cetes interest rate was again one digit. This adverse long-lasting effect on inflation and on interest rates was not favorable for credit activity since it affected the payment capacity of families and companies, and also inhibited the granting of new credit.

iii) **Lack of a strong regulatory framework for banking activity up to 1995.** The 1995 bank crisis quickly increased delinquent payments, undercapitalizing various banking institutions, reflecting a deficient regulatory framework for banking and credit activity (in the following paragraphs reference is made to the manner in which banking and its regulatory framework was strengthened).

iv) **Emergence and expansion of non-bank financing.** To a certain extent, the 1995 banking crisis gave rise to some non-bank financial intermediaries, which gained importance (mortgage and automobile credit Sofoles), at the same time that government housing institutes (Infonavit and Foivissste) increased their credit activity and new financing instruments that compete with bank credit appeared, such as private debt (stock certificates are one of the new financing instruments). Transforming the debt balance into another more liquid instrument (securitization of bank housing loans) also had an effect on the penetration of bank credit.

Table 6

Mexico: credit and financing to the private and public sectors as a percentage of GDP (%)

	1994	2000	2005	2007	2009	2011	Increase 2011 - 2005
A: Credit and Financing to the Private Sector *							
I. Total Domestic Banking to the Private Sector	35.2	12.0	9.8	13.3	14.3	15.2	5.4
I.1 Commercial Banks	32.4	11.0	9.3	12.9	13.6	14.3	5.0
I.2 Development Banks	2.8	1.0	0.5	0.4	0.7	1.0	0.4
II. Non-Bank Entities of the Private Sector (NBEPS or ENBSP in Spanish)	2.2	3.5	5.2	5.8	6.6	6.4	1.3
III.1 Infonavit	2.2	3.5	5.2	4.7	5.4	5.4	0.3
III. 2 Fovissste	-	-	-	1.1	1.3	1.0	1.0
III. Foreign Banking							
III Bank Loans and Other Direct Credit	4.4	5.1	3.9	4.3	4.7	4.0	0.1
IV. Non-Bank Financial Intermediaries in the Country (NBFI or IFNB in Spanish)							
IV. NBFI (IFNB): Factoring, Leasing Companies, Credit Unions, Sofoles, Other NBFI (Non-Bank Financial Intermediaries)	4.0	1.5	2.8	2.1	1.4	1.4	-1.3
V. Securitized Loan Portfolio							
V. Securitization of Housing Loans of Infonavit, Fovissste, banks and Sofoles	-	-	0.1	0.6	1.2	1.4	1.3
VI. Debt Issues by Private Companies	5.0	4.4	4.0	3.7	4.4	5.8	1.8
VI.1 Debt Issued Abroad	3.7	3.1	2.2	2.2	2.4	3.7	1.5
VI.2 Debt issued in the domestic market by companies listed on the Mexican Stock Exchange (BMV)	1.3	1.3	1.7	1.6	2.0	2.0	0.3
Total Amount to the Private Sector = I + II + III + IV + V + VI	**50.7**	**26.4**	**25.8**	**29.9**	**32.7**	**34.3**	**8.5**
B. Credit and Financing to the Public Sector							
VII. Bank Credit to the Public Sector: Commercial Banks & Development Banks	nd	5.0	3.8	2.7	3.2	3.2	-0.5
I.1 Credit of the commercial banks *	nd	3.4	2.3	1.5	2.3	2.4	0.0
I.2 Credit of the development banks or public banks *	nd	1.6	1.4	1.1	1.0	0.9	-0.6
VIII. Debt issue (bonds) by the public sector on the financial market in the country	nd	13.0	23.9	26.3	31.4	34.2	10.3
IX. Debt issue (bonds) by the public sector on the international financial market	nd	4.2	5.2	3.4	3.8	4.0	-1.2
X. Bank credit granted to the public sector by international banks	nd	4.5	2.7	1.3	3.9	4.4	1.8
Total Amount to the Public Sector = VII + VIII + IX + X	**37.8**	**26.7**	**35.5**	**33.7**	**42.4**	**45.9**	**10.4**
Total Amount to the Private Sector + the Public Sector = A + B	**88.5**	**53.1**	**61.3**	**63.6**	**75.0**	**80.2**	**18.9**

* Includes credit granted to the Federal Government, to States and Municipalities and public sector entities.
Source: Banco de Mexico (Banxico, the central bank) for Items I, II, III, IV t VI; the Federal Mortgage Association, (SHF), Infonavit and Fovissste for Item V;. the National Banking and Securities Commission (CNBV) for Items from VII to X from 2000 to 2011. For Items VII to X of 1994, the source is the Finance Ministry.(SHCP).

So as to bolster, on one hand, the capitalization of the banking institutions and, on the other, to boost the reactivation and expansion of credit in general and of the banking sector in particular, various aspects of the banking legal and regulatory framework were modified and improved. Among the initially undertaken measures, the following are of note: improvement of the accounting framework for banking activity so as to bring it more in line with international standards; the establishment of stricter capitalization and evaluation of bank loan portfolio rules; the creation of credit information associations (credit bureaus). In a later stage, the total opening to foreign investment was allowed in the banking sector; deposit insurance was delimited; early warning mechanisms on the banking capitalization index were established; use of tools to measure client credit risk was introduced and protection of creditor rights was improved (Guarantees Miscellany Law and Bankruptcy Law).

Thanks to the referred improvements to the regulatory framework for banking and credit activity, and also to the recovery of economic activity and price stability, bank credit once again grew and increased its relative importance within the economy. Another important aspect that has accompanied the reactivation of bank credit is the financial strength of the institutions and the important capitalization process that the banks have undertaken. This can be observed both in the increase of its net worth or by the increase of its capitalization index (CAPI) (or by the capital that complies with certain rules and is used in the computing of the bank capitalization index). For example, in December 2000 the capitalization index of the banking system was 13.8% and in June 2012 it rose to 15.95%. This index is greater than the 10% minimum required and will allow the country to be among the first to adopt the Basel III guidelines and regulations.

Moreover, the current dynamic of the financial market makes the main sources of credit and financing of families and companies to now be: i) bank credit; ii) credit granted by public housing institutes; iii) credit to companies from foreign banks residing abroad; iv) credit granted by local non-bank financial intermediaries (regulated and unregulated Sofoles and Sofomes); v) securitization of mortgage loans; and, vi) debt issued by private companies in local and international financial markets. Thus, for example, in 2011, the percentage of bank credit in relation to GDP was 15.2%, while financing by the non-bank components rose to 19.1%. The sum of its two components makes the ratio of total credit and financing to the private sector in 2011 to be at 34.3% of GDP.

3.d.2 Importance and implications of credit and financing to the public sector

Another important credit and financing item that banking institutions and local and international financial markets grant is that destined to the public sector (Federal Government, States and Municipalities and public sector agencies). The greater the percentage of resources that are destined for the public sector in relation to GDP, that financing acquires greater importance in itself (Chart 6). This is because public sector liabilities have implications in terms of public spending and of the debt service that it implies. Also, under certain circumstances, it can inhibit the expansion of credit and financing to the private sector to the extent that both sectors compete for the same savings pool.

In the case of Mexico, the inclusion of public sector debt indicates that the country's total indebtedness ratio (debt of the public and private sectors) is high, and in 2011| it was 80.2%. That is, to the ratio of 34.3% of credit and financing to the private sector of that year the 45.9% that corresponds to that of the public sector must be added, In addition to the fact that the greater part of the debt has been placed on the local financial market.

3.d.3 Comparison of the penetration of credit and financing with other Latin American countries

To illustrate the importance of the inclusion of credit and financing that is granted to the public sector, an exercise of comparison was carried out on credit and financing in Mexico with other Latin American countries for 2011 (Chart 7). This exercise considered the credit and financing that both the private and public sectors received In Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.[2]

If only the penetration of credit and financing that has been granted to the private sector is considered, it turns out that the credit penetration of Mexico is much lower than that of Chile and, to a lesser degree, than that of Brazil, Colombia and Peru. That is, Mexico, given this indicator, has, in principle, an important distance to advance in the coming years in terms of the rise in its penetration of credit and financing to the private sector. The above will be possible provided that an environment of sustained GDP growth and price stability exists. To this, it is necessary to add that the expansion of credit must be carried out prudently, maintaining risk delimited so that it will be lasting.

Table 7

Credit and financing to the private and public sectors in Mexico and in some Latin American countries as a percentage of GDP in 2011 (%)

	Argentina	Peru	Venezuela	Mexico	Colombia	Chile	Brazil
A. Credit and Financing to the Private Sector *							
I. Total domestic Bank Credit to the Private Sector	14.0	27.0	20.3	15.2	32.0	73.1	52.3
I.1 Commercial Banks	14.0	26.4	20.2	14.3	30.9	73.1	25.3
I.2 Development Banks	0.0	0.6	0.1	3.6	1.0	-	27.0
II. Non-Bank Entities of the Public Sector NBEPS)	0.0	-	0.2	6.4	0.8	-	-
III. Foreign Bank credit	3.5	-	-	4.0	-	-	8.0
IV. Non-Bank Financial Intermediaries in the Country (NBFI)	0.5	4.8	0.1	1.4	4.6	5.7	1.3
V. Securitized Loan Portfolio	0.0	-	-	1.4	1.0		-
VI. Debt Issues by Private Companies	3.3	9.3	0.1	5.8	10.7	14.5	1.6
VI.1 Debt Issued Abroad	1.4	6.4	-	3.7	7.3	-	1.1
VI.2 Debt Issued by Companies on the Domestic Market	1.9	2.9	0.1	2.0	3.4	14.5	0.5
Total Amount to the Private Sector = I + II + III + IV + V + VI	**21.3**	**41.2**	**20.7**	**34.3**	**49.1**	**93.3**	**63.2**
B. Credit and Financing to the Public Sector							
VII. Bank Credit to the Public Sector: Commercial Banks and Development Banks	1.4	2.0		3.2	7.8	0.3	2.0
I.1 Credit of the commercial banks *				2.4	5.8		0.1
I.2 Credit of the development banks or public banks *				0.9	2.0		1.9
VIII. Debt issues (bonds) of the public sector on the financial market in the country.	27.1	8.1		34.2	25.6	27.2	60.6
IX. Debt issues (bonds) of the public sector on the international financial market	0	5.2		4.0	5.8	1.8	1.5
X. Bank credit granted to the public sector by the international banks.	4.1	6.0		4.4	6.4		1.0
Total Amount to the Public Sector= VII + VIII + IX + X	**32.5**	**21.2**	**45.5**	**45.9**	**45.6**	**29.3**	**65.0**
Total Amount to the Private Sector + Public Sector = A + B	**53.8**	**62.4**	**66.2**	**80.2**	**94.7**	**122.6**	**128.3**

Source: Chart 6 in the case of Mexico. For the other countries it is BBVa Research of the countries indicated except for the case of the external debt of Venezuela, since that datum comes from the IMF.

