BBVA Research

Creating Opportunities

Mexico Banking Outlook

Second half 2019

Contents

Closing date: November 29, 2019

1. Summary

In a context of global trade tension and public domestic policy uncertainty, the Mexican economy was marked by a significant reduction in gross fixed investment and formal job creation, which was in turn decisive in shaping a year of slowdown in banking activity.

The banking activity slowdown was seen both in the granting of loans and in attracting funds. In fact, the 4.6% real term annual growth rate in bank lending to the private sector in September was, along with the growth recorded in June, the smallest since November of 2017. The above-mentioned reduction in the rate of formal job creation in 2019 to levels not seen since 2010, affected consumer loans in particular, which, with an real annual growth rate under 3.0%, only contributed 0.5 percentage points to the growth of total credit to the non-financial private sector in the third quarter of 2019. As in recent years, the largest contributor to growth came from credit extended to companies, which, despite the country's marked reduction in investment, benefited from the substitution of external credit with domestic credit. It should be noted that this process was corroborated by the data presented in the National Survey of Enterprise Financing 2018 (ENAFIN 2018). One of the credit items with improved performance over previous years was home loans. While there were no significant changes in the granting conditions, this was possibly favored by purchases of smaller homes, in addition to the higher number of loans than the previous two years being extended for new homes with cofinancing.

Deposits from the banking system continued to grow, but at lower rates, in line with the reduced momentum in the economy. Traditional bank deposits (sight deposits + term deposits) had an average annual growth rate of 3.7% in real terms between January and September 2019, which was a drop of 1.4pp compared with the same period of 2018. Within deposits, sight deposits began to be replaced with term deposits, influenced by the recent reduction in the benchmark interest rate, which, however, was not enough to compensate for the negative impact of lower economic activity on sight deposits. In fact, even when the positive annual growth rate for sight deposits resumed in real terms after a record historic minimum of -2.6% in June, it was not high enough to compensate for the drop of almost 5.0 pp in the real annual growth rate for term deposits between December 2018 and September 2019. This shows how the substitution effect between sight and term deposits is less than the effect that economic activity has on total deposits. The only item in deposits that strengthened over the previous year was debt investment funds, which, as of September, showed a nominal double-digit annual growth rate. This resulted in reduced interest rates, exchange rate stability and expectations of reduced trade tensions between the US and China from September.

There was also less robust growth in the sources of savings other than traditional deposits in 2019. In particular, growth in external financing sources for the country reduced due to lower demand from foreigners of fixed-income and variable-income instruments. In fact, the cumulative holding of government bonds by non-residents as of December 4 is at its lowest level since 2016. Demand for variable income instruments weakened in the face of a volatile external environment resulting from trade tensions between the US and China and uncertainty over local public policies. In the case of residents' savings, this was supported by compulsory savings, particularly retirement savings funds. In the case of voluntary savings, there was a notable increase in government bond holdings by residents from the third quarter of the year, while the trend of holding variable income instruments resumed its positive trend in this period. It should be noted that the significant reduction in interest rates in the long part of the curve influenced the strong performance of local asset prices in 2019.

In short, 2019 can be considered a year of low growth in banking activity influenced by the lack of momentum in economic activity and by an external environment of commercial disputes. In future, the strengthening of lending activity will depend on the reactivation of investment, employment and a greater dynamism of both domestic and external sources of savings.

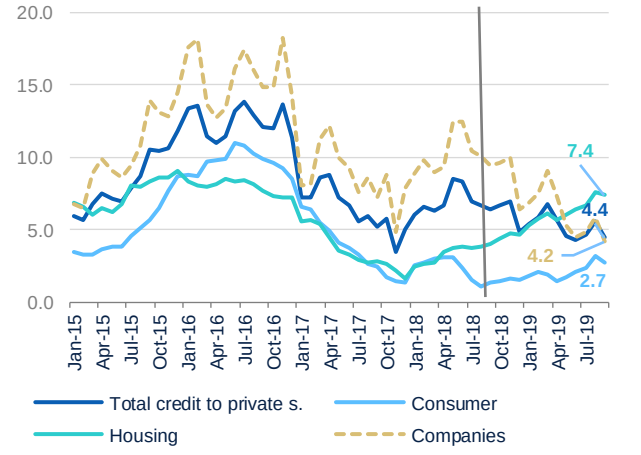
2. Market Conditions

2.a In the first nine months of 2019, the main source of growth in bank credit to the private sector was business loans

2a.1 Credit from commercial banking to the non-financial private sector: Introduction

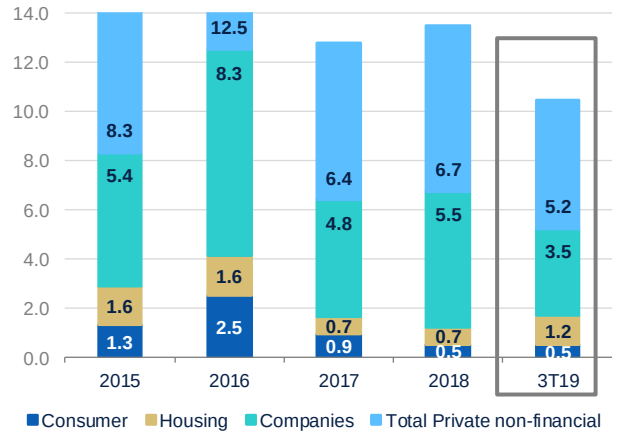
The credit portfolio granted by commercial banks to the non-financial private sector is that extended to families (consumer and home loans) and to private non-financial companies. From 2017, commercial banking credit to the non-financial private sector (NFPS) began to slow. In 2016, the annual average real growth rate was almost double (12.5%) that of 2017 (Figures 2a.1 and 2). The average growth rate in 2018 was slightly higher than in 2017, but the average rate for the first nine months of 2019 was lower than for the same period in the previous two years.

Figure 2a.1 **NON-FINANCIAL PRIVATE SECTOR CREDIT: TOTAL, CONSUMER, HOUSING AND BUSINESS** (REAL ANNUAL VAR % AND %)



Source: BBVA Research based on Banxico data

Figure 2a.2 **NON-FINANCIAL PRIVATE SECTOR CREDIT, CONTRIBUTION TO GROWTH RATE** (%)

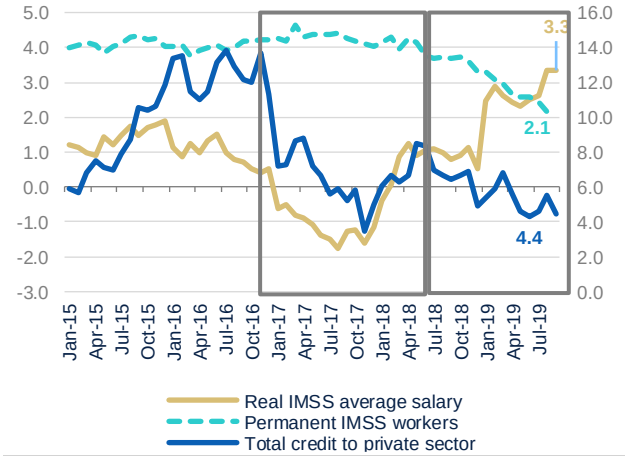


Source: BBVA Research based on Banxico data

It is notable that several factors influenced the slowdown in private sector credit. These are analyzed in detail throughout this section, but the main factors include the contraction of the average salary for employees registered at the Mexican Social Security Institute (IMSS) in real terms, particularly in 2017, and the lower dynamism of the growth rate of formal employment measured as IMSS registered workers. This means that the creation of new jobs in the formal sector of the economy has been gradually decreasing since last year. Thus, the number of new clients that could apply for a bank loan and be able to pay it off on time increased at a lower rate than in past periods.

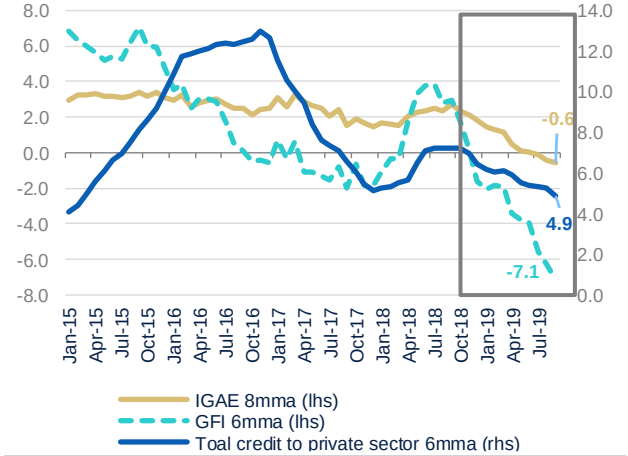
However, regarding bank loans channeled to companies, particularly larger or major enterprises, this was initially unaffected due to the increase in the benchmark interest rate due to the substitution of external financing with domestic credit. That is, between the first quarter of 2017 and the second quarter of 2019, larger companies began to replace their sources of foreign financing with domestic bank credit. Notwithstanding the foregoing, over the course of 2019 there has been a significant slowdown in economic activity which is reflected in lower demand for business loans. The average annual GDP growth rate from the fourth quarter of 2018 to the third quarter of 2019 was 0.3% and the average GDP rate for the first three quarters of 2019 is 0.0%. This rapid slowdown in economic activity lowered the demand for credit, given that in this macroeconomic environment, companies' financing needs decline, whether for use as working capital or to finance expansion projects involving gross fixed investment (Figure 2a.4).

Figure 2a.3 **TOTAL NON-FINANCIAL PRIVATE SECTOR CREDIT, NUMBER OF PERMANENT IMSS WORKERS, AND REAL IMSS AVERAGE SALARY** (REAL ANNUAL VAR % AND %)



Source: BBVA Research based on Banxico and CNBV data

Figure 2a.4 **TOTAL CREDIT TO THE PRIVATE SECTOR, GLOBAL ECONOMIC ACTIVITY INDEX (IGAE) AND GROSS FIXED INVESTMENT INDEX (FBCF)** (REAL ANNUAL VAR %)



Source: BBVA Research based on Banxico and INEGI data

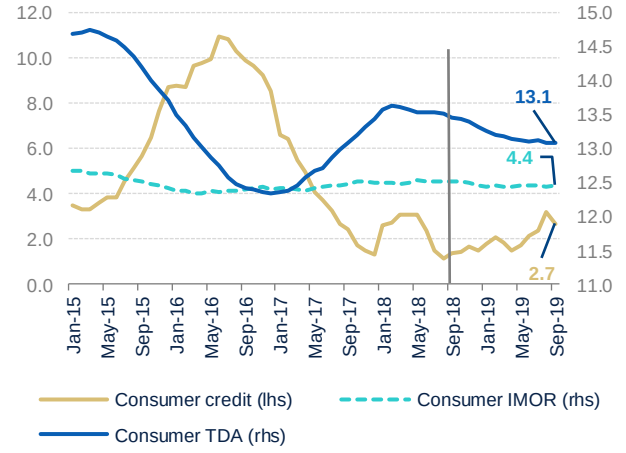
The following sections give an analysis of the behavior of consumer loans to business and housing. It is notable that a special section of this edition of "Mexico Banking Outlook" delves deep into the evolution of mortgage loans, which, as will be reviewed below, was the most dynamic sector over the course of 2019. As will be reflected below, all the conclusions presented in each section on private sector credit categories indicate that until the macroeconomic environment improves and, thus, growth for economic activity and employment are higher, the different categories of private sector credit all stand to improve their growth rates.

2a.2 Consumer credit: The slowdown in the growth rate of formal employment and economic activity limit dynamism of this type of financing[1]

Two-digit real annual growth for the current consumer credit portfolio stopped in August 2016 (10.3%). From then on its dynamism rapidly slowed as is reflected in its average annual real growth rates in 2017 and 2018, which were 3.7% and 2.1%, respectively. This low degree of dynamism continued in 2019, so that the 12-month average annual real growth of this credit from October 2018 to September 2019 was 2.0% and only in the first nine months of 2019 was it 2.2% (Figure 2a.5).

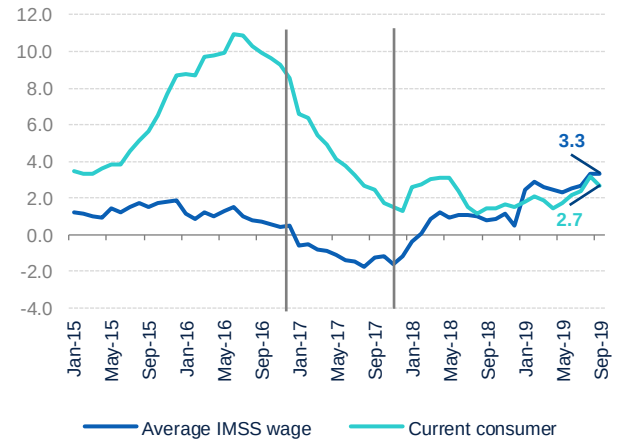
As discussed in the previous section, one of the reasons for the lower dynamism of consumer credit that occurred from the second half of 2016 to December 2017 is, initially, the lower growth rate in the real average wage of formal IMSS workers and, subsequently, the contraction of average remuneration observed over 2017 (Figure 2a.6). During this period, the real annual growth rate of consumer credit rose from 10.3% in August 2016 to 1.3% in December 2017. In those months, the real annual growth in average wages was 0.8% in the first month, which fell to 0.5% in December 2016 and at the end of 2017 it was negative at -1.2%.