[2] Chart 7 was structured thanks to the collaboration in contributing information by the following units of BBVA Research: Maria Gonzalez and Gloria Sorensen, BBVA Research Argentina; Enestor Dos Santos, BBVA Research Emerging Markets; Alejandro Puente and Karla Flores, BBVA Research Chile; Juana Téllez and Julio Suarez, BBVA Research Colombia; Stephen Schwartz, BBVA Research Hong Kong; Isaac Foinquinos and Hugo Perea, BBVA Research Peru; Canan Pelin Durtas, BBVA Research Turkey; Hakan Denis and Nathaniel Karp, BBVA Researh United States; Frank Gomez and Oswaldo Lopez, BBVA Research Venezuela.

On the other hand, if reference is made to the penetration of total credit (public sector plus private sector), then there is a change In the situation in Mexico. Now, that ratio is more than doubled, because that percentage increased substantially, from 34.3% in the case of considering only credit and financing to the private sector to 80.2% now that reference is made to the penetration of total credit and financing. It should be mentioned that in this last case the gap that Mexico presents in this indicator with other countries is closed significantly,, as is the case with Chile, and surpasses Argentina, Peru and Venezuela in penetration. Given the stable amount of savings, there Is the possibility that the financing requirements of the public sector limit growth of financing to the private sector.

Evaluation

The current penetration of bank credit to the private sector is due to the macroeconomic and institutional factors that prevailed after the 1995 banking crisis. To the extent that the macroeconomic environment of the country improved and a better legal framework was implemented for credit activity, it responded positively and its proportion in relation to GDP has increased. Also, the penetration of bank credit in the country will continue to increase because its pillars are solid; that is, the financial situation of the banks is solid and its capitalization index is high; there is efficient supervision and an adequate regulatory framework. These factors are supported by a favorable economic environment and of price stability, which allows bank credit to flow with delimited risks.

On the other hand, the analysis of the subject of banking penetration must take into consideration that in Mexico, as in other Latin American countries, there are important non-bank financing sources that have been institutionalized, and also that they eventually compete with or complement bank credit. Based on this consideration, the penetration of credit and financing in the country is substantially greater if we consider credit from non-bank sources that the private sector has received from the public housing institutes and from debt issues of companies, excluding financing by suppliers. Similarly, the penetration of credit in the economy increases its absolute and relative importance if in addition to the credit and financing that is granted to the private sector, that channeled to the public sector is also included. In this case, credit penetration is much greater.

To the points in the previous paragraph It must be added that in Mexico there are numerous non-bank financial intermediaries that are not regulated and that are not obliged to provide information on the amount of credit that they have granted, such as the case of the non-regulated Sofome.[3] To the extent in which this situation is corrected in the future, there will be more elements for determining with greater accuracy the penetration of credit and financing in the country.

To the extent in which the total penetration of credit and financing in Mexico is considered and it is compared with the same indicators of other Latin American countries, then the the gap of Mexico with those economies is reduced. In this sense, as long as an environment of economic growth and of price stability prevails, and these factors are supported by the prudent expansion of credit tp the private sector based on the correct measurement of its risk, there will be assurance that the relative and absolute importance of credit in the economic activity of the country will continue to grow.

[3] According to the Banco de Mexico Report on the Financial System of Septembre 2012 , in Mexico, there are 3,763 multiple purpose financial institutions (Sofomes) that re not regulated..

Box 2: The Recent Expansion of Public Sector Banks in Brazil: Some Issues to Consider for Mexico [1]

As described in the November 2011 edition of ***Mexico Banking Outlook*** and in this current issue as well (see Section 3.a: "Use of credit in the different productive sectors: what does the 2009 Economic Census 2009 tell us?"), credit to companies by the private banks reflects, above all, considerations regarding companies' payment capacity and their investment projects, measured by their size, the value of their assets and revenue, among other variables. This results in a distribution of credit by company size and sector of economic activity, which might not coincide with an optimal allocation of financing from the point of view of cost and social benefit. As we know, this disparity between private and social costs, in turn, leads to government intervention in markets. This government intervention in the banking system can assume different forms of regulation or funding through development banks. Given the importance of this matter for Mexico, this article will briefly describe the recent expansion of government banks in Brazil, a country that has become an important reference point in discussions on this issue.

The history of Brazilian public banks and the country's financial system is intrinsically related. In 1808, the year of the arrival of the Portuguese colonists in Brazil, King D. Joao VI created the country's first bank, the Banco do Brasil. Although the bank's equity was initially privately owned, since its inception its operations and functioning were influenced by the needs of the public sector. Also under the direct influence of government (federal and regional), there were, from their establishment, the savings and loan associations, known as caixas, and the development banks. The caixas were formally organized in 1860 and had a more social and political rather than economic focus. The development banks emerged as public instruments to promote national economic progress in the mid-20th century, with the leading role played by the Banco Nacional de Desenvolvimiento Economico e Social (BNDES).[2] Therefore, for quite some time now, the public banking system, comprised of commercial and development banks, has played an extremely important role within the Brazilian financial system.

More recently, in the late 1980s, public bank credit accounted for about 70% of total financing in Brazil. To some extent, the expansion of public financing was related to the intention to promote the country's development through, for example, the supply of credit to strategic sectors, such as real estate (traditionally financed by the Caixa Económica Federal), agriculture (strongly supported by the Banco do Brasil) and the capital goods sector (with resources from BNDES). However, the excessive growth of public credit was linked to a chaotic macroeconomic environment, characterized by—among other factors—hyperinflation and fiscal imbalances, and by a series of inappropriate incentives that, for example, allowed for the political use of public banks.

Since the end of the 1980s, public credit as a percentage of total financing decreased significantly, especially following the successful attempts to control and reduce inflation and the country's fiscal problems. From that point on, given an improved macroeconomic environment, authorities began to implement a series of more appropriate incentives for the better functioning of the financial system. During this time, some public banks began to be privatized. The percentage share of public credit declined to 34% in 2001 and remained practically stable until 2008, when the crisis spurred by the collapse of Lehman Brothers severely affected the country. At this point, private credit slowed as a result of greater risk aversion, liquidity problems, and a significant weakening of the growth outlook, which, in turn, was reflected in lower demand for resources. In sharp contrast, public credit posted major growth from late 2008 onward.

Public credit expanded at a faster pace than commercial bank financing after the economy began to recover from the international crisis, and even after the appearance of signs of an overheating of the economy in 2010. During this time, the market share represented by public banks grew significantly and reached 44% of total loans at the end of 2011, almost 10 basis points higher than the percentage posted in mid-2008 (Graph 69).

The expansion of public banks was generalized. Not only was this related to the expansion of the BNDES, but was also tied to the dynamic growth of public commercial banks.

In the four years between December 2007 and December 2011, credit granted by publicly owned commercial banks increased 199%, while BNDES loans rose 178%. This compares

[1] Section prepared by Enestor Dos Santos, Senior Economist, South America Analysis Unit, BBVA Research.
[2] See Costa Neto (2004).

with the 109% and 69% growth, respectively, of total credits granted by national and foreign private banks.

Among the public commercial banks, credits from Banco do Brasil (BB) and Caixa Económica Federal (CEF), which together account for 96% of public bank assets, grew 152% and 347%, respectively.

The tremendous expansion of the public banking system is also evident when we consider other measurement standards, such as total assets and capital. In the past four years, total government-owned commercial bank assets increased 116% in nominal terms, and in the case of the BNDES, 204%. The expansion of private domestic and foreign banks was not as dynamic, with 96% and 51% growth in assets, respectively. While, on the one hand, the capital of the government-owned commercial banks increased by 96% between 2007 and 2011 (144% in the case of the BNDES), on the other, that of private domestic and foreign banks grew 69% and 112%, respectively, in the same period.

Although the increase in capital and assets in the public banking system was also very important in recent years, the growth was not as much as the expansion of public credit. This suggests that the balance sheets of the public banks weakened compared with those of the private banks. The "not so strong" increase in deposits in public banks suggests that a similar phenomenon occurred, at least in comparison with private domestic banks.

In December 2011, the Basel capital adequacy ratio for BB, CEF, and BNDES was 14.5%, 13.3%, and 21.5%, significantly higher than the minimum level demanded by the national regulatory authority (11.0%), as well as the levels required internationally. However, these levels are lower than those of four years ago and below those maintained by foreign and domestic private banks.

An analysis of other basic financial ratios, such as credit/assets, credit/capital, and credit/deposits, reinforces the argument that, in general, the situation of the public banking system is not as strong as in 2007, or as solid as that of private banks (see graphs 66, 67, 68, and 69). This is a direct result of a very significant growth in public credit in the past few years. In other words, the growth in public credit provided the public banks with an increased market share, but also exposed them to greater risks as a result of lower capitalization and higher leverage.

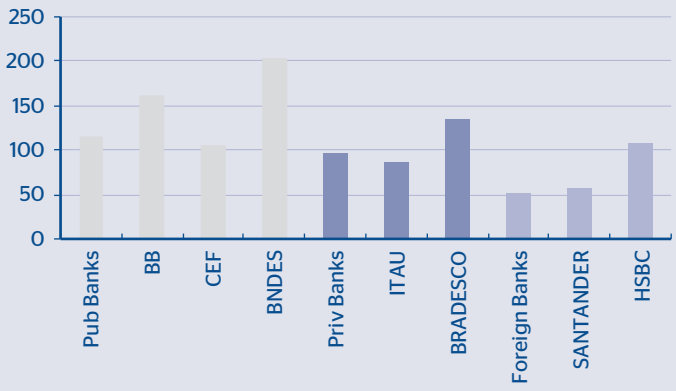
These facts do not imply that the situation of the public banks is fragile. The public banks' balance sheets remain healthy and, indeed, to a much greater extent than was the case a few decades ago. In some respects, their financial situation is better than that of private banks, with their loan delinquency index, for example, at 2.1% compared to 5.0% for the national private banks, and 5.4% for foreign private banks, at the end of 2011.

However, the previously described weakening suggests that problems could occur in the medium to long term if the public banks continue to grow at the same pace as in the past few years, especially if they are used politically to address macroeconomic distortions and in a phase of slower growth.

Graph 64
Public Credit (% of total credit)

Source: Banco Central do Brasil.

Graph 65
Evolution of credit by financial institution between 2007 and 2011 * (% change in the period)



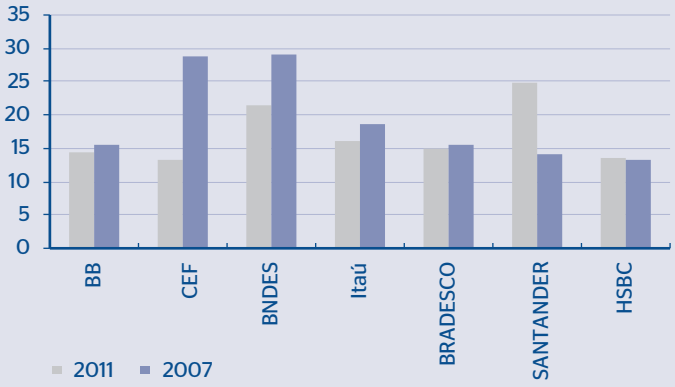
* Public banks: BB, CEF, and BNDES. National private banks: Itaú and Bradesco; Foreign private banks: Santander and HSBC.
Source: Banco Central do Brasil.

The decision to promote public credit after the country was negatively affected by the global turbulences of 2008 was one of the main anti-cyclical measures that enabled Brazil to reduce the repercussions of the global crisis and begin a strong economic recovery in 2009. Despite the positive support that public credit provides to the economy, the political use of the public banks to revive growth raised concerns over the long-term situation of the public banking system and, therefore, the banking system as a whole.

These concerns were reinforced by i) the fact that public credit continued to post very strong growth even after signs of overheating were observed in 2010, ii) the continued use of treasury resources (i.e., through subsidies) to capitalize the BNDES; 235 billion reales (R$), equivalent to 6.5% of GDP between 2009 and 2011, and 45 billion reales (1.0% of GDP) in 2012 and, especially, iii) the recent announcement that the two most important public commercial banks (Banco do Brasil and Caixa Económica Federal) will reduce their interest rates, which will force a reduction in the spread between other bank interest rates in Brazil.

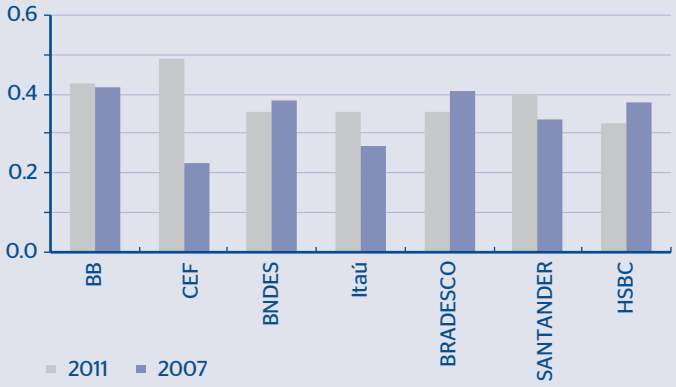
The use of public credit to underpin the economy and the public financial institutions to force a reduction in interest ra-

Graph 66
Basel Capital Adequacy Ratio*



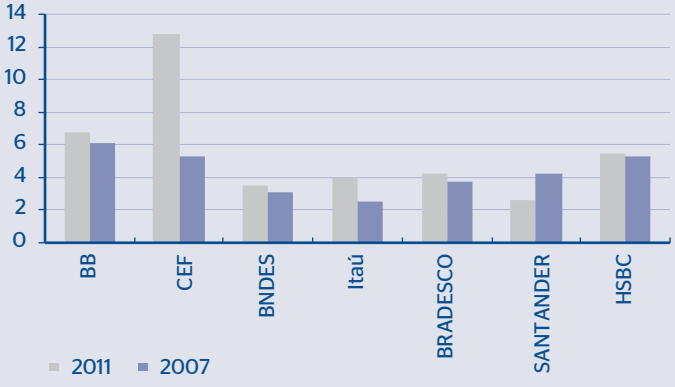
* Public banks: BB, CEF, and BNDES. National private banks: Itaú and Bradesco; Foreign private banks: Santander and HSBC.
Source: Banco Central do Brasil.

Graph 67
Credits/Assets Ratio*



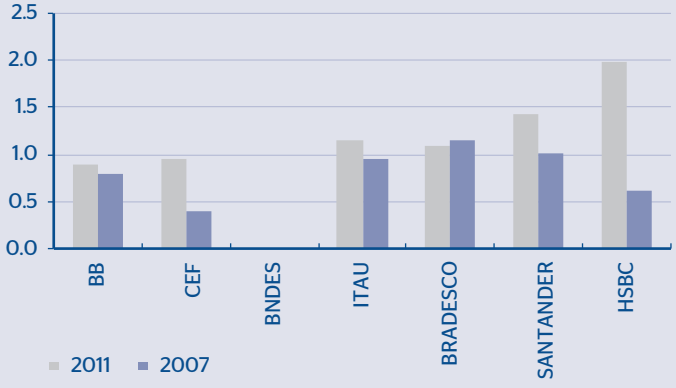
* Public banks: BB, CEF, and BNDES. National private banks: Itaú and Bradesco; Foreign private banks: Santander and HSBC.
Source: Banco Central do Brasil.

Graph 68
Credit/Capital Ratio*



* Public banks: BB, CEF, and BNDES. National private banks: Itaú and Bradesco; Foreign private banks: Santander and HSBC.
Source: Banco Central do Brasil

Graph 69
Credit/Deposits Ratio */**



* Public banks: BB, CEF, and BNDES. National private banks: Itaú and Bradesco; Foreign private banks: Santander and HSBC.
** The BNDES was not included in the analysis, since it does not have either demand or time deposits. Source: Banco Central do Brasil.

tes in the economy, suggests that the public financial institutions will probably continue to expand at a faster pace than the private banks. Therefore, it cannot be ruled out that in the near future the public banks will represent more than half of the Brazilian credit market, a situation that resembles that of a few decades ago.

As previously mentioned, the excessive expansion of the public banking system involves risks, especially if it is due to political rather than economic incentives. In addition to leading to a weakening in the public banks' balance sheets and exposing them (and, in the process, the entire system) to a possible economic slowdown, the continued growth of the public banking system could fuel concerns over the creation of a credit bubble in the country. It could also reduce the margin for the central bank to lower SELIC interest rates to international levels, which is, paradoxically, one of the current government's main objectives.

Evaluation: Some thoughts for Mexico on the experience of the public banking system in Brazil

The existence of public sector financial institutions creates, as the Brazilian case illustrates, the possibility of deepening the bancarization process in Mexico. Specifically, it allows for a greater range of financial services, or a reduction in their costs, to be made available to segments of the population, in which the benefit to society is considered particularly high (i.e., small and medium size companies, agriculture, and infrastructure). Public credit also represents a counter-cyclical alternative of economic policy, which can be especially positive in periods and places in which there is not enough maneuvering room for the adoption of other fiscal stimuli and/or monetary policies.

The benefits do not come, however, without a high cost. The growth in public credit can inhibit private financing. The Brazilian case illustrates this point very well. There is an important and very current debate underway on whether the long-term credit offered by the BNDES has enabled the flow of financial resources to segments of the population that were not attended to by the private sector financial institutions or whether it was the strong presence of the BNDES, spurred by a particularly high tax burden, which did not allow for the expansion of private credit. But probably more important than this is the risk that an important part of the financial system could continue to respond to political rather than economic incentives. The Brazilian experience in the 1980s and 1990s shows that the costs associated with this type of distortion can be very high, both in terms of financial as well as economic stability. The Mexican authorities–as well as their Brazilian counterparts–should take these points under consideration before promoting the expansion of the public banking system.