Figure 2a.5 **CONSUMER CREDIT: CURRENT PORTFOLIO, NON-PERFORMING LOAN INDEX (IMOR) AND ADJUSTED IMPAIRMENT RATE (TDA)** (REAL ANNUAL VAR % AND %)



Source: BBVA Research based on Banxico and CNBV data

Figure 2a.6 **CURRENT CONSUMER CREDIT AND AVERAGE IMSS WAGE** (REAL ANNUAL VAR %)



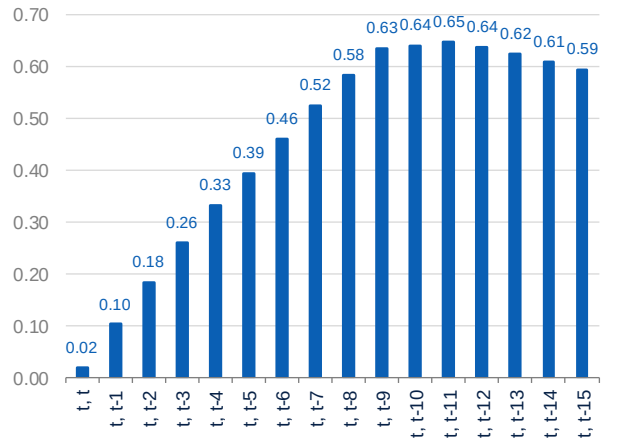
Source: BBVA Research based on Banxico and INEGI data

The data in the previous paragraph indicate a positive relationship between the dynamism of consumer credit and that of the average real wage of IMSS workers. The extent of the link between these two variables, seen in their correlation coefficient, is low for the contemporary month (or month t). However, the strength of this association gradually increases over the months (Figure 2a.7). In other words, there is a lagging effect between the growth of IMSS real

1: It is also worth mentioning that an article was published in the magazine *Situación Banco México*, first half 2019, in the section on Special Topics entitled “Consumer lending: recent evolution and analysis of the slowdown in growth rate”. This article presents a detailed analysis of the development of consumer credit up to the end of 2018 by its components. For this reason, the material presented in this section on the performance of consumer credit complements and updates the article in question.

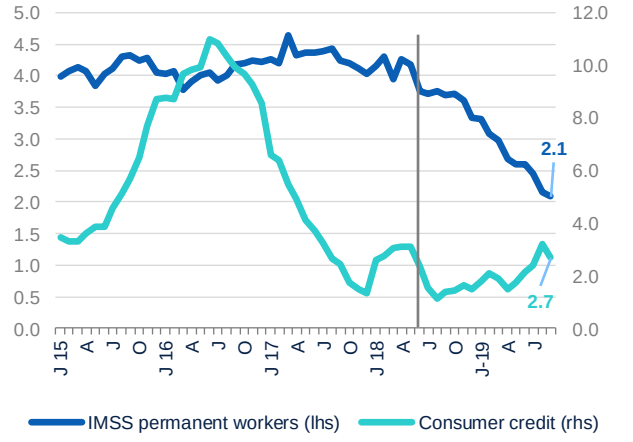
wages and the growth of the current credit portfolio, which reaches its maximum in the lag of the eleventh month, in which the correlation coefficient between these variables is 0.65.

Figure 2a.7 **CORRELATION COEFFICIENT BETWEEN THE ANNUAL GROWTH RATES OF IMSS REAL WAGES AND THE REAL CONSUMER CREDIT PORTFOLIO** (T = CURRENT MONTH; T-I = PREVIOUS ITH MONTH)



Data correlation exercise from January 2015 to September 2019.
Source: BBVA Research based on Banxico and INEGI data

Figure 2a.8 **CONSUMER CREDIT PORTFOLIO AND TOTAL NUMBER OF PERMANENT IMSS WORKERS** (REAL ANNUAL VAR %)



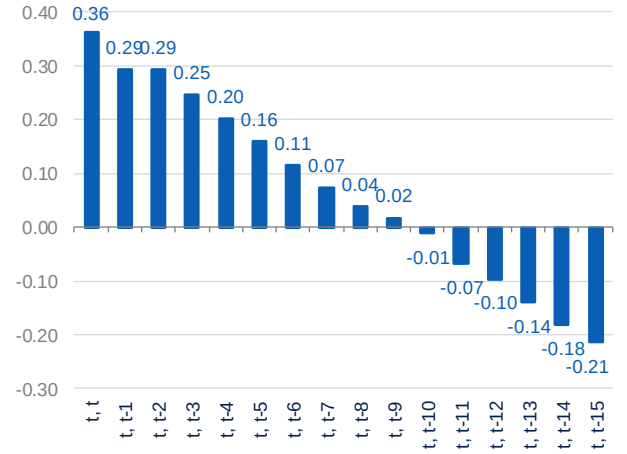
Source: BBVA Research based on Banxico and INEGI data

Furthermore, IMSS real wages began to grow again from February 2018, which assisted the increase in the real annual growth rate of consumer credit in the first five months of 2018, and in May 2018 its real annual growth rate increased to 3.1%. After that month, dynamism in consumer credit was lower, and from then until September 2019 its average annual real growth rate was 1.9%.

This second stage of slowing growth of consumer credit is associated with the lower growth rate of formal employment, which is reflected in the annual growth in the number of permanent IMSS workers. In other words, the above points indicate that there is a positive relationship between the growth rate for current consumer credit and the annual growth rate of the number of IMSS permanent workers. For instance, the annual growth rate of formal employment registered with the IMSS (or formal IMSS employment) in May 2018 was 4.2% and the following month it fell to 3.8%. Beginning this last month, formal IMSS employment began a rapid slowdown, leading to a decrease in its annual growth, first to 3.3% in December 2018 and 2.1% in September 2019 (Figure 2a.8).

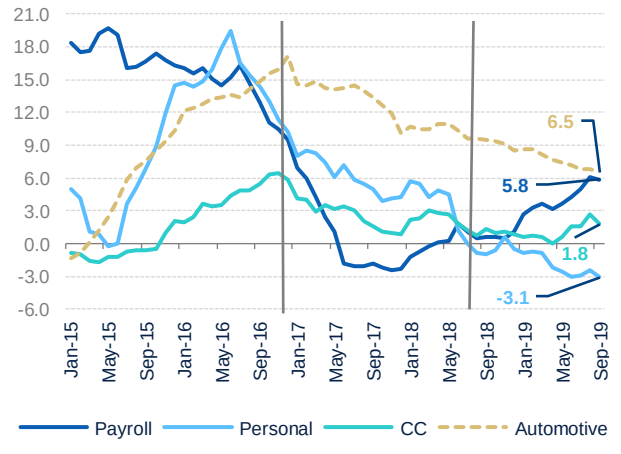
The positive relationship between the consumer credit growth rate and the growth rate of formal IMSS employment is also reflected in the correlation coefficient between these two variables. In fact, the same month these two variables (or the contemporary month) are considered, the correlation coefficient was positive at 0.36. This coefficient gradually decreases in the following months or as the lag between these two variables increases (Figure 2a.9). As such, the rapid and significant slowdown in the growth of formal employment observed from the second half of 2018 to date, helps explain the limited growth of the current consumer credit portfolio in this period.

Figure 2a.9 **CORRELATION COEFFICIENT BETWEEN THE GROWTH RATES OF THE NUMBER OF PERMANENT IMSS WORKERS AND THE CREDIT PORTFOLIO** (T = CURRENT MONTH; T-I = PREVIOUS ITH MONTH)



Data correlation exercise from January 2015 to September 2019.
Source: BBVA Research based on Banxico and INEGI data

Figure 2a.10 **CONSUMER CREDIT BY SEGMENT: AUTOMOTIVE, PAYROLL, PERSONAL, CCs** (REAL ANNUAL VAR %)



Source: BBVA Research based on Banxico data

It is worth noting that the positive relationship between real wage growth and the growth rate of consumer credit (Figure 2a.7) gradually increases over time. In contrast, the positive relationship between the real annual growth rate for consumer credit and the growth of formal IMSS employment occurs to a greater extent in the short term and decreases as the months pass (Figure 2a.9). This may indicate that the first stage of the slowdown in consumer credit growth had been due to the persistent contraction of real wages, particularly in 2017. Subsequently, when wages began to grow and gradually drive the growth of this type of credit forward, there was a slowdown in permanent IMSS employment, the speed and persistence of which limited the recovery of the growth rate for consumer lending, even despite the increase in real wages in 2019

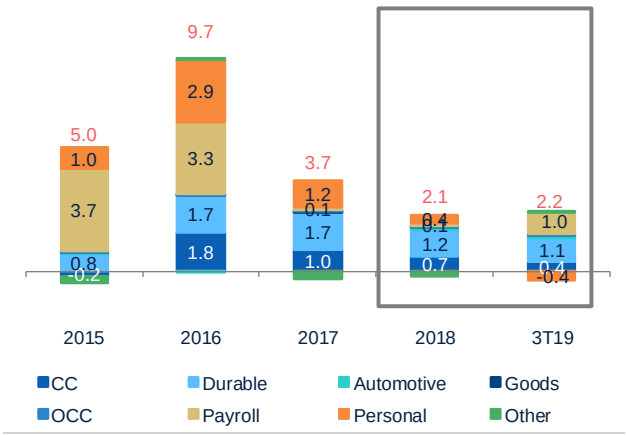
In short, the contraction of real wages limited dynamism in demand for consumer credit because purchasing power dropped with the contraction of real average IMSS wages. In addition, starting in the second half of 2018, the slowdown in formal employment virtually determined the slower growth rate of consumer credit seen recently, indicating that there are now fewer new IMSS registered workers who could apply for loans.

2a.2.1 Consumer credit: Evolution and contribution to growth of different areas

The slowest growth in consumer credit in all areas was from January 2017. In that month, the growth rate began to slow for car loans as well as for other areas of consumer lending (credit cards (CC), payroll and personal loans) until December 2018 (Figure 2a.10). In 2018, the real annual growth rate of total consumer credit was 2.1%, and the area that contributed most to this dynamism was loans to purchase consumer durables (cars) which contributed 1.2 percentage points (pp) of the 2.1 pp in which it grew. On the other hand, credit extended through CCs, and personal and payroll loans contributed to total consumer credit growth by 0.7 pp, 0.4 pp and 0.1 pp, respectively, while credit extended in the “others” category subtracted -0.3 pp from growth (Figure 2a.11). It should be noted that at December

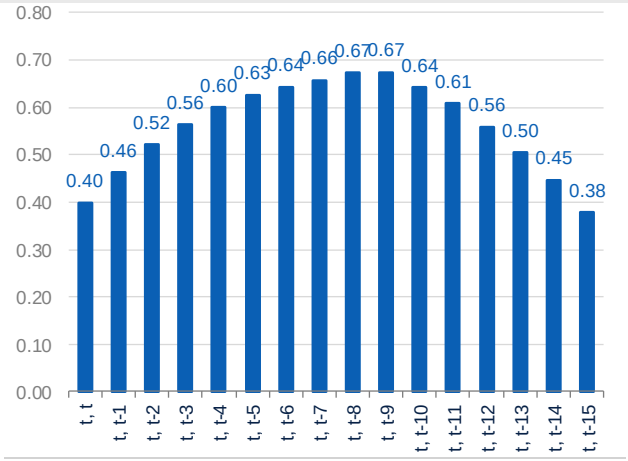
2018 credit extended through credit cards was 38.2% of total consumer credit. This was followed by payroll loans (23.3%); personal loans (20.5%); loans for consumer durables (15.1%, where cars were 13.5%; and other consumer durables, 1.6%); and other consumer credit (3.6%).

Figure 2a.11 **CONSUMER CREDIT: CONTRIBUTION TO THE AVERAGE ANNUAL GROWTH RATE BY SEGMENT**
(PERCENTAGE POINTS)



Source: BBVA Research based on Banxico and INEGI data

Figure 2a.12 **CORRELATION COEFFICIENT BETWEEN THE ANNUAL GROWTH RATES OF REAL AVERAGE IMSS WAGES AND THE GROWTH RATE FOR PAYROLL LOANS** (T = CURRENT MONTH; T-I = PREVIOUS ITH MONTH)

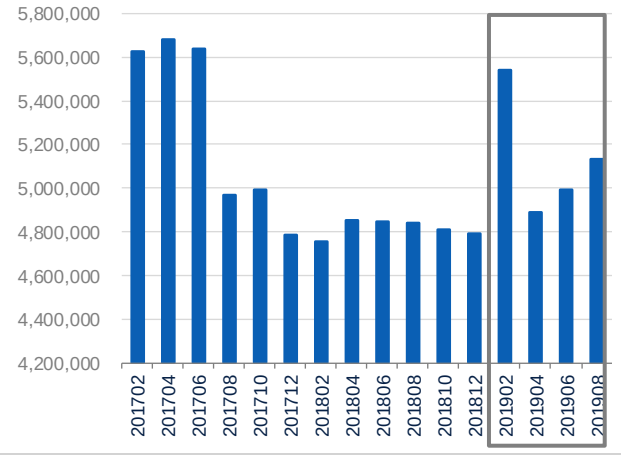


Correlation graph with data from January 2015 to September 2019.
Source: BBVA Research with Banxico and INEGI data

Note that, on the one hand, there were no significant changes to the percentage structures for the different components of consumer credit in September 2019 compared with the previous year and the average annual real growth rate from October 2018 to September 2019 was similar to that of 2018 (2.2% vs. 2.1%). Differences in the growth rate of each segment were reflected in changes in contributions to total growth. The most significant changes were in the contribution to CC growth, which dropped from 0.7 pp in 2018 to 0.4 pp in September 2019. The category of "other" consumer credit went from a negative (-0.3) to a positive (0.1) contribution. On the other hand, personal loans switched from a positive contribution of 0.4 pp to a negative one of -0.4 pp. Finally, there was a significant increase in the contribution of payroll loans to growth, from 0.1 pp to 1.0 pp. In other words, the expansion of consumer credit in the twelve months from October 2018 to September 2019 was due to growth in loans for consumer durables (particularly cars) and the expansion of payroll loans.

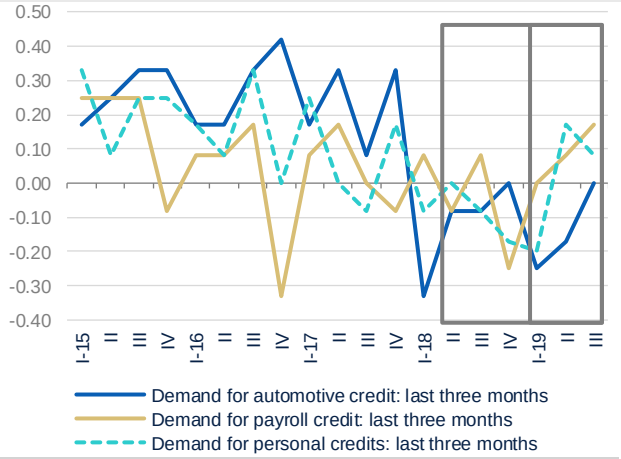
The greater dynamism of consumer credit extended through payroll loans in 2019 is partly explained by the average real wage growth of registered IMSS workers, since the greater the growth of average wages in real terms the greater the amount that can be lent. This means that there is a positive relationship between the growth of payroll loans and growth in real average IMSS wages (Figure 2a.12). It should be noted that payroll lending is intended for formal workers, particularly those registered with the IMSS.