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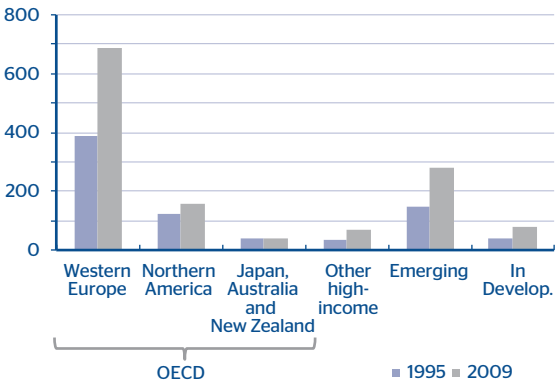
3.e The Good Old Days of Foreign Entry to the Mexican Banking System: Review of the Winning Investigation of the 2012 Manuel Espinosa Yglesias Award

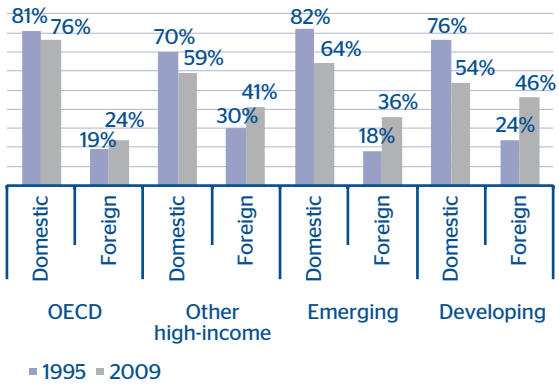
The presence of foreign banks has risen significantly in the emerging countries on their way to development in recent years (Graph 70) Currently, also, there are more foreign banks originating from developed countries than from emerging or developing countries operating in the world (Graph 71). These trends in the expansion of the global banks have given rise to numerous studies regarding the importance of this phenomenon and its repercussions on the well-being of the persons in the host countries of the global banks, which have been carried out in various international financial institutions, central banks and prestigious universities, among others.[1] Also, as has been briefly explained in the previous issue of ***Mexico Banking Outlook***, June 2012, the 2008 global financial crisis has also contributed to fuel the analysis and debate regarding the participation of global banks in the host countries and the design of the most appropriate rules so that the international financial system operates in a more stable and efficient manner.

Graph 70
Number of foreign banks by country of origin



Source: BBVA Research with information from: "Foreign Banks: Trends, Impact and Financial Stability", Claessens, S. and van Horen N., IMF WP/12/10, January 2012. Uses a sample of the 1995-2009 period, with 137 countries and 5,377 active banks. A bank is classified as foreign if 51% or more of its shareholders are of a different nationality to that of the country in which that institution operates.

Graph 71
Distribution of banks by receiving country (% of the Total number of banks)



Source: BBVA Research with information from: "Foreign Banks: Trends, Impact and Financial Stability", Claessens, S. and van Horen N., IMF WP/12/10, January 2012. Uses a sample of the 1995-2009 period, with 137 countries and 5,377 active banks. A bank is classified as foreign if 51% or more of its shareholders are of a different nationality to that of the country in which that institution operates.

In a most timely manner, the topic of this year's summons for the 2012 Manuel Espinosa Yglesias Award (the MEY award), granted by the Espinosa Rugarcía Foundation and the Espinosa Yglesias Study Center (CEEY for Centro de Estudios Espinosa Yglesias) for research on banking topics was "The transformation of the Mexican banking system as a result of the financial crisis of the nineties and the sale to foreign capital". The jury called upon to evaluate the competing research contestants, who are personalities in the academic and professional spheres selected by the CEEY and a representative of the CEEY, granted the first place of the 2012 MEY award to professors Stephen Haber (Political Science Department of Stanford University) and Aldo Musacchio (Harvard Business School).[2]

[1] Claessens and van Horen (2012) analyze with a new and broad data base the recent trends of the global banks and present an excellent.
[2] On the Internet websites of Professor Stephen Haber (https://iriss.stanford.edu/sshp/haber) and of Professor Aldo Musacchio (http://www.hbs.edu/faculty/Pages/profile.aspx?facId=296063) further details can be consulted regarding their respective formation and trajectory as well as other research of theirs on financial and banking subjects.

Because we consider that the Haber and Musacchio (HM) research contributes various important elements of analysis for understanding the current architecture of the Mexican financial system and of the challenges for conducting it more efficiently and accessible to families and companies, in this section of ***Mexico Banking Outlook*** is presented a summary of their work, which in a very provoking manner is entitled "These are the Good Old Days: Foreign Entry and the Mexican Banking System".

In order to analyze the decision to allow the entry of foreign banks in the Mexican banking system and its implications for social well-being, HM employ two different conceptual approaches. One of them is based on measuring the short-term impact on the abundance, price and stability of bank credit through models of reduced-form regression equations. The second is based on the analysis of the economic institutions affecting the performance of the banking sector and seeks to evaluate whether the entry of foreign banks produces changes in the economy policy of banking regulation that are difficult to revert, considering that such changes affect the competition and stability of the system in the long term.

The authors build a data base based on the statistical bulletins of the multiple-service banks of the CNBV with diverse financial performance indicators and track the changes in the ownership of banks and the entry of institutions in the 1997-2011 period to develop the first approach. For the second approach, the authors compare the incentives generated under the system of banks that allows foreign ownership with those that had existed in Mexico since the nineteen twenties until prior to such opening. Thus, the HM research combines analytical tools of financial economy, economic history and political science.

The rest of this review is divided into three sections. The following Section 3.e.1 briefly describes the institutional framework to organize the facts and the data so as to contract the stages of the Mexican banking system as per the "Game of Banking Negotiations" developed by Calomiris and Haber (2013), as well as some data of the banking system from 1930 to 1997. It is important to recognize that due to considerations of brevity, the description of the data of the banking system presented in this section does not do justice to the HM analysis on the economic history of the banking system in Mexico. Due to the above, it is recommended that the interested reader review the corresponding sections of the original research. In Section 3.e.2., the main results of the analysis described through econometric regressions of the impact of the ownership of the banks under the bank credit conditions during the 1997-2011 period. This description emphasizes the strategy of proposed estimate by the authors in order to identify the diverse impacts on the variables of interest, since it illustrates some of the difficulties that this type of analysis faces. Finally, Section 3.e.3. presents some conclusions and an evaluation of the implications of the HM analysis.

3.e.1 The game of banking negotiations by Calomiris and Haber

Based on the theory on banking systems and political institutions that Calomiris and Haber approach and delve into through the analysis that they call "The Game of Bank Bargains" (Game), these authors consider the incentives of the various participants who have a direct interest in the banking system (majority shareholders, minority shareholders, depositors, debtors and government) and the various ways in which these can negotiate among themselves under autocratic and democratic forms of government. [3] Then they use the logical conceptual framework in order to understand the variations in stability and levels of access among different societies.

The conceptual framework of Calomiris and Haber begins with the observation that behind any simple banking transaction (acquisition of deposits and capital that are then channeled to the borrowers) there is an underlying series of complex ownership rights. In the scheme of analysis, all the participants that have a direct interest may undertake actions for their own benefit; among which are taking control and possession of the assets of the other participants (expropriation, which is an extreme case). Within the context of the rights referred to, the participants of the coalition must create various mechanisms to protect their rights (for example, the capital of the minority shareholders, the deposits of the depositors

[3] It is important to comment to the reader that the analysis framework of Calomiris and Haber is more akin to the contributions by Robert W. Fogel and Douglass C. North, which apply economic theory and quantitative methods to economic history with the aim of explaining economic and institutional changes more than to the analysis of economic and/or political situations through game theory, to which authors like John C. Harsanyi, John F. Nash Jr., Reinhard Selten, Robert Aumann, Thomas Schelling, and Lloyd Shapley have contributed.

and the banks of the majority shareholders and bankers) and avoid that they be impaired or expropriated partially or totally by other participants (for example that through related loans or non-compliance of credit contracts by debtors, the capital of the shareholders and/or the deposits of the depositors are thereby reduced).

Despite the fact that a strong government is required to solve problems of fraud and non-compliance with contracts, which can affect the participants, Calomiris and Haber identify three reasons for which the government is not a disinterested and independent participant in the Game and, therefore, cannot offer efficient protection of participants´ rights. First, the group of individuals that influence the government can have pre-existing economic interests which, in turn, can depend on the manner in which they are structured and make them comply with the financial rights. Second, at the same time that the government is in charge of having credit agreements complied with by debtors, it may need political support from them. Third, the government, in addition to supervising, regulating and guaranteeing the compliance of bank contracts, also goes to the banks for financing. Thus various conflicts of interests are underlying in the banking system.[4]

For the researchers, the existence of conflicts of interest among banking system participants implies that there is no banking system that is completely private. On the other hand, all modern banking systems are the result of an association or coalition between the government and a group of bank investors. As a result, the banking regulation policies are not created to maximize social well-being, but they reflect the agreements that sustain the coalition among government, bankers and other groups that are crucial for the government. These agreements determine which laws are approved, which groups of persons have the faculties to enter into contracts with which agents, for what purposes and under what terms. This is the game to which Calomiris and Haber refer.

An idea that is derived from the Game is that its rules depend on the underlying political institutions in a society. For example, under an autocratic regime, the coalition between the government and the bankers will produce a banking system strongly deviated from any notion of allocative efficiency. In this case competition will be limited by the need to generate the necessary income to induce investments. The system will be small and inherently prone to crisis.[5] Another idea that is derived from the Game is that the security networks (limited responsibility of shareholders, generous insurance of banking deposits, fiscal support to banks with problems, etc.) may be used to convince the bankers and the minority shareholders to participate in the coalition.

In the opinion of HM, this Game has various useful implications to understand the evolution of the Mexican banking system. For example, the authors suggest that toward 1982, the government had carried out various actions that impaired the rights of bankers initially established in the banking legislation of 1924-25, since it was paying them each time lower interest rates for their deposits in the central bank, it had increased inflation and the development banks, instead of lending to small and medium companies of economic sectors with difficult access to the markets, were increasingly lending more funds to the medium and large companies that were traditional clients of the banks or dedicated the funds to repurchase the bank loans directed to specific government programs. This last gave the system artificial stability by not motivating an appropriate measurement of the risks neither among shareholders nor among depositors, but by transferring the credit risks directly to the taxpayers.