Figure 2a.13 **NUMBER OF PAYROLL LOANS REGISTERED EVERY TWO MONTHS** (FIGURES IN UNITS)



Source: BBVA Research based on CNBV data

Figure 2a.14 **DEMAND FOR CONSUMER CREDIT BY SEGMENT FOR THE LAST THREE MONTHS** (DIFFUSION INDEXES)



Source: BBVA Research based on Banxico data Survey on general conditions and standards in the credit market, consumer

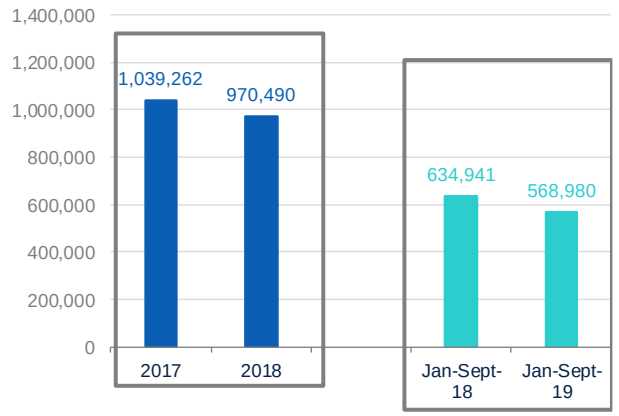
Data from the National Banking and Securities Commission (CNBV) indicate that in the period January-August 2019, the average number of payroll loans granted increased 13.7% compared with the same period for 2018, surpassing the average for 2018 by just over 4.8 million loans in 2018 to almost 5.5 million in 2019 (Figure 2a.13). The increase in the number of payroll loans extended over 2019 is another factor explaining the growth of this type of consumer loan in the first nine months of 2019. According to the results of the Banco de México (Banxico) quarterly survey on the general lending conditions for the different components of consumer credit, the increase in payroll loans in the first nine months of 2019 came from an increase in demand, particularly in the second and third quarters (Figure 2a.14).

However, the recovery of payroll lending dynamism may also be associated with the regulatory changes implemented at the end of last year.[2] These changes allow, among other things, users who have payroll accounts to obtain a payroll loan from an institution other than the one that administers their account. This provision may have increased competition among banking institutions to extend this type of loan to workers applying for it. This could also explain the increase in the number of payroll loans extended over the course of 2019.

However, the slowdown in lending for consumer durables, particularly cars, is mainly explained by the 7.5% contraction of sales of light vehicles from January-September 2019 compared to the same period in 2018. Note that from June 2017 a process began of negative annual growth rates in sales of these vehicles. The only exception was January 2019. Monthly sales of these vehicles increased by 1.9% in that month. It should be noted that, while annual car sales have been in decline for a little more than two years, this is also reflected in the number of cars sold with financing, whether banking or non-banking (Figure 2a.15). In this regard, comparing January-September 2019 with January-September 2018, sales of cars with financing reduced by 10.4%.

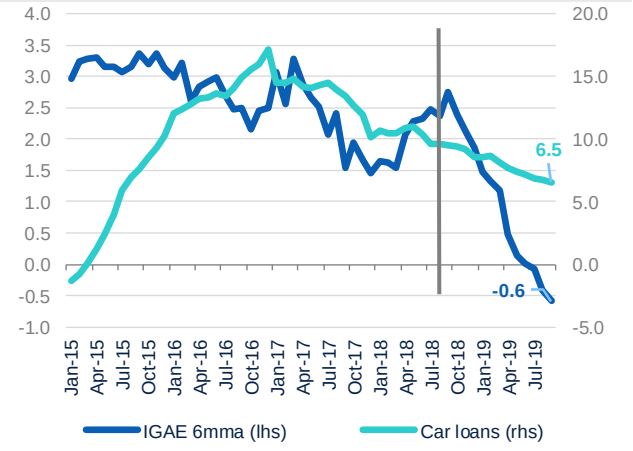
2: On October 28, 2018 and April 30, 2019, the Bank of Mexico published Circular 15/2018 and Circular 07/2019 respectively, with provisions concerning the use of labor benefits as support for financial services contracted by workers.

Figure 2a.15 **NUMBER OF LIGHT VEHICLES SOLD IN THE INTERNAL MARKET**
(FIGURES IN UNITS)



Source: BBVA Research based on AMDA data, Internal Automotive Market Report

Figure 2a.16 **CAR LOANS AND GLOBAL ECONOMIC ACTIVITY INDEX (IGAE)**
(REAL ANNUAL VAR %)



Source: BBVA Research based on INEGI data

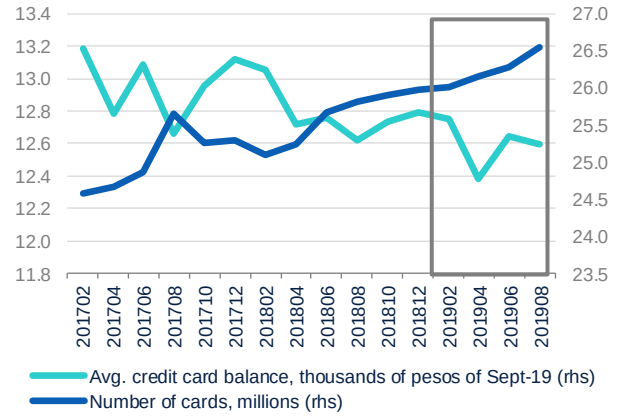
The slowdown in the growth rate for car loans reflects the lower rate of car sales. In particular, data from the Mexican Association of Automobile Distributors (AMDA) also indicate that sales of financed cars (banking and non-banking) dropped in January-September 2019 compared with the same nine month period for 2018. Banxico's quarterly survey of general conditions and consumer credit market standards indicates that, since the first quarter of 2018, demand for car loans has declined. It is possible that the lower car sales in particular are associated with several factors such as the contraction of average IMSS real wages in 2017, the slowdown in the growth rate of formal IMSS employment, which occurred in the second half of 2018 and has continued to date, plus the significant slowdown in economic activity in the first nine months of 2019 (Figure 2a.16).

Another factor that could explain the lower degree of dynamism of bank credit for car loans is the fact that in the last five years the number of cars in the country has been renewed or increased significantly. For instance, according to the AMDA, domestic sales of domestic vehicles in the country rose to just under 7.1 million from 2014 to 2019, of which 4.6 million were financed. In addition, in 2017 and 2018, 68.4% and 67.3%, respectively, of car loans were extended for terms of more than 36 months. However, the above figures mean that a large number of people have recently renewed or bought a car, and it will be several more years before they do so again. Furthermore, the long-term loan period in terms of months for car loans also indicates that these customers' ability to pay is compromised until they finish paying off this loan, which is another factor limiting the demand for car loans.

Since 2017, the current consumer credit portfolio for credit cards (CCs) has had low real annual growth rates. For instance, the average annual real growth rate granted by this instrument in 2017 was 2.5%. In 2018, it fell to 1.7% and in the first nine months of 2019 its annual real average rate was 1.1%. On the one hand, CNBV data indicate that the number of credit cards has increased since the second half of 2018 while the actual average CC balance decreased from 2017, possibly because of the contraction in real wages since the beginning of that year (Figure 2a.17). After that year, the decline in the actual average CC balance continued, possibly because of the slower growth rate in formal

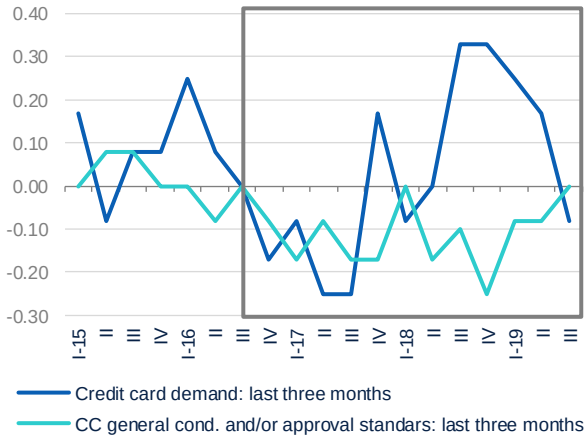
IMSS employment from the second half of 2018, the significant slowdown in economic activity, and particularly the decline in private consumption throughout 2019.

Figure 2a.17 **NUMBER OF CREDIT CARDS AND AVERAGE CREDIT CARD BALANCE** (NUMBER, MILLIONS; BALANCE, THOUSANDS OF PESOS)



Source: BBVA Research based on CNBV and INEGI data

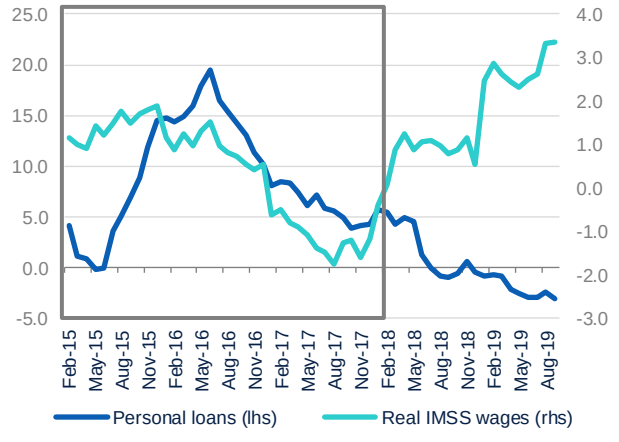
Figure 2a.18 **GENERAL CONDITIONS FOR CREDIT CARDS (CC). SUPPLY AND DEMAND, LAST THREE MONTHS** (DIFFUSION INDEX)



Source: BBVA Research with Banxico data, Survey on general conditions and standards in the bank credit market

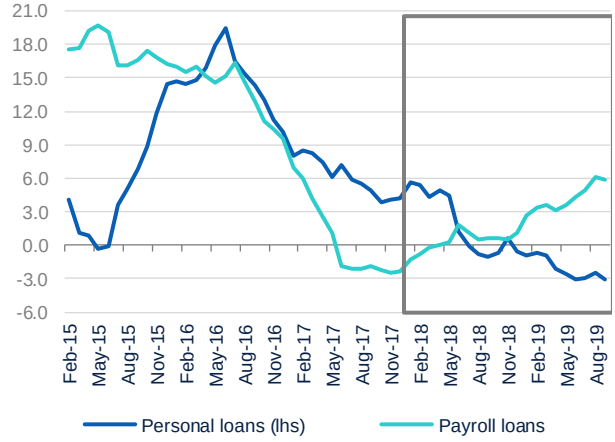
It should be mentioned that while demand for consumer credit through CCs increased from the second quarter of 2018 to the third quarter of 2019 (Figure 2a.18), the supply conditions applicable to this credit instrument remained restrictive in those years.

Figure 2a.19 **PERSONAL LOANS AND REAL IMSS AVERAGE WAGES** (REAL ANNUAL VAR %)



Source: BBVA Research based on Banxico data

Figure 2a.20 **PERSONAL LOANS AND PAYROLL LOANS** (REAL ANNUAL VAR %)



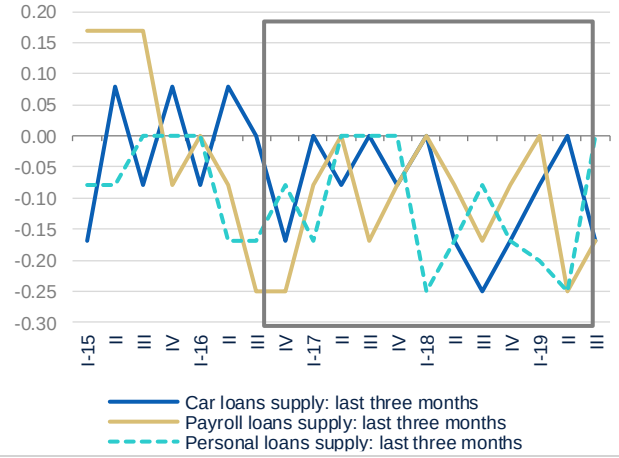
Source: BBVA Research based on Banxico, CNBV and SHF data

Personal loans began to slow down throughout 2017. In that year the average annual real growth rate of this type of loan was 6.2%, and while real average growth of 2018 fell to 2.0%, negative real annual variations began in July of that year. In the first nine months of 2019, negative annual growth rates continued in this credit category. On the one hand, it can be considered that the contraction in average real IMSS wages affected demand in this category of consumer credit (Figure 2a.19, triangle area). On the other hand, when the real wages began to recover in February 2018 and the personal loans first continued to decelerate and subsequently began to contract in real terms, this may be because from 2018 onwards, personal loans began to be replaced with payroll loans (Figure 2a.20). This point is illustrated if it is taken into account that from January 2018 to September 2019 the correlation coefficient between these two types of consumer credit was negative and high, at -0.82.

2a.2.2 Consumer credit: perspectives and conclusions

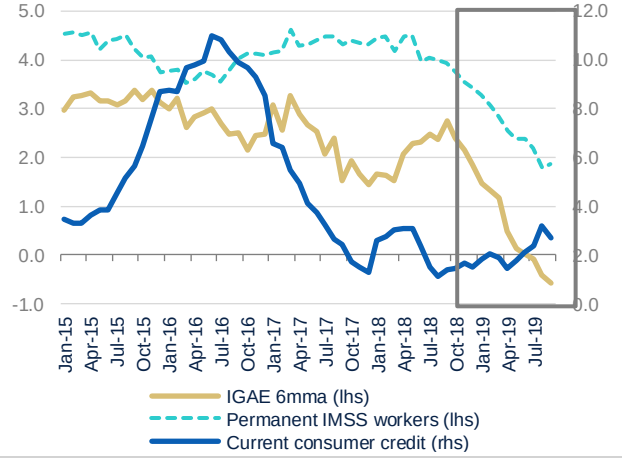
Finally, it is important to note that, according to Banxico's quarterly survey, from the end of 2016 to the third quarter of 2019, supply conditions for car, payroll and personal loans and CC credit were restrictive (Figures 2a.18 and 2a.21). In this regard, it can be considered that from 2017 onwards the growth rate for the components of consumer credit slowed significantly due to the lower client demand in the face of contracting incomes, in light of the contraction of average IMSS real wages, the significant decelerations of formal IMSS employment and economic activity. This is partly reflected in the evolution of demand for the main categories of consumer loans according to Banxico surveys on the general conditions for granting these loans. It must be added to the above, as the Banxico survey also points out, that there has been caution in the supply side of granting this type of loan.

Figure 2a.21 **CAR, PAYROLL AND PERSONAL LOANS, GENERAL CONDITIONS OF LENDING: SUPPLY, LAST THREE MONTHS** (DIFFUSION INDEXES)



Source: BBVA Research based on Banxico data

Figure 2a.22 **TOTAL CONSUMER CREDIT, PERMANENT IMSS WORKERS, AND IGAE** (REAL ANNUAL VAR %, AND 6-MONTH MOVING AVERAGE (6MMA) FOR IGAE)



Source: BBVA Research based on Banxico, CNBV and SHF data

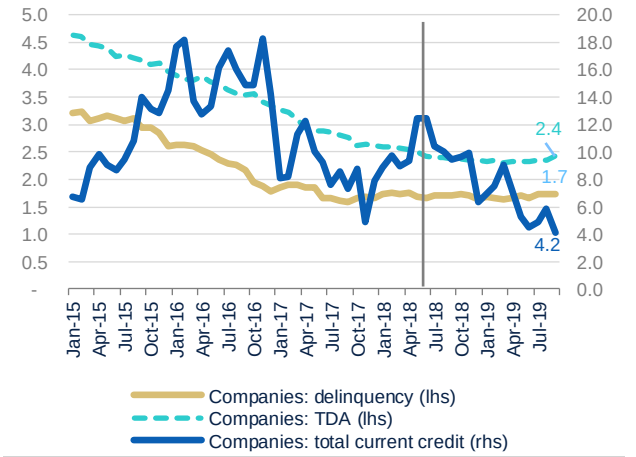
The points in the above paragraph indicate that the lower demand for consumer credit observed from 2017 (Figure 2a.21) coupled with supply-side caution are reflected in the low real growth of this type of credit. This, in turn, has prevented the deterioration or delinquency of consumer credit from increasing, so the quality of the portfolio has remained stable. The above can be seen based on the delinquency rate (IMOR) or the Adjusted Deterioration Rate

(ADD) of consumer credit (Figure 2a.5), as these indicators of deterioration were not accentuated by adverse events such as the rapid slowdown in economic activity seen by IGAE and formal IMSS employment (Figure 2a.22). In this respect, the increased dynamism of healthy growth in consumer credit will remain until the macroeconomic environment improves and both economic activity and formal IMSS employment grow steadily at high rates to increase both income and the number of possible customers of this type of credit.

2a.3 Business loans: recent developments

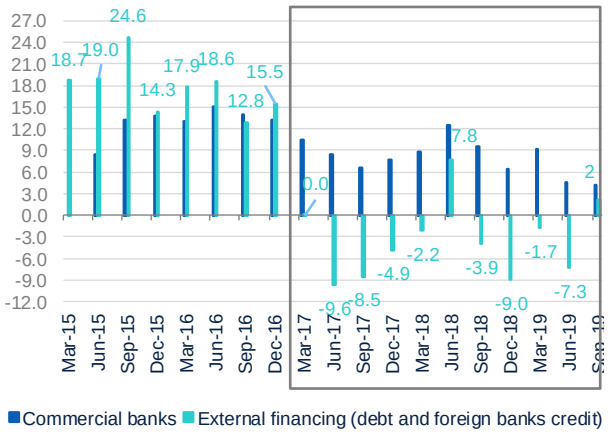
From December 2017, dynamism in the annual real growth rate of business loans extended by commercial banks increased and from that month until November 2018, its average annual real growth rate was 9.9%. From December 2018, the growth rate for this loan portfolio began to decline, and the average rate from this last month to September 2019 was 6.2%. Moreover, this growth slowed faster in the five months between May and September 2019 (5.3% average real rate). For this last month, its real annual growth of 4.2% (Figure 2a.23) was the lowest on record for just under five years, given that in December 2014 its growth rate was 4.0%.

Figure 2a.23 **BUSINESS LOANS: CURRENT PORTFOLIO, DELINQUENCY RATE AND TDA** (REAL ANNUAL VAR % AND %)



Source: BBVA Research based on Banxico and CNBV data

Figure 2a.24 **LOANS TO COMMERCIAL BANK COMPANIES AND EXTERNAL FINANCING TO COMPANIES** (REAL ANNUAL VAR %)



Source: BBVA Research based on quarterly Banxico data

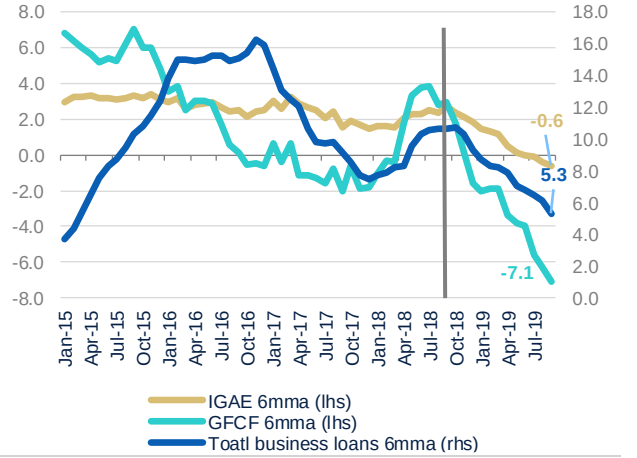
It should be mentioned that the growth of business loans from 2017 was due to the fact that credit from the country's commercial banking replaced the external financing (debt issues and foreign bank lending) which large companies obtained. The substitution between these sources of financing meant that the growth of one (domestic bank credit) was accompanied by the contraction of the other (foreign financing). In other words, while the business loans extended by domestic banks grew from the first quarter of 2017 (1Q17) to 3Q19, external financing only did so in two quarters in that period (Figure 2a.24).

The lower growth rate of the country's bank credit to companies from the end of 2018 is associated with lower dynamism and stagnating economic activity. On the one hand, the economic activity measured by the Global Economic Activity Index (IGAE) decelerated rapidly (Figure 2a.25). Thus, in October 2018, the annual growth of the IGAE was

2.6% and in September 2019, it fell to 0.1%. Its average growth of the last 12 months was 0.3% and the average nine-month rate of 2019 was still lower and 0.0%. Additionally, the performance of the Gross Fixed Capital Formation index (GFCF) was worse than that of the IGAE. For instance, the average annual growth rate of the GFCF index from October 2018 to September 2019 was negative at -4.5%. From January-September 2019, this average rate was also negative at -4.8%.

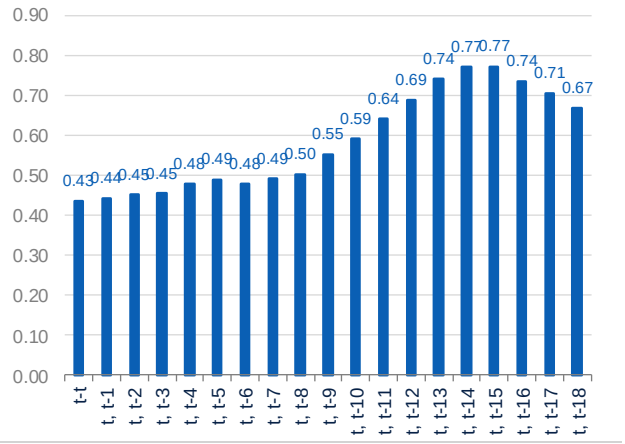
It should be mentioned that there is a positive (direct) relationship between the growth rate of business loans and that of the IGAE. This is given in the current period (t) and as time passes (there is a lag) this relationship increases, as indicated by the correlation coefficient between these two variables (Figure 2a.26). In other words, if economic activity grows in the current period, months later the demand for business loans will increase, as the growth of income or economic activity generates financing needs by private companies, either because they need to increase their working capital or because the economic growth itself generates new investment opportunities. On the contrary, if economic activity is stagnant, companies cease to require credit because they do not need to increase their working capital and the stagnation of the economy does not generate new investment opportunities.

Figure 2a.25 **BUSINESS LOANS, IGAE AND GFCF** (6MMA AND REAL ANNUAL VAR %)



Source: BBVA Research based on Banxico and INEGI data

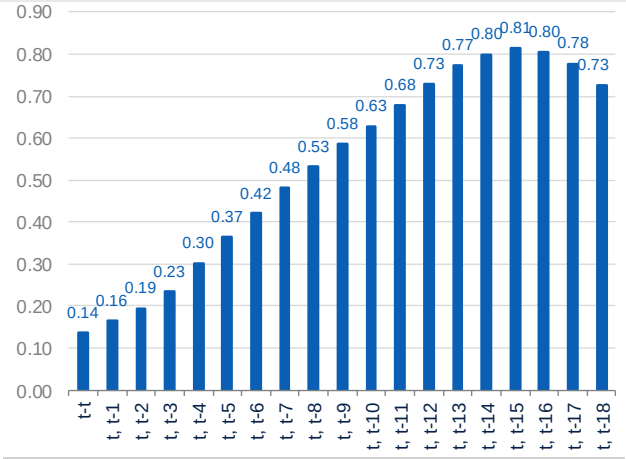
Figure 2a.26 **CORRELATION COEFFICIENT BETWEEN THE GROWTH RATES OF LOANS TO COMPANIES AND THE IGAE** (6MMA. T = CURRENT MONTH; T-I = PREVIOUS ITH MONTH)



Source: BBVA Research based on Banxico and INEGI data

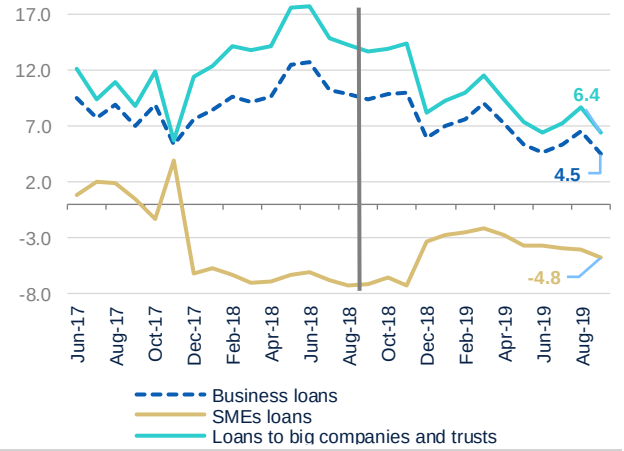
There is also a positive relationship between the growth rate of real annual credit to companies and the growth rate of gross fixed investment (GFCF). The more investment flows into new projects with an acceptable risk profile, the more demand for bank credit will increase to finance these projects. The positive relationship between growth rates is manifested by the correlation coefficient of their growth rates, in addition to the fact that in this case there is also a lag between expansion of investment and higher demand for bank credit (Figure 2a.27). In this regard, if the GFCF is contracting this implies that the private sector does not require bank credit because there are currently no profitable investment projects.

Figure 2a.27 **CORRELATION COEFFICIENT BETWEEN GROWTH RATES OF BUSINESS LOANS AND THE GFCF INDEX** (6MMA, T = CURRENT MONTH; T-I = PREVIOUS ITH MONTH)



Source: BBVA Research based on Banxico and INEGI data

Figure 2a.28 **CURRENT BUSINESS LOANS BY COMPANY SIZE** (REAL ANNUAL VAR %)



Source: BBVA Research based on CNBVI data

2a.3.1 Growth of credit and delinquency rate (IMOR) by company size[3]

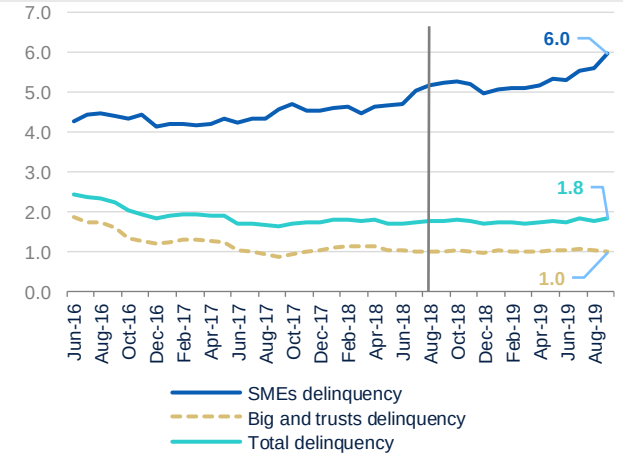
Moreover, and according to the CNBV information available from June 2016 to September 2019, business loans are divided into two segments. There is credit granted to small or medium size enterprises or SMEs, and that extended to large companies and trusts. The balance of credit granted to SMEs by commercial banks as a percentage of their total in 2018 and in January-September 2019 was 18.4% and 17.0%, respectively. The remaining percentage (2018, 81.6%; Jan-Sept-19, 83%) was bank lending to large companies and trusts.

According to available CNBV data, the annual real growth rate of credit to SMEs was negative from October 2017 to September 2019, while that of large companies and trusts was positive, though it has been continuously losing dynamism over the last twelve months (Figure 2a.28). These data indicate that the growth in total lending from commercial banking to companies, from the last quarter of 2017 to September 2019, was basically only due to that channeled to larger companies. It should also be mentioned that bank credit channeled to large companies also slowed down significantly. For example, its annual real growth rate for March 2019 was 11.6% and six months later, in September 2019, it fell to 6.4%. If the stagnation in economic activity is prolonged and the decline in gross fixed investment continues, it can be considered that the process of slowing credit to large enterprises will persist as will the contraction of credit to SMEs.

The CNBV information also references the delinquency index (IMOR) of the loan portfolio by company size. According to data from this source, SMEs are also marked by a higher delinquency rate than larger companies. For instance, in September 2019 the IMOR of the credit extended to SMEs was 6.0%, while that of the larger companies was much smaller at 1.0% (Figure 2a.29).