[4] Calomiris and Haber indicate that the situation described becomes even more complex because the government can carry out actions of various types to achieve its own objectives, which in turn affect different groups. For example, it can first ask the banks for loans and then monetize their bank debt by printing money. The government can also favor private debtor and depositor groups for political convenience through actions or mechanisms such as directing bank funds toward specific activities or granting excessively generous deposits insurance, respectively..
[5] Calomiris and Haber identify, in addition to México, other 21 countries with a propensity to suffering banking crises: Argentina, the Congo Democratic Republic, Chad, the Central African Republic, Cameroon, Guinea, Kenya, the Philippines, Nicaragua, Brazil, Bolivia, Costa Rica, Thailand, Ecuador, Colombia, Uruguay, Chile, Turkey, Spain, Sweden and the United States. They identify only seven countries, which are small islands, state cities or democracies with anti-populist constitutions, where bank credit is abundant and have never experienced a banking crisis: Singapore, Malta, Hong Kong, Cyprus, Australia, Canada and New Zealand.

Finally, the government broke the coalition in September 1982 through the expropriation of the banks which went hand in hand with the contraction of bank credit and the consolidation of the system into 18 banks.[6] Just nine years later, the government sought to sell those 18 banks to the private sector and to maximize their sale price in auction.[7] From the negotiation between the government and the bankers emerged a coalition that maximized the sale price of the banks and allowed the new investors to acquire banks exposing a quite reduced fraction of their own capital and established an unlimited deposits insurance.

HM indicate, in addition, that at that moment the government de facto was selling the rights to operate a market with a very reduced number of participating institutions. This arrangement allowed forming a new coalition of the government with the bankers, although in it, if something went bad, the bankers had very little to lose, while the government had a lot to lose. It should be added that the regulatory framework and its supervision then showed notable deficiencies and lags with regard to what the best international practice was. Thus, this coalition led to an incautious credit expansion between 1992 and 1995, which in turn, became an important element of the bank crisis of 1995 and 1996. Down deep, HM also suggest that the privatization created a banking system so fragile that it was leading to a crisis sooner of later, even in the absence of the "December error". Not only the fiscal cost of the banking rescue that provoked the failure of the coalition was high, In the order of 15% or 19% of GDP according to various measurements (see Murillo, 2005, or Laeven and Valencia, 2012). Also, the cost to the party in power of this failed coalition was very high, since it implied losing control of the Chamber of Deputies in the intermediate elections of 1997 and the presidential election of 2000.

When the government of President Ernesto Zedillo tried to form a new coalition after the banking rescue of 1995-96, he was more cautious in the selection of his partners. Instead of local private investors, he sought global banks which offered four advantages:

1) It was assured that they would recapitalize the banks with real and not fictitious capital contributions;

2) They were not owners of commercial non-financial companies that would induce them to grant related loans to save them during a crisis:

3) They could not rationally expect the government to rescue them in case of a crisis;

4) Their administrations could be leaning more toward behaving with rectitude before the regulators and shareholders of their countries of origin.

Another element that strengthened this coalition with the foreign bankers was the difficulty that the government would face to expropriate the foreign banks or affect their ownership rights as of the entry in force of the North American Free Trade Agreement (NAFTA). Said treaty prohibits the nationalization or direct or indirect expropriation of companies that are the property of investors of the member countries, unless such acts are justified by the public interest that they not be discriminative and that affected parties are indemnified; the channel for solving such controversies being the international courts established In the treaty itself. Mexican courts cannot contravene the decisions of the NAFTA because such behavior violates it and can be sanctioned by the members of the treaty.

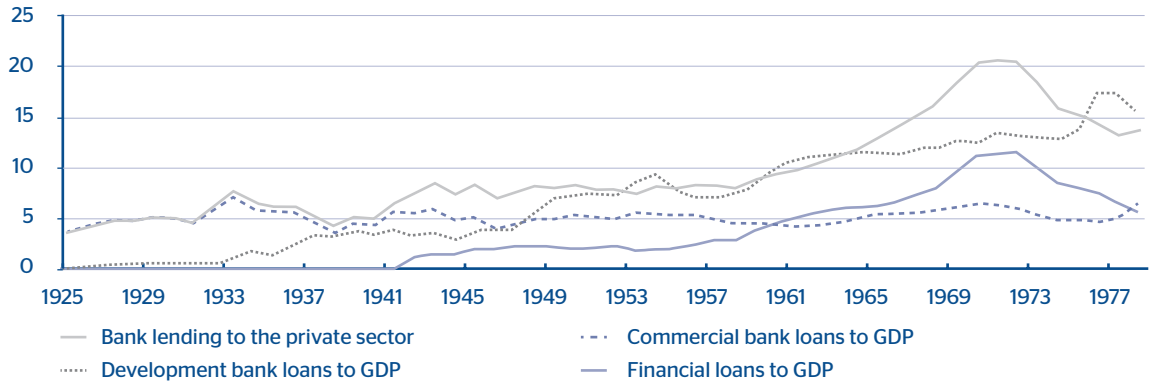
It should be added that to shield the new coalition, the sale of the banks to the new investors came together with five reforms to strengthen the regulatory and supervisory framework for banking operations. First, loans to related persons were restricted.[8] Second, rules were introduced to bolster the diversification of the loan portfolios. Third, the requirements of capital and credit reserves were increased according to the risk of the banks' portfolios. Fourth, new accounting standards were adopted that were more in line with the accounting systems accepted internationally. The fifth reform consisted in

[6] Del Ángel and Martinelli (2009), winning research of the MEY Award in 2007, offers an excellent review of the economic and financial conditions that led to the nationalization of the Mexican banking system in 1982.
[7] The winning research of the MEY Award in 2009, Sandoval (2011), analyzes in detail the bank privatization of 1991-1992.
[8] It is important to note that the rules to grant loans to bank persons have become ever more restrictive, so as to strengthen the financial system (for further details see ***Mexico Banking Outlook***, February 2010 or the general provision of Banco de Mexico published last October 10th in the Official Gazette of the Federation, which establishes that banks that are considering carrying out operation with persons with relevant links such as cession of rights or debt agreements of which the amount exceeds 25% of the basic capital will have to obtain authorization from the central bank.

substituting the unlimited deposits insurance, operated through the Fund Trust for the Protection of Bank Savings (FOBAPROA, by its Spanish acronym), with an insurance for bank deposit accounts limited to 400,000 UDIS, operated through a more independent agency which is the current Institute for the Protection of Bank Savings (IPAB, by Its Spanish acronym).

A review of the statistics on the penetration of credit in Mexico presented by HM reveals that during the 20th Century the percentage of credit by the commercial banks to the private sector in relation to GDP never was high. For example, between 1925 and 1979, the period prior to the nationalization of the banks, It always remained at around 5% of GDP and never came to even 8% of GDP (Graph 72). Also, as has already been mentioned, despite the fact that total credit to the private sector, adding that of the commercial banks and of the development banks, represented around 20% of GDP between 1970 and 1972, HM quote several studies of the banks in that period which indicate that the financing of the development banks was not destined to facilitate access to credit by sectors that could not have access to credit of the commercial banks.[9] It should be mentioned that in the February 2010 issue of ***Mexico Banking Outlook*** statistics are presented for later years that confirm the idea that the expansion of credit to commercial banks after the rescue and the entry of foreign banks has been dynamic and sustained by more solid foundations. In the following section will be seen the econometric analysis by HM for the 1997 - 2011 period; which supports and complements this appreciation.

Graph 72
Credit source in Mexico as a percentage of GDP, 1925-1978 (%)



Source: Figure taken from HM. Uses data from INEGI and from Del Angel, G. (2002), "Paradoxes of Financial Development: The construction of the Mexican Banking System, 1941-1982", Ph. D. Dissertation, Stanford University, 2002.

3.e.2 Well-being effects from the entry of foreign banks in the Mexican banking system

Once considered a theory to explain the decision by the government of allowing foreign banks to offer financial services in Mexico, HM analyze the data of the banking system during the 1997-2011 period with the aim of analyzing the impact of this measure in different variables of performance.

HM correctly warn that to affirm that the entry of the foreign banks has an impact given the volume, price or volatility of credit, the main difficulty consists in establishing an appropriate reference, since the problem consists in that "There are no two countries like Mexico" ("Como México no hay dos"), In the present context, the reference to this folk saying points to the idea that it is not possible to compare the banking system of Mexico in 2012 with a hypothetical banking system that would have existed in 2012

[9] Cárdenas (2000) documents this situation through a detailed analysis of financing policies during the period of the industrialization of Mexico between 1929 y 1982..

in the absence of liberalization, because it does not exist. It is also impossible to establish a comparison between the Mexican banking system In 2012 and the banking system of another country or group of countries which in 1997 were similar to Mexico, but that have not have liberalized the entry of foreign banks. The reason is that such a comparison would not only require Identifying countries with a per capita income level and of development of the banking system similar to that of Mexico in 1997, but that such a country would also had to have experienced a similar crisis to that of Mexico during the 90´s. but not have responded with an opening of its system to foreign banks, which did not happen either.