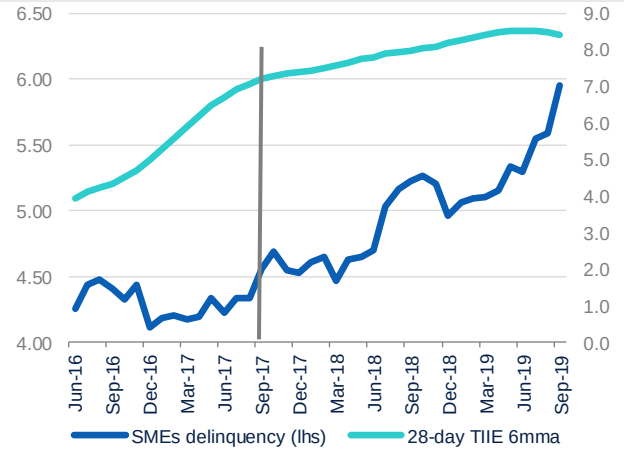
3: This section is based on information from the National Banking and Securities Commission that it publishes in its Information Portfolio, New Commercial Portfolio, Report 040-11L, Business size.

Figure 2a.29 **DELINQUENCY INDEX (IMOR) OF LOANS TO BUSINESSES ACCORDING TO SIZE** (%)



Source: BBVA Research based on Banxico and INEGI data

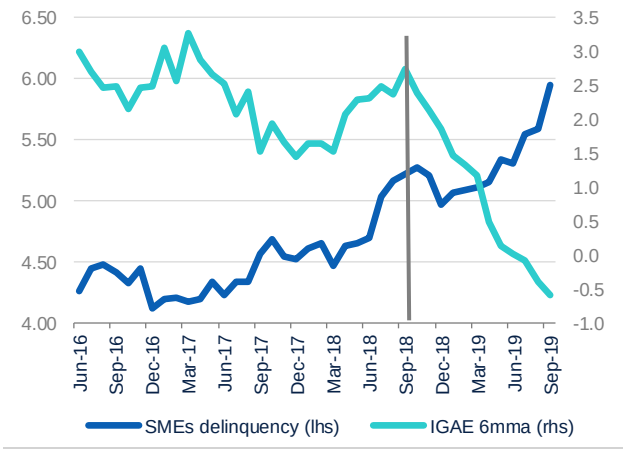
Figure 2a.30 **DELINQUENCY INDEX (IMOR) OF SMEs AND TIIE28 6MMA** (%)



Source: BBVA Research based on CNBVI data

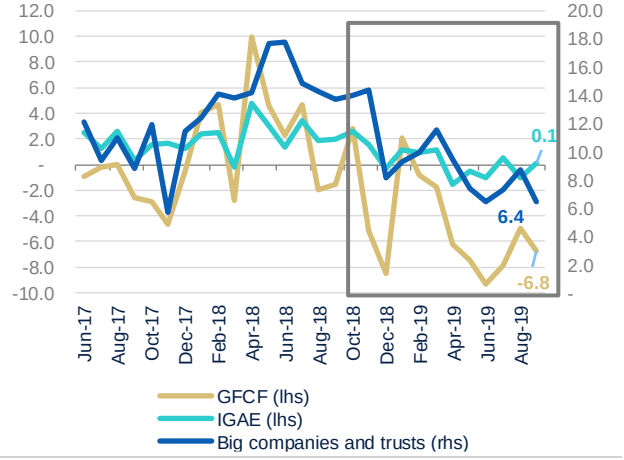
It should be mentioned that the increase in the benchmark interest rates, such as the 28-day Interbank Equilibrium Interest Rate (TIIE28) and the lower economic activity explain the increase in the delinquency rate of SMEs. However, there has to be a positive relationship between the IMOR of smaller companies and the behavior of TIIE28 (Figure 2a.30). For its part, the positive relationship between these two variables is observed by a positive correlation coefficient, which is 0.79 for the months November 2016 to September 2019.

Figure 2a.31 **SME DELINQUENCY AND IGAE GROWTH RATE**
(6MMA, REAL ANNUAL VAR % AND %)



Source: BBVA Research based on CNBV and INEGI data

Figure 2a.32 **GROWTH RATE OF LOANS TO LARGE COMPANIES AND TRUSTS, IGAE AND GFCF** (REAL ANNUAL VAR %)



Source: BBVA Research based on CNBV and INEGI data

On the other hand, there is a negative relationship between the delinquency rate of SMEs and the growth rate of the IGAE. The correlation coefficient between these two variables for the same period of the previous case is -0.75 (Figure 2a.31). In other words, the increase in TIIE28 from the second half of 2016 and the significant slowdown of economic activity affected the SMEs capacity to pay and generate cash flow. While benchmark rates are expected to begin to decline in the near future, the pace at which they do so along with the time it takes economic activity to grow again are the two factors that will continue to determine growth prospects and the IMOR of credit to SMEs.

With regard to credit to larger companies, while their delinquency rate declined from the last quarter of 2017 to September 2019 (Figure 2a.29), the rate of growth of the credit they receive decreased as a result of the contraction of gross fixed investment and the slowdown and stagnation of economic activity (Figure 2a.32). To the extent that economic activity remains stagnant or does not grow at relatively high rates and sustainably, there will not be great demand for new business loans and the real annual bank growth rate will continue to decline.

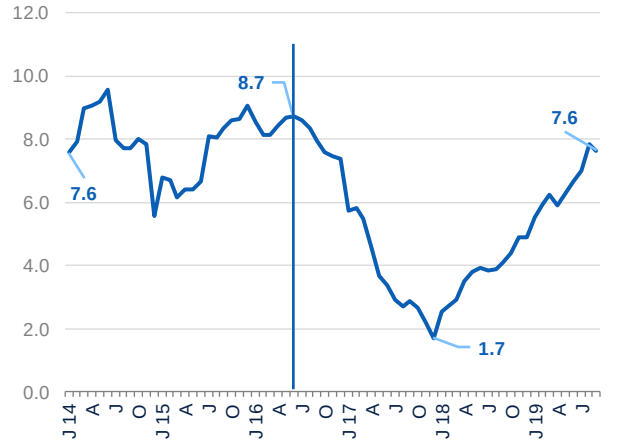
2a.3.2 Business loans: Conclusions and perspectives

The growth of bank credit to companies which took place from the second half of 2017 and in 2018 was largely due to the process of replacing sources of business financing. During this period, demand for domestic bank loans from companies increased and demand for foreign sources of financing decreased. On the other hand, the significant process of economic slowdown that began in the last quarter of 2018 and which has been marked by stagnating economic activity in the first nine months of 2019, has also been reflected in a significant decrease in the growth rate of bank credit to companies. This is a consequence of the important relationship that this type of lending has with the macroeconomic environment, particularly economic activity. To the extent that the country's GDP does not regain its dynamism (GDP growth from 4Q18 to 3Q19 was only 0.3% and GDP growth from 1Q19 to 3Q19 was 0.0%), then business loans from banks will continue to slow.

2a.4 Mortgage loans. Recent developments

This is the only category of the three categories of commercial bank credit to the non-financial private sector with a growth rate that increased over the course of 2019. It should be mentioned that the dynamism of this type of credit began to decelerate after June 2016, as its annual real growth rate dropped from 8.7% in that month to 1.7% in December 2017. As of 2018, the dynamism of this credit portfolio accelerated (Figure 2a.33). The reasons for and details of the reactivation of bank mortgage loans are presented in the Special Items section, in the article entitled "Determinants and Evolution of Mortgage loans in Mexico".

Figure 2a.33 **MORTGAGE LOAN PORTFOLIO** (REAL ANNUAL VAR %)



Source: BBVA Research based on Banxico data

Table 2a.1 **REAL GDP GROWTH, GROWTH EXPECTATIONS FOR 2020-22**

Survey on Expectations of Specialists in Economics of the Private Sector: December 2018 and 2019

	Dec-18 survey		Dec-19 survey	
	Mean	Median	Mean	Median
2019	1.89	1.80	0.03	0.00
2020	1.96	2.00	1.10	1.10
2021	2.18	2.20	1.79	1.80
2022			2.03	2.00
Average next 10 years	2.37	2.30	2.05	2.00

Source: BBVA Research based on Banxico survey responses

2a.5 Total non-financial private sector credit: Conclusions and perspectives

According to the survey of private sector economic specialists' expectations published quarterly by Banxico, the country's GDP was expected to grow 1.9% at the beginning of 2019. However, over the year, GDP growth expectations were adjusted as indicated by the central bank's survey, and the GDP growth rate in 2019 is currently expected to be 0.0% (table 2a.1). In addition, and according to the December 2019 survey of private sector economic specialists' expectations, GDP growth in 2020 is expected to be 1.1%.

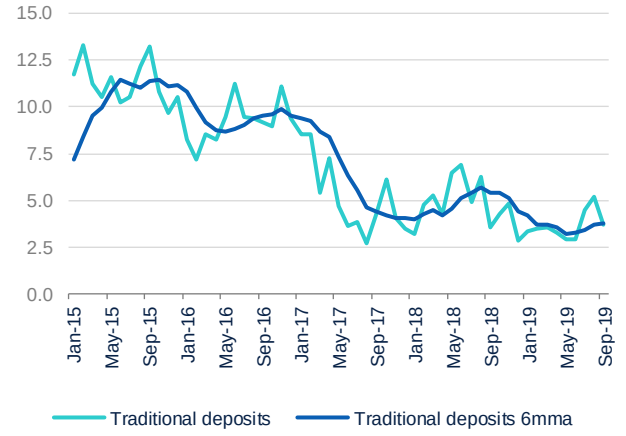
To the extent that GDP growth for 2020 and the next few years is limited and that it may also be subject to various types of downside risks, bank lending to the non-financial private sector can be expected to have limited momentum in terms of increasing its growth rate in the short and medium term. This is largely due to the fact that, in many cases, such as business loans, loan repayment, or loan servicing, the expected flows from income growth come from sales (in the case of companies), or wages (in the case of individuals). If this does not happen, economic agents will not increase their demand for credit due to uncertainty in their source of income. In addition, in the case of families, consumer and mortgage loans are also considered to be the result of the presence of new clients, that is to say, an increase in formal IMSS employment. The latter increases if economic activity increases. In other words, the three components of credit to the non-financial private sector (consumer credit, home loans and business loans) require a more rapid environment of economic activity to grow at a higher rate and with bounded risks to maintain the quality of the portfolio.

2.b Commercial bank deposits lose dynamism

2b.1 The impact of the slowdown of economic activity on traditional deposits counteracts the momentum of a high interest rate environment

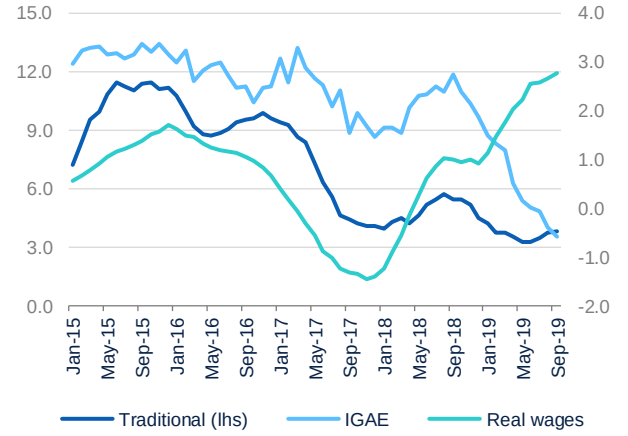
In September 2019, traditional deposits in commercial banks (sight deposits + term deposits) registered a real annual growth rate of 3.7% (6.8% nominal). With this result, the average real annual growth rate for traditional deposits between January and September was 3.7%, 1.4 percentage points (pp) lower than the average observed in the same period of 2018. In the first nine months of 2019, real growth rates of traditional deposits continued to fall below double digits (Figure 2b.1) and show a weak growth rate. In fact, in September 2018, a slowdown began in traditional deposit balances, mainly as a result of the decline in the economic activity growth rate, which was dominated the positive effect of higher interest rates and the recovery of real wages observed in the same period (Figure 2b.2).

Figure 2b.1 **TRADITIONAL DEPOSITS (SIGHT + TERM)** (REAL ANNUAL VARIATION, %)



Source: BBVA Research based on Banco de México and INEGI data.

Figure 2b.2 **TRADITIONAL DEPOSITS, IGAE AND REAL WAGES** (REAL ANNUAL VARIATION, 6-MONTH MOVING AVERAGE (6MMA), %)

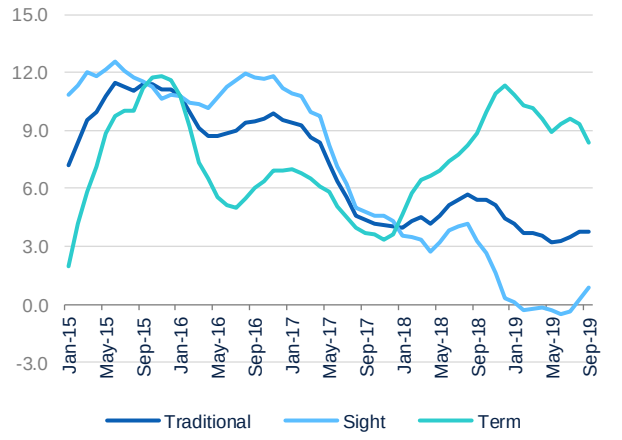


Source: BBVA Research based on Banco de México and INEGI data.

By deposit type, sight and term deposits showed different trends (Figure 2b.3). In particular, during the course of 2019, term deposits maintained their rate of expansion, reaching an average real growth of 8.5% in the first nine months of the year, slightly below the average growth of 8.7% in the same period of 2018. This result was mainly due to the higher interest rate environment, which maintained the relative attractiveness of this type of savings instrument. On the other hand, growth of sight deposits continued to decrease. Between January and September 2019, average real growth of sight deposits was 0.6%, significantly below the average growth of 2.9% observed in the same period of the previous year. This loss of dynamism was partly due to the slowdown in private consumption, as agents maintain this type of deposit primarily for transactional purposes. As such, as at September 2019, term deposits (41.1% of traditional deposits) accounted for the majority of the 3.7 pp average growth in traditional deposits, contributing 3.3 pp between January and September 2019, while sight deposits (58.9% of traditional deposits) contributed just 0.3 pp (Figure 2b.4).

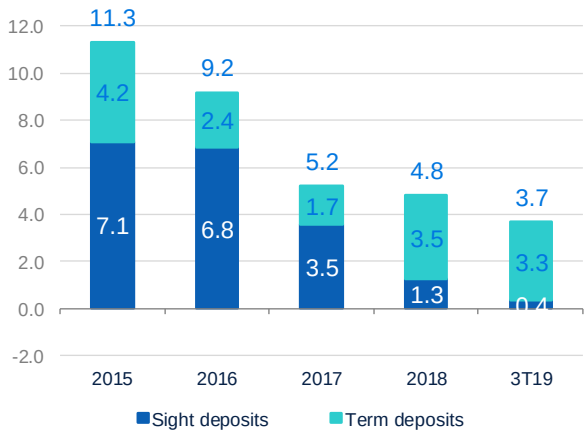
Moving forward, the expected cycle of easing monetary policy and economic activity could change the dynamics of sight and term deposits. (See 3a. “Substitution effect between sight deposits and term deposits”).

Figure 2b.3 **TRADITIONAL DEPOSITS BY DEPOSIT TYPE.** REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.4 **CONTRIBUTION TO AVERAGE GROWTH OF TRADITIONAL DEPOSITS BY DEPOSIT TYPE,** (PP)



Source: BBVA Research based on Banco de México and INEGI data

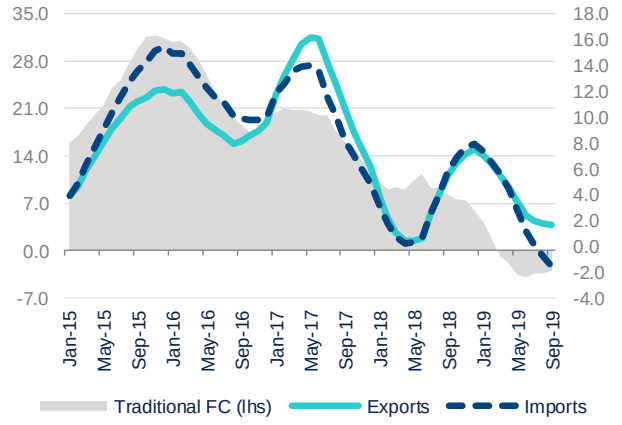
In the breakdown by currency, lower growth of deposits in foreign currency (which account for 15.7% of traditional deposits) stands out, contracting by -2.9% in real terms (0.8% in nominal terms) between January and September 2019. This figure is significantly below the real growth rate of 8.2% observed in the same period of 2018. It should also be noted that the depreciation in the exchange rate observed during the last 12 months (2.9% on average) has contributed to increasing the value of foreign currency deposits in Mexican pesos.

The reduced dynamism of foreign currency deposits is partly due to the slowing growth of global trade flows. Average real annual growth of exports fell from 2.8% to 2.1% between January to September 2018 and the same period of 2019, while imports contracted by -0.1% in January to September 2019 compared to growth of 3.0% in the same period of 2018 (Figure 2b.5). In addition, meeting the deadlines associated with the capital repatriation program implemented in 2017[4] may also have had a negative impact on the performance of deposits in foreign currency. In particular, the program established that, in order to receive the tax benefit offered, capital returned to the country must be invested and remain invested in Mexico for at least two years. The dynamics observed in the course of 2019 for deposits denominated in foreign currency indicate that the incentive for using this type of deposit (whether to maintain or mobilize repatriated resources between different investment alternatives) may have decreased as the deadline set to obtain this tax benefit gradually expired.

4: On January 18, 2017, the Ministry of Finance and Public Credit (SHCP) published in the DOF (*Diario Oficial de la Federación* – Official Gazette of the Mexican Federation) the “Decree granting various administrative powers in relation to income tax (ISR) in connection with deposits or investments received in Mexico,” whereby individuals and legal entities residing in Mexico or abroad with a permanent establishment in the country that had obtained income from direct and indirect investments held abroad could repatriate capital to regularize their tax position. The details of the purposes permitted for investment are detailed in Article Six of that decree.

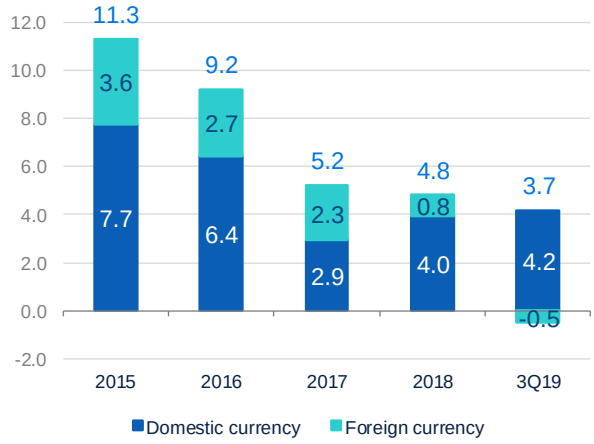
Meanwhile, traditional deposits in local currency registered an average real growth rate of 5.0% (9.1% in nominal terms) between January and September 2019, slightly above the average growth of 4.5% observed in the same period of the previous year. As such, in the first nine months of 2019, local currency deposits accounted for 4.1 pp on average of the 3.6 pp of growth in total traditional deposits, while foreign currency deposits accounted for a decrease of 0.5 pp (Figure 2b.6).

Figure 2b.5 **TRADITIONAL DEPOSITS IN FOREIGN CURRENCY**
(REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.6 **CONTRIBUTION TO AVERAGE GROWTH OF TRADITIONAL DEPOSITS BY CURRENCY TYPE** (PP)



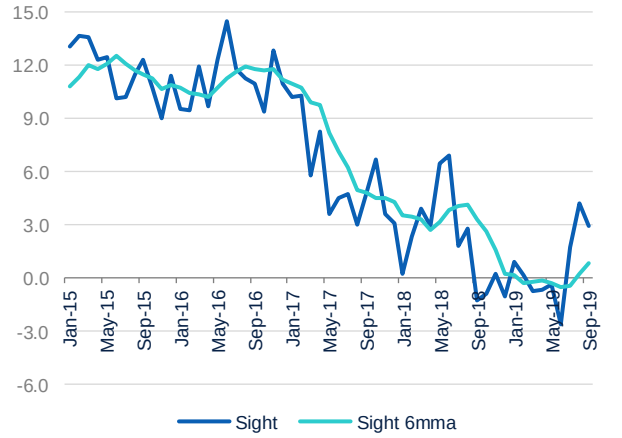
Source: BBVA Research based on Banco de México and INEGI data

2b.2 Slowdown in private consumption has a negative impact on the performance of sight deposits

In September 2019, sight deposits (60.7% of traditional deposits) registered real growth of 2.9% (6.0% in nominal terms), compared to the contraction of -1.2% in September 2018. As a result, demand deposits averaged real annual growth of 0.6% (4.5% in nominal terms) in the first nine months of 2019, less than a quarter of the average real growth rate observed in the same period of 2018 (2.9%). It should be noted that, starting from September 2018, growth of demand deposits began to slow and the contraction lasted for 10 months, with average annual growth of -0.6% during that period. It was not until 3Q19 that demand deposits showed signs of an incipient recovery, and the average real growth rate reached 3.0% between July and September (Figure 2b.7).

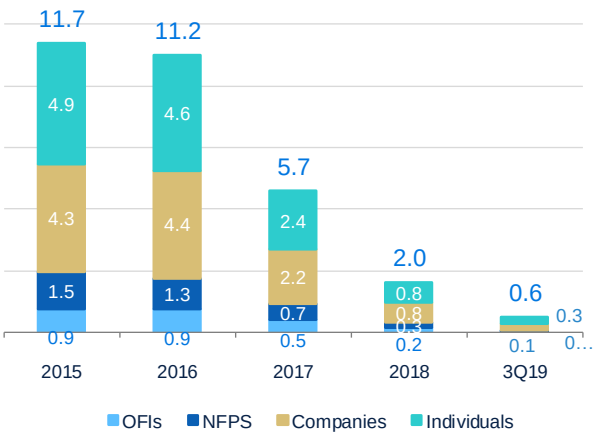
Between January and September 2019, the dynamism observed in sight deposits was underpinned by growth in individual and corporate balances, which made an equal contribution to the average real growth rate (0.2 pp each), whereas demand deposits from the non-financial public sector (NFPS) contributed 0.1 pp and other financial intermediaries (OFIs) remained flat (Figure 2b.8).

Figure 2b.7 **SIGHT DEPOSITS** (REAL ANNUAL VARIATION, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.8 **CONTRIBUTION OF SIGHT DEPOSITS TO AVERAGE GROWTH** (PP)

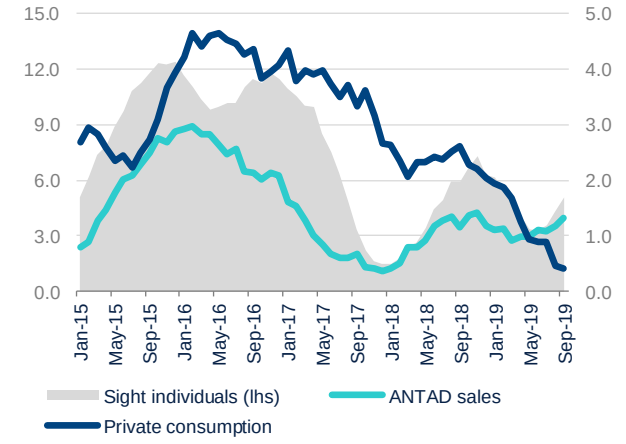


Source: BBVA Research based on Banco de México and INEGI data

Sight deposits by individuals (43.5% of total demand deposits) reached real annual growth of 6.1% (9.2% in nominal terms) in September 2019, above the 5.4% real growth rate observed in the same month of 2018. As a result, sight deposits by individuals saw real annual growth of 4.3% in the first nine months of 2019, below the average real growth of 4.9% observed in the same period of 2018. As they are used primarily for transactional purposes, the performance of demand deposits by individuals is due primarily to the slowdown in private consumption. In particular, as of the end of September 2019, INEGI's private consumption indicator for the domestic market registered real annual growth of 0.9%, less than half of the average growth rate between January and September 2018 (2.4%). Similarly, average real growth of the National Association of Supermarkets and Department Stores' (ANTAD) total sales indicator fell from 3.7% to 3.4% between January to September 2018 and the same period of 2019 (Figure 2b.9).

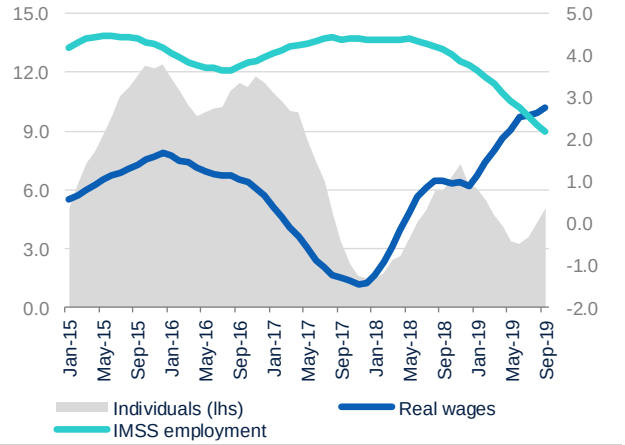
This decline in consumption occurred despite the recovery in real wages. Between January and September 2019, the wages of employees registered with the Mexican Social Security Institute (IMSS) saw real annual growth of 2.7%, compared to growth of 0.7% in the same period of 2018. On aggregate, the positive effect of this recovery in household purchasing power may have been offset by lower formal employment generation in the private sector (growth in the number of employees registered with the IMSS fell from 4.2% on average between January and September 2018 to 2.5% in the same period of 2019). This suggests that the total wage bill in the formal sector of the economy did not grow sufficiently to stimulate higher aggregate consumption (Figure 2b.10).

Figure 2b.9 **DEMAND DEPOSITS BY INDIVIDUALS, PRIVATE CONSUMPTION AND ANTAD SALES** (REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.10 **DEMAND DEPOSITS BY INDIVIDUALS, SALARY AND IMSS EMPLOYMENT** (REAL ANNUAL VARIATION, 6MMA, %)

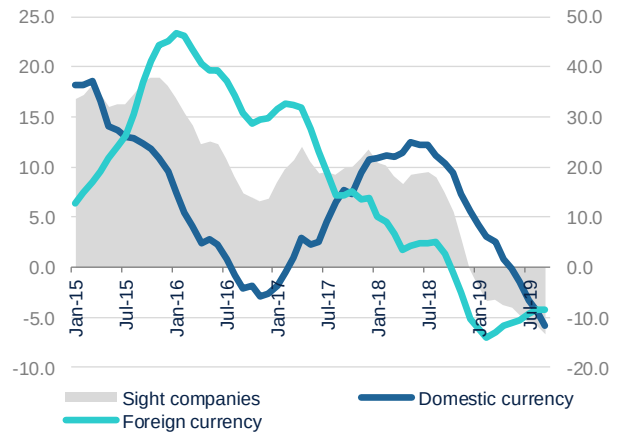


Source: BBVA Research based on Banco de México and INEGI data

Meanwhile, sight deposits by companies (37.6% of total sight deposits) registered a real annual contraction of -5.9% (-3.1% in nominal terms) in September 2019, accumulating six consecutive months of contractions in nominal terms and 13 months in real terms. As a result, the real annual growth of sight deposits by companies averaged -5.4% between January and September 2019, significantly below the average real growth rate of 7.3% between January and September 2018. The real contraction of sight deposits by companies can be explained by the lower growth of both foreign currency deposits and local currency deposits (Figure 2b.11).

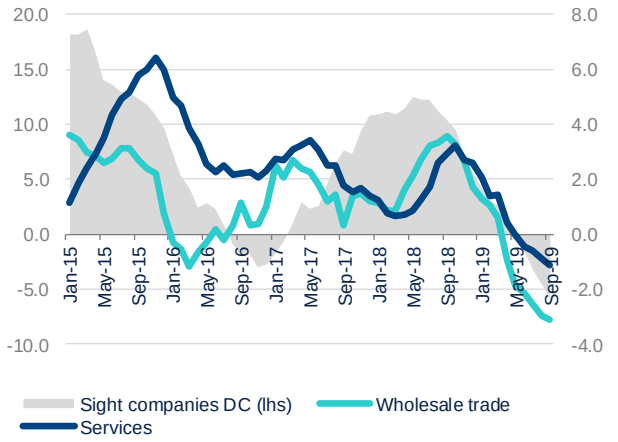
Between January and September 2019, foreign currency sight deposits by companies (which account for 33.5% of companies' total demand deposits) saw reduced dynamism compared to the same period of the previous year, moving from average real growth of 1.7% to an average contraction of -9.0%. As mentioned above, this decrease is underpinned both by the reduction in global trade flows and finalization of the deadline for the capital repatriation program. On the other hand, local currency sight deposits by companies (which account for 66.5% of companies' total demand deposits) also decreased, moving from real annual growth of 10.8% between January and September 2018 to a contraction of -3.3% in the same period of 2019. This loss of dynamism is associated with a slowdown in domestic consumption resulting in lower sales and negatively impacting companies' revenue sources, as reflected in INEGI's goods and services revenue indices. INEGI's wholesale revenue index contracted by -2.1% in January-September 2019 compared to growth of 2.5% in January-September 2018, while the services sector index contracted by -0.5% in the same period compared to growth of 1.9% in January-September 2018 (Figure 2b.12).