In view of this situation, a reasonable identification strategy should be able to capture not only changes within the banking system as a whole, but also changes among the different groups of banks in the system. To this end, HM consider a strategy that analyzes the variation among the Mexican banks that were acquired by global banks, taking into account changes that affect all the banks, by comparing these banks with themselves before and after they were purchased. Then, they discount the effect of the non-observable variables and of the non-random breakdown of the types of banks, through a specification of fixed effects per bank. Due to the fact that the banks of Mexico were acquired at different times and because it is possible to consider, in the econometric analysis, the changes that affected all the banks, it is possible to make inference about the impact, independently of the acquisition of the banks by a global bank. In addition, HM exploit the variation among the foreign banks that emerged from the merge and/or acquisition of Mexican banks (MA banks) and those that resulted from the new investments (De Novo banks), considering once again the changes that affected all the banks.

HM structured a single data base that combines the information of the balance sheets, income statements and loan portfolios on a quarterly basis for all the existing commercial banks in Mexico during the period from September 1997 to December 2011, based on the statistical bulletins of the multiple service banks that the CNBV publishes. Also the authors track the changes in the ownership of the banks during that period.[10] In regards to the estimation method, HM specify panel regressions with observations by bank and by quarter in which the dependent interest variable (the net interest margin, the loan portfolio delinquency index and the credit volume) is explained through several variables related with the breakdown of the portfolio and the financial situation of each bank in each quarter and of dichotomic variables that indicate whether a bank is of foreign ownership MA or De Novo. This allows comparing these types of banks with the other banks of local ownership. Also considered are versions of the basic specification with and without fixed effects by bank. It should be mentioned that HM point out that in the application of this model they take as a starting point the econometric model proposed by Martínez-Peria and Mody (2004).

Relative to the effect of banks' ownership on the price of credit, measured in terms of the net interest margin, HM obtain that once the effects of the structure and risk of the loan portfolios, administrative costs, capitalization indexes, liquidity coefficients and economic disturbances that affect all the banks are considered, there are no differences in the net interest margins that the MA foreign banks charge and the local banks. Moreover, they find that there are no differences in the movement over time of the net interest margins charged by MA foreign banks, De Novo foreign banks and local banks. Based on these results, HM conclude that there is no evidence that the entry of foreign banks has reduced well-being through a rise in the price of credit.

As refers to the impact of the entry of foreign banks on the stability of the banking system, measured through the delinquency index of the loan portfolio, the HM econometric analysis indicates that the foreign banks maintain less risky loan portfolios, once they take into account the effects of this variable of the breakdown and risk of the loan portfolios, the administrative costs, the capitalization indexes, the liquidity coefficients and the economic disturbances that affect all the banks. Moreover, the authors report that after a foreign bank acquires a local bank the delinquency index of the loan portfolio decreases by 6.5%,; this magnitude is not only economically large but statistically significant. This result can be attributed to the fact that the bank owned locally, which gave much weight to the opinions of regional boards in decisions regarding credit granting, upon being purchased by foreign banks introduced parametric methods of credit qualification and centralized loan placement decisions. Also, it is consistent

[10] HM comentan que los cambios en la contabilidad bancaria que acontecieron en México en 1997 imposibilitan utilizar datos anteriores a Septiembre de 1997 para este tipo de análisis.

with other research that report that between 1995 and 1998 some Mexican bankers granted loans to their own companies at vey low interest rates and with insufficient collateral, and then did not meet the payment of such loans, which was another reason for not selling the banks again to their owners after intervening and correcting such institutions.

Finally, HM find that once the effects of the structure and risks of the loan portfolios, administrative costs, capitalization indexes, liquidity coefficients and economic distrubances that affect all the banks are considered, no differences are observed in the provision of credit when comparing the MA foreign banks and the De Novo banks with the local banks.

Thus, the econometric analysis described is consistent with the fundamentals of economic history and political science that support the Game of Calomiris and Haber as well as the title of their study. Not only the entry of global banks seems to have contributed to increasing the stability of the Mexican banking system through the implementation of credit granting criteria based on risk analysis, but that the nationality of the banks seems to be a factor that does not have a significant bearing on credit supply decisions, once other factors are taken into account like the structure and risk of the loan portfolios, administrative costs, capitalization indexes, liquidity coefficients and the economic disturbances that affect all the banks.

Evaluation: the greater presence of foreign banks has brought benefits

The HM research is a significant contribution to a growing literature that documents that the rise in the participation of foreign banks in the banking systems of emerging countries has brought benefits, such as an improvement in the stability and efficiency of the banking system. For Mexico, in addition, the HM research reports that the foreign banks do not grant less credit than the local banks, in clear contrast with various affirmations that have occacionally appeared in some communication media and are not necessarily based on an in-depth analysis of the data and the economic institutions. In this consideration, It is no less Important that this entry required the establishment of an institutional framework much more solid than the previous one, which has facilitated a healthy expansion of credit and has significantly delimited the space so that in the future there are more rescues of failed institutions at the expense of the taxpayers such as had occurred in the past.

Furthermore, these results are important due to the lessons they offer relative to the task pending to increase access to credit in Mexico. The legal and regulatory reform agenda that would focus on closing the gaps that still exist in Mexico regarding non-compliance of contracts and execution of guarantees compared with other countries, should It be implemented, would have a positive bearing on credit supply. On the other hand, the modifications to the Credit Institutions Law already implemented in recent years to reduce the requirements for granting bank concessions has given rise to the entry of new participants to the banking system, which based on economic theory, is the most efficient manner to increase the amount of banks loans and reduce their price for the benefit of the users of these services.

The idea of whether the elements of the Game of Banking Negotiations are present in other economic sectors, different from that of banking deserves reflection. In the cases where the provision of goods and services also require the granting of concessions by the government (for example, energy, transportation, telecommunications, various professional services, etc.) the following question could be asked; Could the entry of foreign capital in other sectors capitalize new good times for the Mexican economy?

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4. Statistical Appendix

Table 7

Financial savings: Balances in billions of September 2012 pesos

	IV 01	IV 02	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV 11	III-12	Struc % III-12
M4a	4,757	4,967	5,430	5,784	6,428	6,984	7,485	8,205	8,404	9,015	10,043	10,872	
- Bills and coins held by the public	313	346	378	410	443	494	525	567	594	635	680	648	
= Financial savings *	4,443	4,621	5,052	5,374	5,985	6,490	6,960	7,638	7,809	8,380	9,363	10,224	100.0
I. Depository institutions	2,135	2,045	2,164	2,281	2,445	2,450	2,669	2,989	3,005	3,146	3,333	3,348	32.7
Resident commercial banks (demand + term)	1,717	1,623	1,745	1,855	1,942	2,004	2,217	2,507	2,495	2,618	2,771	2,775	27.1
Demand	786	826	901	935	1,051	1,145	1,256	1,298	1,359	1,488	1,623	1,622	15.9
Term	931	797	844	920	891	860	962	1,209	1,137	1,130	1,147	1,153	11.3
Foreign agencies of commercial banks	77	65	47	53	55	66	88	96	82	90	106	101	1.0
Savings & Loan Associations (S&L)	10	11	13	16	19	22	24	24	52	57	60	61	0.6
Development banks	331	346	360	357	428	358	340	361	376	380	397	411	4.0
II. Securities issued by the public sector	1,748	1,950	2,157	2,294	2,682	3,092	3,286	3,376	3,534	3,919	4,632	5,427	53.1
III. Securities issued by private companies	145	196	251	278	282	315	363	353	340	352	391	413	4.0
IV. SAR outside of Siefores	416	429	479	521	576	633	642	920	930	963	1,007	1,035	10.1
Financial savings = I + II + III + IV	4,443	4,621	5,052	5,374	5,985	6,490	6,960	7,638	7,809	8,380	9,363	10,224	100.0
Instruments included in financial savings													
TOTAL SAR = Siefores + SAR outside of Siefores	806	913	1,054	1,173	1,350	1,545	1,653	1,992	2,177	2,409	2,584	2,843	
Siefores	391	483	575	652	774	912	1,012	1,072	1,247	1,447	1,577	1,808	
SAR outside of Siefores	416	429	479	521	576	633	642	920	930	963	1,007	1,035	
Financial savings without SAR total	3,637	3,708	3,998	4,201	4,635	4,945	5,307	5,646	5,632	5,970	6,779	7,381	
Debt mutual funds	405	431	443	447	571	743	856	772	883	1,079	1,081	1,154	
Real annual percentage change,%													
M4a	11.6	4.4	9.3	6.5	11.1	8.6	7.2	9.6	2.4	7.3	11.4	9.3	
- Bills and coins held by the public	4.7	10.4	9.2	8.6	8.0	11.4	6.4	7.9	4.9	6.9	7.0	8.7	
= Financial savings *	12.2	4.0	9.3	6.4	11.4	8.4	7.2	9.7	2.2	7.3	11.7	9.4	
I. Depository institutions	3.7	-4.2	5.9	5.4	7.2	0.2	9.0	12.0	0.5	4.7	6.0	0.9	
Resident commercial banks (demand + term)	2.2	-5.5	7.5	6.3	4.7	3.2	10.6	13.1	-0.5	4.9	5.8	1.7	
Demand	21.6	5.0	9.1	3.8	12.4	8.9	9.7	3.4	4.7	9.5	9.1	3.2	
Term	-9.9	-14.4	5.9	9.0	-3.1	-3.5	11.9	25.7	-6.0	-0.5	1.5	-0.3	
Foreign agencies of commercial banks	-16.9	-15.2	-28.4	13.4	4.4	18.3	34.7	9.0	-15.1	10.5	17.0	-16.5	
Savings & Loan Associations (S&L)	13.2	12.4	21.5	19.4	19.0	16.6	9.3	2.4	115.8	9.3	3.8	3.3	
Development banks	19.2	4.5	4.1	-0.7	19.8	-16.4	-5.1	6.4	4.1	1.1	4.6	0.2	
II. Securities issued by the public sector	24.9	11.6	10.6	6.3	16.9	15.3	6.3	2.7	4.7	10.9	18.2	17.2	
III. Securities issued by private companies	3.6	35.6	27.9	10.7	1.2	11.7	15.4	-2.9	-3.7	3.6	11.2	7.4	
IV. SAR outside of Siefores	14.5	3.3	11.5	8.8	10.6	9.9	1.3	43.4	1.1	3.5	4.6	1.9	
Financial savings = I + II + III + IV	12.2	4.0	9.3	6.4	11.4	8.4	7.2	9.7	2.2	7.3	11.7	9.4	
Instruments included in financial savings													
SAR TOTAL = Siefores + SAR outside of Siefores	27.6	13.2	15.5	11.3	15.1	14.5	7.0	20.5	9.3	10.7	7.2	10.4	
Siefores	45.3	23.6	19.1	13.4	18.6	17.9	11.0	6.0	16.3	16.0	9.0	16.0	
SAR outside of Siefores	14.5	3.3	11.5	8.8	10.6	9.9	1.3	43.4	1.1	3.5	4.6	1.9	
Financial savings without SAR Total	9.2	2.0	7.8	5.1	10.3	6.7	7.3	6.4	-0.2	6.0	13.5	8.9	
Debt mutual funds	60.2	6.2	2.8	0.9	27.8	30.1	15.2	-9.7	14.4	22.2	0.1	6.5	
Percentage of GDP													
Financial savings = I + II + III + IV	42.5	45.5	46.7	46.0	49.1	49.3	48.1	56.0	59.1	60.4	63.9	66.1	
I. Depository institutions	20.4	20.1	20.0	19.5	20.0	18.6	18.4	21.9	22.7	22.6	22.7	22.5	
Resident commercial banks	16.4	16.0	16.1	15.9	15.9	15.2	15.3	18.4	18.9	18.9	18.9	18.5	
Development banks	3.2	3.4	3.3	3.1	3.5	2.7	2.3	2.6	2.8	2.7	2.7	2.9	
I Rest (Agencies abroad + S&L)	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.9	1.0	1.0	1.1	1.0	
II. Securities issued by the public sector	16.7	19.2	19.9	19.6	22.0	23.5	22.7	24.7	26.7	28.2	31.6	34.1	
III. Securities issued by companies	1.4	1.9	2.3	2.4	2.3	2.4	2.5	2.6	2.6	2.5	2.7	2.7	
IV. SAR outside of Siefores	4.0	4.2	4.4	4.5	4.7	4.8	4.4	6.7	7.0	6.9	6.9	6.8	
Percentage of GDP, other concepts included in financial savings, %													
Total SAR	7.7	9.0	9.7	10.0	11.1	11.7	11.4	14.2	16.4	17.3	17.6	18.2	
Siefores	3.7	4.8	5.3	5.6	6.3	6.9	7.0	7.9	9.4	10.4	10.8	11.4	