Figure 2b.11 **COMPANIES' SIGHT DEPOSITS BY CURRENCY**
(REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.12 **COMPANIES' SIGHT DEPOSITS IN LOCAL CURRENCY AND REVENUE INDICES**
(REAL ANNUAL VARIATION, 6MMA, %)

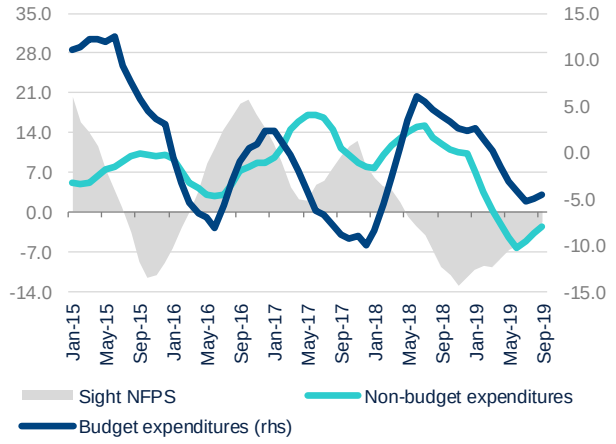


Source: BBVA Research based on Banco de México and INEGI data

Non-financial public sector (NFPS) sight deposits (which account for 8.5% of total sight deposits) registered real annual growth of 1.1% (4.2% in nominal terms) in September 2019, the first return to growth after 17 consecutive months of contractions. As a result of this trend, average real growth between January-September 2019 was -4.2%, which compares favorably to the contraction registered in the same period of the previous year (-6.0%). The cause of this downward trend in NFPS sight deposit balances may be due to underspending of budget amounts allocated. In September 2019, budget expenditure fell by -1.9% in real terms, significantly below the real growth of 5.0% reported in September 2018 and 3% below the amount allocated in the 2019 budget. It should be noted that this downward trend in spending is not associated with a slowdown in public sector revenue, which has been gradually recovering in real terms (in September 2019, public sector revenue saw real annual growth of 1.0%, compared to the contraction of -4.2% reported in September 2018). As will be outlined below, unspent budget resources in the NFPS may have been temporarily reallocated to bank savings instruments such as term deposits (Figure 2b.13).

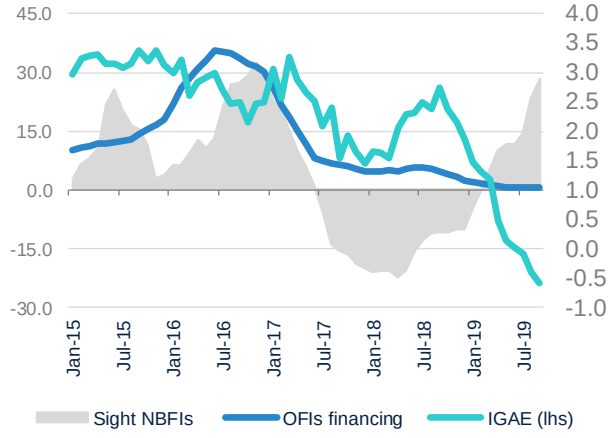
Finally, sight deposits by other financial intermediaries (OFIs, which account for 8.6% of total sight deposits) recorded real annual growth of 43.2% in September 2019 (47.5% in nominal terms), compared to the real contraction of -14.6% in the same month of 2018. As a result, sight deposits by OFIs was the only sector that showed increased growth compared to 2018, with average real growth of 24.5% between January and September 2019, above the average contraction of -14.6% between January and September 2018. This increased dynamism in sight deposits by OFIs may be associated with the slowdown in economic activity, which would reduce demand for intermediation services and financing granted to other agents, thus leaving these intermediaries with excess liquidity (Figure 2b.14).

Figure 2b.13 **SIGHT DEPOSITS BY THE NFPS, AND BUDGET REVENUE AND EXPENDITURE** (REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.14 **SIGHT DEPOSITS BY OFIs AND IGAE** (REAL ANNUAL VARIATION, 6MMA, %)



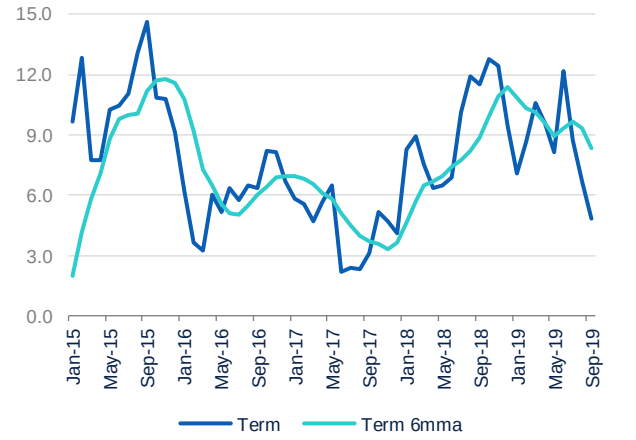
Source: BBVA Research based on Banco de México and INEGI data

2b.3 Term deposits start to lose momentum despite continued high interest rate environment

In September 2019, term deposits (which account for 41.1% of traditional deposits) registered real annual growth of 4.9% (8.0% in nominal terms), less than half of the real rate registered in September of the previous year (11.5%). As a result, term deposits averaged real annual growth of 8.5% between January and September 2019, slightly below the average rate observed in the same period of 2018 (8.7%). The rate of expansion of term deposits began to decelerate in December 2018, and double-digit was only achieved in two months during 2019 (March and June, Figure 2b.15). In the first nine months of 2019, growth of term deposits was underpinned by momentum in all four segments: individuals contributed 4.1 pp to the average real growth rate, companies contributed 2.5 pp, OFIs contributed 1.8 pp and the NFPS contributed 0.2 pp (Figure 2b.16).

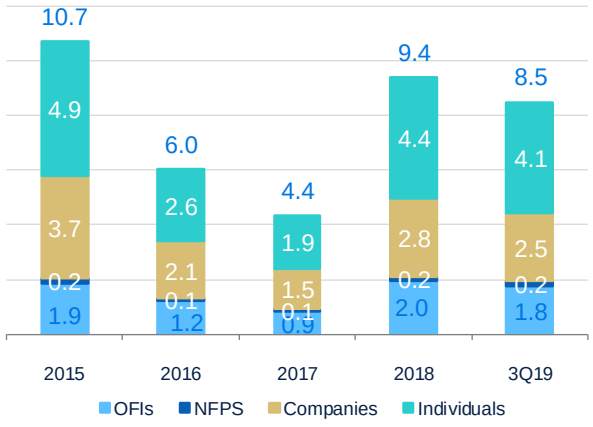
In September 2019, term deposits by individuals (which account for 47.1% of total term deposits) registered a real annual variation of -2.2% (0.8% in nominal terms), significantly below the growth of 16.8% observed in the same month of 2018. Additionally, it should be noted that term deposit balances in this segment had not contracted since February 2014. As a result, in the first nine months of 2019, term deposits by individuals saw average real growth of 7.2%, below the 12.2% registered in the same period of 2018. With a 5.0 pp decrease in the growth rate, this is the term deposit segment whose growth has decelerated most over the last 12 months.

Figure 2b.15 **TERM DEPOSITS.**
(REAL ANNUAL VARIATION, %)



Source: BBVA Research based on Banco de México and INEGI data

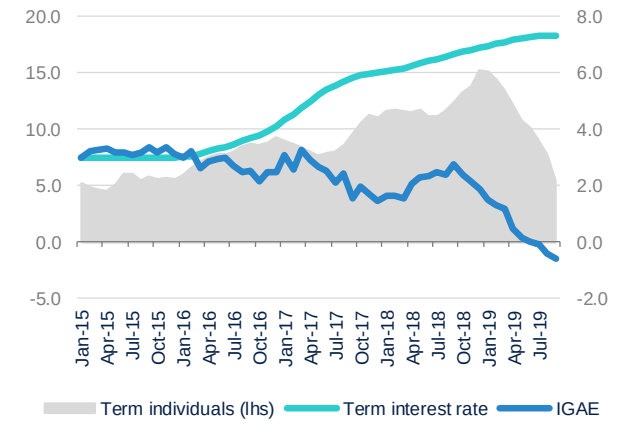
Figure 2b.16 **CONTRIBUTION TO THE AVERAGE REAL GROWTH RATE OF TERM DEPOSITS** (PP)



Source: BBVA Research based on Banco de México and INEGI data

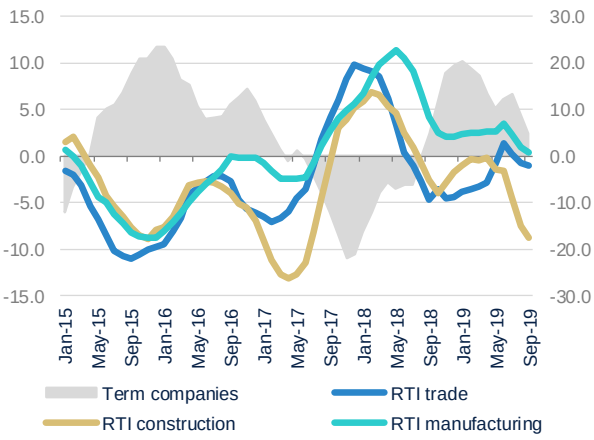
Over the course of 2019, the incentive to make use of term deposits due to higher interest rates has lost momentum due to the slowdown in economic activity. Thus, although the average implicit rate of term deposits was higher in the first nine months of 2019 (7.3% vs. 6.5% in the same period of the previous year), this incentive was offset by the negative effect of the slowdown in economic activity. In the same reference period (January to September), the IGAE index average growth rate fell from 2.0% in 2018 to flat (0.0%) in 2019. As such, the effect of reduced economic activity is reflected in weak income growth, which would limit the resources available to households for savings. Weak income growth could also lead individuals to make use of the savings that they have accumulated to finance their household expenses (Figure 2b.17).

Figure 2b.17 **TERM DEPOSITS BY INDIVIDUALS, INTEREST RATE AND IGAE.**
(REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

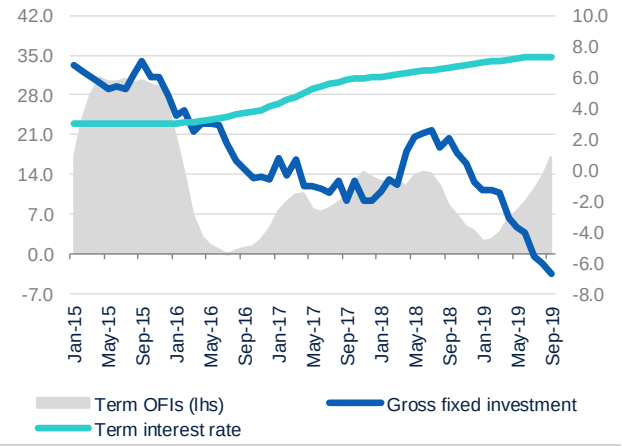
Figure 2b.18 **TERM DEPOSITS BY COMPANIES AND RIGHT TIME TO INVEST INDICES**
(REAL ANNUAL VARIATION, 6MMA, %)



Source: BBVA Research based on Banco de México and INEGI data

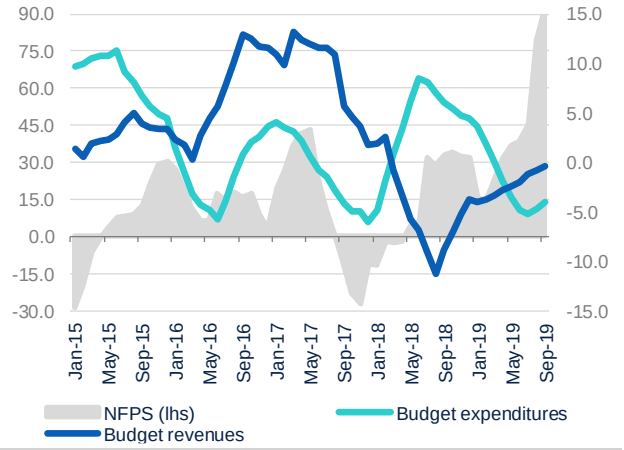
Meanwhile, in September 2019, term deposits by companies (which account for 27.5% of total term deposits) registered a real annual variation of -2.2% (0.7% in nominal terms), below the real annual growth rate of 14.8% in the same month of the previous year. Despite the result in September 2019, taking into account the first nine months of 2019 as a whole, term deposits by companies still grew compared to the previous year. In fact, between January and September 2019, term deposits by companies registered real annual growth of 4.2%, significantly above the rate of 1.4% in the same period of 2018. Part of this dynamism can be attributed to a higher interest rate environment. However, the accumulation of term deposit balances by companies may also reflect a lack of investment alternatives. In the reference period, average annual variations in complementary business confidence indices regarding the right time to invest fell across the board. Comparing January-September 2019 with the same period of 2018, this index fell from 15.3% to 2.3% in the manufacturing sector, from 2.0% to -11.4% in the construction sector, and from -1.9% to -2.5% in the retail sector (Figure 2b.18).