Data for 2Q 2012 Source: Banco de Mexico (broad monetary aggregates) and INEGI

Table 8

Credit and Financing to the Private Sector: Balances in billions of September 2012 pesos

	IV 01	IV 02	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV 11	II-12	Str % II-12
Total: All categories	3,232	3,368	3,504	3,743	3,958	4,063	4,780	5,389	5,119	5,233	6,077	6,216	100.0
Bank	1,095	1,058	1,019	1,057	1,199	1,503	1,844	1,975	1,889	1,975	2,229	2,331	37.5
Non-bank	2,137	2,310	2,484	2,686	2,760	2,560	2,936	3,414	3,229	3,258	3,847	3,885	62.5
Total consumer	163	217	256	351	487	617	704	666	583	586	666	707	11.4
Bank	102	131	176	248	363	496	601	561	453	452	539	579	9.3
Non-bank	61	86	80	103	125	121	104	105	130	134	127	128	2.1
Total housing	759	803	845	908	960	1,055	1,259	1,274	1,296	1,349	1,420	1,488	23.9
Bank	270	238	200	192	240	309	354	374	394	419	437	455	7.3
Non-bank	488	565	645	716	720	746	905	900	903	930	983	1,033	16.6
Total companies	2,310	2,348	2,403	2,484	2,511	2,391	2,816	3,449	3,239	3,298	3,991	4,022	64.7
Bank	722	689	644	617	596	698	889	1,040	1,042	1,103	1,253	1,297	20.9
Non-bank	1,587	1,659	1,759	1,867	1,914	1,693	1,928	2,410	2,196	2,195	2,738	2,724	43.8
Real annual percentage change, %													
Total: All categories	-6.6	4.2	4.0	6.8	5.8	2.6	17.6	12.7	-5.0	2.2	16.1	12.5	
Bank	-13.0	-3.4	-3.7	3.7	13.4	25.4	22.6	7.1	-4.3	4.5	12.9	12.5	
Non-bank	-3.0	8.1	7.5	8.1	2.7	-7.2	14.7	16.3	-5.4	0.9	18.1	12.6	
Total consumer	26.2	33.1	17.9	37.2	38.7	26.6	14.1	-5.5	-12.4	0.4	13.6	13.5	
Bank	27.6	28.0	34.4	41.0	46.1	36.9	21.1	-6.6	-19.2	-0.2	19.2	17.8	
Non-bank	23.7	41.8	-7.2	28.9	21.0	-3.2	-14.3	1.4	24.1	2.8	-5.2	-2.5	
Total housing	1.9	5.8	5.2	7.4	5.8	9.9	19.3	1.2	1.8	4.1	5.3	3.4	
Bank	-18.7	-11.9	-16.2	-4.0	25.1	28.9	14.6	5.7	5.2	6.5	4.2	5.3	
Non-bank	18.4	15.6	14.2	11.0	0.6	3.6	21.3	-0.6	0.3	3.0	5.7	2.6	
Total companies	-10.7	1.7	2.3	3.4	1.1	-4.8	17.8	22.5	-6.1	1.8	21.0	16.1	
Bank	-14.6	-4.6	-6.6	-4.2	-3.3	17.0	27.3	17.0	0.2	5.9	13.6	12.9	
Non-bank	-8.9	4.5	6.0	6.1	2.5	-11.6	13.9	25.0	-8.8	-0.1	24.7	17.8	
Percentage of GDP, %													
Total: All categories	30.9	33.2	32.4	32.0	32.4	30.9	33.0	39.5	38.7	37.7	41.5	41.0	
Bank	10.5	10.4	9.4	9.0	9.8	11.4	12.7	14.5	14.3	14.2	15.2	15.4	
Non-bank	20.5	22.7	22.9	23.0	22.6	19.5	20.3	25.0	24.4	23.5	26.3	25.6	
Total consumer	1.6	2.1	2.4	3.0	4.0	4.7	4.9	4.9	4.4	4.2	4.5	4.7	
Bank	1.0	1.3	1.6	2.1	3.0	3.8	4.1	4.1	3.4	3.3	3.7	3.8	
Non-bank	0.6	0.8	0.7	0.9	1.0	0.9	0.7	0.8	1.0	1.0	0.9	0.8	
Total housing	7.3	7.9	7.8	7.8	7.9	8.0	8.7	9.3	9.8	9.7	9.7	9.8	
Bank	2.6	2.3	1.8	1.6	2.0	2.3	2.4	2.7	3.0	3.0	3.0	3.0	
Non-bank	4.7	5.6	6.0	6.1	5.9	5.7	6.3	6.6	6.8	6.7	6.7	6.8	
Total companies	22.1	23.1	22.2	21.3	20.6	18.2	19.4	25.3	24.5	23.8	27.2	26.5	
Bank	6.9	6.8	5.9	5.3	4.9	5.3	6.1	7.6	7.9	8.0	8.6	8.6	
Non-bank	15.2	16.3	16.2	16.0	15.7	12.9	13.3	17.7	16.6	15.8	18.7	18.0	
Infrastructure and Number of Bank Cards - Units													
	IV 01	IV 02	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV-10	IV-11	II-12	
ATMs	nd	17,011	17,758	20,416	22,900	25,687	29,333	31,932	33,905	35,936	36,448	39,456	
POS terminals	nd	129,971	146,029	160,289	201,852	305,144	418,128	446,025	446,792	482,299	547,708	576,774	
Branches*	nd	7,849	7,768	7,788	7,972	8,404	9,230	10,722	10,731	11,291	11,786	12,055	
Number of current cards at the end of the quarter (figures in millions)													
Credit	nd	7.8	9.4	11.6	14.7	21.4	24.8	25.2	22.1	22.4	24.7	24.8	
Debit	nd	32.4	32.2	31.8	36.1	51.7	51.9	56.9	60.8	75.2	85.6	98.1	

Continued on the following page

Credit and Financing to the Public Sector: Balances in billions of September 2012 pesos

	IV 01	IV 02	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV-11	II-12	Str % II-12
Commercial bank credit	334	366	360	285	286	212	208	181	299	332	348	362	5.2
Federal government	287	298	263	116	72	39	36	25	36	46	36	33	0.5
States and Municipalities	17	22	37	72	80	68	78	100	154	202	216	232	3.3
Decentralized gov't agen.	31	46	60	97	133	104	94	55	109	85	95	97	1.4
Development bank credit	183	208	169	168	174	163	157	162	126	132	127	129	1.9
Federal government	120	114	86	87	100	83	99	103	51	56	26	26	0.4
States and Municipalities	12	14	15	33	32	34	34	30	44	50	80	86	1.2
Decentralized gov't agencies	51	80	68	47	42	46	24	29	30	25	22	17	0.2
Debt issued in the country	1,734	2,071	2,371	2,532	2,906	3,384	3,639	3,810	4,143	4,353	5,016	5,269	75.8
Federal government	1,076	1,183	1,371	1,416	1,547	1,989	2,193	2,317	2,634	2,708	2,944	3,072	44.2
States and Municipalities	0	8	20	28	28	46	54	59	61	63	68	67	1.0
Decentralized gov't agen.	-	-	22	65	135	168	159	147	159	195	244	238	3.4
IPAB	239	344	442	521	651	752	842	831	844	827	854	809	11.6
Banco de Mexico	320	387	333	317	343	218	221	286	274	390	736	916	13.2
FARAC	98	149	184	185	203	211	169	169	171	170	170	168	2.4
External financing	924	997	1,128	1,079	949	678	650	772	1,028	1,103	1,229	1,187	17.1
Credit and financing TOTAL	3,176	3,643	4,030	4,064	4,316	4,446	4,678	4,945	5,596	5,919	6,720	6,948	100.0

Real annual percentage change in the balance, %

Commercial bank credit	-7.1	9.6	-1.7	-21.0	0.4	-25.8	-2.0	-13.0	65.3	11.2	4.8	9.6
Federal government	-13.9	3.8	-11.7	-56.0	-37.4	-46.0	-8.9	-28.8	41.5	27.0	-20.2	-32.7
States and Municipalities	-31.4	34.6	64.6	96.1	10.6	-14.4	14.4	27.7	54.0	31.0	7.4	18.7
Decentralized gov't agen.	1328.6	50.4	30.9	60.4	38.1	-21.8	-10.2	-40.9	96.5	-22.1	12.0	13.1
Development bank credit	7.7	13.6	-18.7	-0.6	3.4	-6.3	-3.5	3.0	-22.1	4.5	-3.3	6.8
Federal government	10.3	-5.5	-24.0	0.7	14.3	-16.2	19.2	3.5	-50.1	9.7	-54.3	-51.0
States and Municipalities	27.1	17.6	4.1	128.4	-4.4	4.9	1.2	-13.2	50.3	12.8	59.2	83.7
Decentralized gov't agen.	-1.4	57.8	-15.3	-30.1	-11.4	8.7	-48.4	24.5	3.4	-16.4	-13.7	-17.8
Debt issued in the country	25.6	19.4	14.5	6.8	14.8	16.4	7.5	4.7	8.8	5.1	15.2	10.8
Federal government	16.3	9.9	15.9	3.3	9.3	28.6	10.2	5.7	13.7	2.8	8.7	6.7
States and Municipalities	0.0	5610.1	147.6	37.7	0.8	65.7	18.1	8.5	3.6	2.9	8.0	6.3
Decentralized gov't agen.	0.0	0.0	0.0	200.6	107.1	24.8	-5.4	-7.3	8.1	22.5	25.1	8.2
IPAB	104.9	44.0	28.7	17.8	25.0	15.5	12.0	-1.4	1.6	-2.1	3.3	-4.6
Banco de Mexico	20.8	20.9	-14.1	-4.7	7.9	-36.4	1.6	29.5	-4.2	42.0	88.9	58.9
FARAC	33.4	51.3	23.3	0.7	9.6	3.8	-19.9	0.3	1.0	-0.1	-0.2	-1.5
External financing	-0.7	7.9	13.2	-4.4	-12.0	-28.5	-4.1	18.7	33.2	7.3	11.5	15.4
Credit and financing TOTAL	11.7	14.7	10.6	0.9	6.2	3.0	5.2	5.7	13.2	5.8	13.5	11.4

Credit and Financing: Percentage of GDP, %

Commercial bank credit	3.2	3.6	3.3	2.4	2.3	1.6	1.4	1.3	2.3	2.4	2.4	2.4
Federal government	2.7	2.9	2.4	1.0	0.6	0.3	0.2	0.2	0.3	0.3	0.2	0.2
States and Municipalities	0.2	0.2	0.3	0.6	0.7	0.5	0.5	0.7	1.2	1.5	1.5	1.6
Decentralized gov't agen.	0.3	0.5	0.6	0.8	1.1	0.8	0.6	0.4	0.8	0.6	0.6	0.6
Development bank credit	1.8	2.0	1.6	1.4	1.4	1.2	1.1	1.2	1.0	0.9	0.9	0.9
Federal government	1.2	1.1	0.8	0.7	0.8	0.6	0.7	0.8	0.4	0.4	0.2	0.2
States and Municipalities	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.6
Decentralized gov't agen.	0.5	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1
Debt issued in the country	16.6	20.4	21.9	21.7	23.8	25.7	25.1	27.9	31.4	31.4	34.2	35.2
Federal government	10.3	11.6	12.7	12.1	12.7	15.1	15.1	17.0	19.9	19.5	20.1	20.5
States and Municipalities	0.0	0.1	0.2	0.2	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.4
Decentralized gov't agen.	0.0	0.0	0.2	0.6	1.1	1.3	1.1	1.1	1.2	1.4	1.7	1.6
IPAB	2.3	3.4	4.1	4.5	5.3	5.7	5.8	6.1	6.4	6.0	5.8	5.4
Banco de Mexico	3.1	3.8	3.1	2.7	2.8	1.7	1.5	2.1	2.1	2.8	5.0	6.1
FARAC	0.9	1.5	1.7	1.6	1.7	1.6	1.2	1.2	1.3	1.2	1.2	1.1
External financing	8.8	9.8	10.4	9.2	7.8	5.2	4.5	5.7	7.8	7.9	8.4	7.9
Credit and financing TOTAL	30.4	35.9	37.2	34.8	35.4	33.8	32.3	36.2	42.4	42.7	45.9	46.4

Source: Banco de México and National Banking and Securities Commission

5. Reforms to the Legal and Regulatory Framework Applicable to Multiple Banking Institutions

Table 9

Reforms to the Legal and Regulatory Framework Applicable to Multiple Banking Institutions: May – November 2012

No.	Subject	Scope of the reform	Modified dispositions	Publication in Official Gazette of the Federation (DOF)
1	BANXICO (central bank). Circular 15/2012 directed to full service banks, in relation to transactions undertaken by multiple banking institutions with closely linked interested parties	It requires special authorization from an official of the institution who occupies an executive position immediately below that of the general director, to enter into transactions with family members related in the second degree in direct or collateral line consanguinity or affinity.	BANXICO. CIRCULAR 15/2012	10/X/2012
2	CONDUSEF. Monitoring Rules of the National Commission for the Protection and Defense of Users of Financial Services	Regulates the supervision (or monitoring), inspection, and verification that the CONDUSEF is required to conduct of the financial institutions, in accordance with the following: • The supervision or monitoring involves exercising the powers of surveillance, prevention and correction, in accordance with the law and other applicable provisions. It will be conducted by the CONDUSEF. • The inspection will be carried out by the National Banking and Securities Commission at the request of the CONDUSEF through ordinary or special visits. • The CONDUSEF will exercise its verification authority with regard to the Multiple Purpose Financial Institutions, in accordance with the provisions of the respective laws in terms of the procedure established in the Federal Law on Administrative Procedures.	Presidential decree that issues the Monitoring Rules of the National Commission for the Protection and Defense of Users of Financial Services	10/X/2012
3	Federal Law for the prevention and identification of operations conducted with illicit funds	Its purpose is to protect the national financial system and the economy from the legitimization or laundering of illicit funds performed by criminal organizations and to contribute to the dismantling of their financial structures. Establishes the application of a series of policy measures aimed at new economic actors, whom the international community feels may be vulnerable to being used by organized crime or terrorism to legitimize financial resources and who are bound by the law and whose professional activities are defined as vulnerable activities. Mechanism to achieve said objectives: I. Through the prevention of acts and transactions susceptible to money laundering and terrorism financing, through the following procedures that must be complied with by those parties that are engaged in vulnerable activities: 1. Identifying and knowing the clients; 2. Monitoring the acts and transactions that they conduct, and 3. Notifying the Finance Ministry (SHCP) of these acts and transactions. II. Restricting the use of cash in specific transactions linked to assets considered to be of high value, to hinder organized crime from placing a high volume of cash in the formal economy.	NEW LAW	17/X/2012
4	Rules on public private Partnerships	Regulates the Public Private Partnerships of the State with the private or social sectors so that these, through the infrastructure that they supply totally or partially, provide services to the public sector or the end user. It stipulates that the long term in infrastructure projects is defined as a period longer than three years. It defines three types of projects: • Pure, which are financed by federal government budgetary funds. • Combined, which involves money from both the budget as well as the National Infrastructure Fund or any non-budgetary public source. • Self-financing, which are those that obtain resources from individuals or generated by the project itself. According to the stipulations of the new rules, the Single Registry of Infrastructure Developers will be available on the web page of CompraNet	Presidential decree that issues the Rules on public private Partnerships	5/XI/2012

6. Special topics included in previous ssues

June 2012
The Good Weekend

A Comparison of the Different Sources of Information on Access to and Use of Bank Credit among Mexican Companies

Combined Use of Financial Services

Regulation for Systemically Important Financial Institutions (SIFIs)

November 2011
Current Situation of Bank Credit Cards

The registration of property guarantees

Basic deposit accounts, some international experiences in the field and their importance as a means of bancarization

An estimate of the gains in efficiency due to the bancarization of subsidy programs in Mexico

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Financial Savings: Two Ways of Measuring Them, Based on CNBV and Banxico Statistics

Credit Bureaus: toward the Incorporation of More and Better Information

July 2010
Does Judicial Efficiency Reduce the Cost of Credit?

Credits to Related Parties

Restrictions on external financing: effects on investment and growth for countries in the demographic window

“Mobile Money” in Kenya

February 2010
Credit to the Private Sector

TAC, Total Annual Cost of Financing

Regulatory Changes and Consumer Protection

Changes to the Rules for the Creation of Loan Loss Provisions for Consumer Credit through Credit Cards

Trends in Supervision and Regulation on an International Level

Solvency of the Mexican Banking System

A Brief Review of the Literature on Determining Factors in Credit Penetration Brazil’s Correspondent Bank Model

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