Figure 2b.19 **TERM DEPOSITS BY OFIs, GROSS FIXED INVESTMENT INDEX AND INTEREST RATE** (ANNUAL PERCENTAGE VARIATION, 6MMA)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.20 **NFPS TERM DEPOSITS, BUDGET REVENUE AND EXPENDITURE** (ANNUAL PERCENTAGE VARIATION, 6MMA)



Source: BBVA Research based on Banco de México and INEGI data

Term deposits by OFIs (which account for 21.6% of total term deposits) registered real annual growth of 22.9% (26.6% in nominal terms) in September 2019, above the contraction of -4.6% in the same month of 2018. Despite this higher growth in September 2019, increases in term deposits by OFIs have moderated in 2019 compared to the previous year. On average, this type of deposit grew by 12.1% in real terms between January and September 2019, above the real growth of 10.6% in the same period of 2018. The performance of term deposits by OFIs may be related to lower demand for their intermediation services. The weakness in investment recorded in the last year (average annual growth in the fixed investment index fell from 1.8% between January and September 2018 to a contraction of -4.5% in the same period of 2019), would indicate low demand for financing by these intermediaries, in which case they would accumulate part of their available funds in term deposits, taking advantage of the yields offered by these instruments (Figure 2b.19).

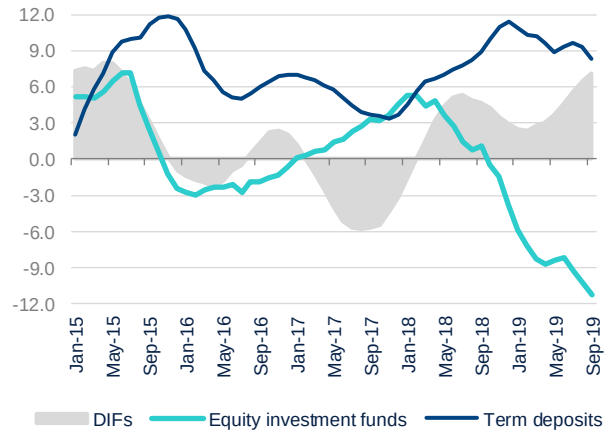
Finally, in September 2019, the balance of term deposits by the NFPS (3.8% of total term deposits) registered real annual growth of 145.1% (152.4% in nominal terms), above the growth observed in the same month of the previous

year (17.7% in real terms). It should be noted that, due to the low amount of term deposits by the NFPS, small movements in balances are reflected in higher and more volatile growth rates, showing the effect of a reduced basis for comparison. Taking this into account, the average real growth from January to September in term deposits by the NFPS was 80.8%, the highest average rate for that period in the last five years. The slowdown in budget expenditure, as well as the recovery of public sector revenue, as discussed in the sight deposits section, would provide greater room for maneuver for the NFPS to temporarily allocate resources to increase its term deposits (Figure 2b.20).

2b.4 Debt Investment Funds (DIFs) increase dynamism

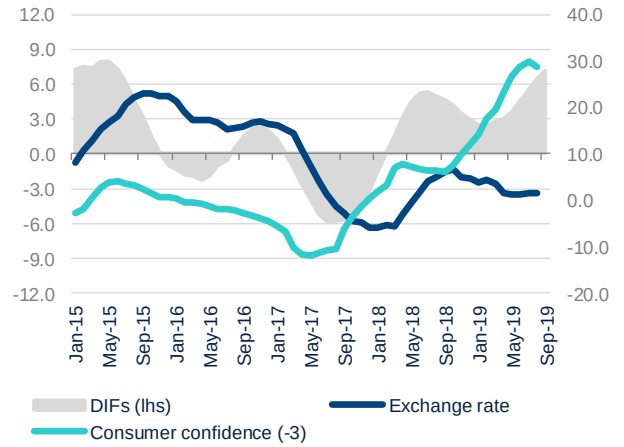
As of the end of September 2018, the real annual growth rate of debt investment fund (DIF) shares was 9.0% (12.3% in nominal terms), above the real growth of 2.7% in September 2018. Growth of this savings alternative accelerated starting from January, and by September 2019 average real growth reached 5.8%, above the result obtained between January-September 2018, when average real growth reached 4.6%. As such, DIFs have regained ground against other savings alternatives such as term deposits or equity investment funds, whose growth slowed in the reference period (Figure 2b.21).

Figure 2b.21 **DIFs, TERM DEPOSITS AND EQUITY INVESTMENT FUNDS**
(REAL ANNUAL PERCENTAGE VARIATION, 6MMA)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.22 **DIFs, EXCHANGE RATE AND CONSUMER CONFIDENCE INDICES**
(REAL ANNUAL PERCENTAGE VARIATION, 6MMA)

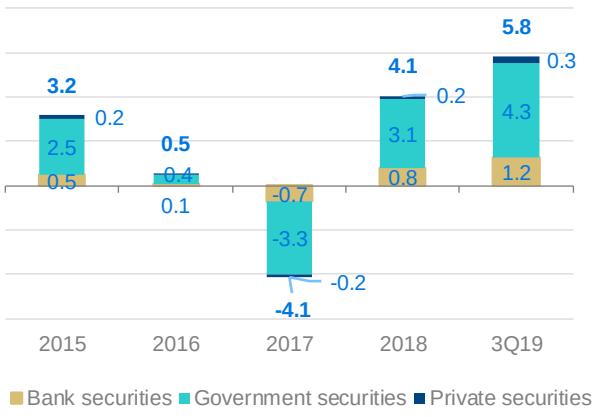


Source: BBVA Research based on Banco de México and INEGI data

DIFs saw continued growth despite the prevalence of high interest rates offered by bank term deposits, which would be expected to discourage use of this type of instrument. The effect of higher interest rates may have been offset by lower volatility in financial markets, as partially reflected by exchange rate stability during 2019 (Figure 2b.21).

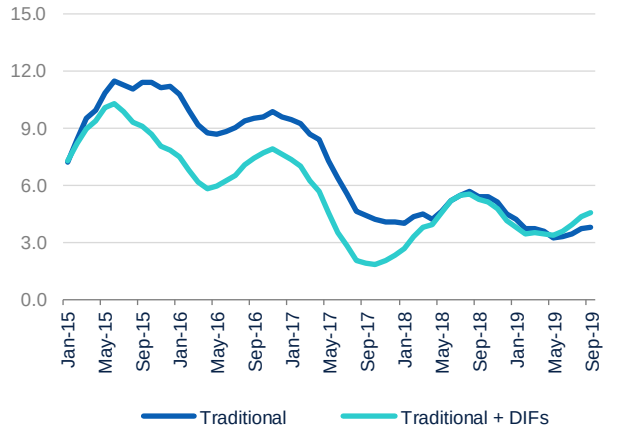
Based on the information available as of September 2019, as in previous years, the instruments that contributed most to DIF growth were government securities (accounting for 73.7% of the total), which provided 4.3 pp of the average real growth rate of 5.8% (in Jan-Sep 2019). Meanwhile, bank securities contributed 1.2 pp to this rate, and other private securities contributed 0.3 pp (Figure 2b.23).

Figure 2b.23 **CONTRIBUTION TO THE AVERAGE GROWTH RATE OF DIFs** (PP)



Source: BBVA Research based on Banco de México and INEGI data

Figure 2b.24 **TRADITIONAL DEPOSITS AND DIFs** (REAL ANNUAL PERCENTAGE VARIATION, 6MMA)



Source: BBVA Research based on Banco de México and INEGI data

The aggregate of total deposits, which includes sight deposits, term deposits and shares in DIFs, takes into account the performance of various bank savings alternatives, regardless of the degree of substitution that exists between them. As of September 2019, this aggregate of financial savings instruments grew at a real annual rate of 4.9% (8.1% in nominal terms), above the rate of 3.4% in September 2018. Despite this relative increase, this indicator averaged real annual growth of 4.1% in the first nine months of 2019, 0.9 pp lower than the 5.0% average real growth observed in the same period of 2018 (Figure 2b.24). In other words, the dynamism provided by DIFs was not sufficient to offset the slowdown in growth of traditional deposits (sight + term). By component, DIFs drove the majority of growth in total deposits, contributing 2.1 pp to the growth rate on average. Meanwhile, term deposits contributed 1.5 pp and sight deposits made the lowest contribution to total deposit growth at just 1.3 pp.

2b.5 A recovery of growth in savings will depend on economic reactivation

In the first nine months of 2019, the various aggregates that measure the performance of savings and financial investment in the economy (traditional deposits and total deposits) showed a pronounced slowdown compared to the results obtained in the previous year. This occurred despite the high interest rate environment being maintained, which may have made some financial savings alternatives more attractive. The main factor behind this loss of dynamism is the slowdown in economic activity, which has been reflected in stagnation of private consumption and a reduction in investment.

In the case of households, although there was a recovery in real wages, the growth rate of formal employment seems not to have been sufficient to increase the total wage bill available in the economy and trigger an increase in consumption, while also leaving resources available for families to save. In the future, greater weakness in job creation and a prolonged stagnation in economic activity could lead households to make use of money saved in previous years to meet their ongoing expenses. This would be reflected both in a slowdown of traditional deposit growth and a shift in the breakdown between different deposit types.

For its part, the prevailing uncertainty regarding future economic performance has led to a contraction in private investment, resulting in companies accumulating resources while they wait for more favorable investment conditions in the future.

As such, in the course of 2019, the stimulus of high interest rates was not sufficient to maintain savings growth amid stagnation of other key drivers such as economic activity. These factors, coupled with greater uncertainty regarding future economic performance, may limit any increase in savings growth in the short and medium-term, together with domestic financing sources.

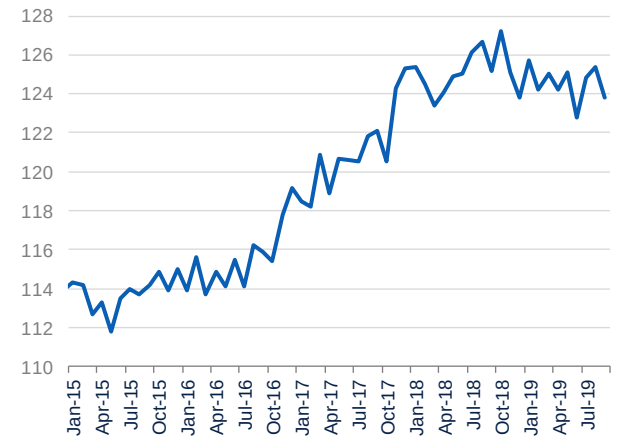
That is, while the environment of stagnation or very low economic growth persists, this will result in low growth of domestic savings. This will, in turn, reduce the amount of resources available to intermediate and allocate to different forms of financing, and as such, this low growth in deposits will eventually be reflected in reduced loan growth.

2.c Weakness of external financing sources is influenced by concerns regarding the global economic cycle and internal uncertainty

Throughout 2019, financial market transactions have been influenced primarily by the expectations of investors, with widespread concerns regarding the extent to which interest rate reductions will be sufficient to maintain economic growth, particularly in the current context of global slowdown and increasing trade tensions between the US and China. Although this set of factors has influenced looser financing conditions in 2019, it has also at times caused investors to search for safe assets, which has not favored capital flows to emerging markets. In the case of Mexico, the lower growth of foreign investment flows to the country's financial assets has been a relevant factor in the face of a complex external environment and domestic uncertainty regarding the new government's economic policy.

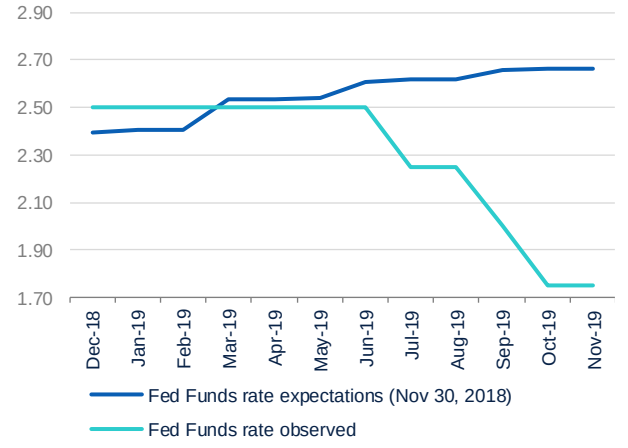
The slowdown in economic activity has led to global growth forecasts for 2019 being reduced to 3.0%, the lowest level since 2010, according to the International Monetary Fund (IMF). Unlike the synchronized recovery in 2018, this year, the US economy has stood out from others for achieving growth above its potential, supported by strong domestic consumption. Notwithstanding this difference, weakening aggregate demand conditions, exacerbated by growing trade disputes between the US and China (see Figure 2c.1), led the Federal Reserve (FED) to change its monetary policy stance. Indeed, supported by the notion of mid-cycle rate cut, the FED has reduced the federal funds rate by 75 basis points (bps) this year. This is a significant change, considering that in November of last year the markets expected the US benchmark rate to increase by 25 bps (see Figure 2c.2). This shift toward a looser monetary policy stance, which has followed the trend adopted by several central banks, led to a change in the allocation of resources between different asset classes and world regions, which has generally favored instruments in developed countries.

Figure 2c.1 **GLOBAL TRADE VOLUME** (INDEX)



Source: BBVA Research based on Bloomberg data

Figure 2c.2 **FEDERAL FUNDS RATE. OBSERVED AND EXPECTED IN NOVEMBER 2018** (%)



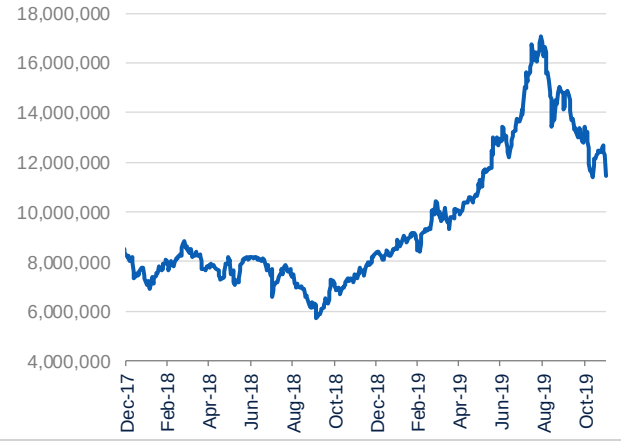
Source: BBVA Research based on Bloomberg data

An environment of lower interest rate expectations not associated with an economic recession usually generates incentives to search for higher-yield assets. However, fears regarding global growth, exacerbated by trade tensions between China and the US, were reflected in a strong increase in demand for safe assets. In fact, demand reached such a point that in August, approximately 25% of total investment grade public and private debt globally registered

negative yield-to-maturity rates (see Figure 2c.3). As such, all or a large part of the yield curve for developed countries such as Germany, Switzerland and Denmark, among others, has remained negative.

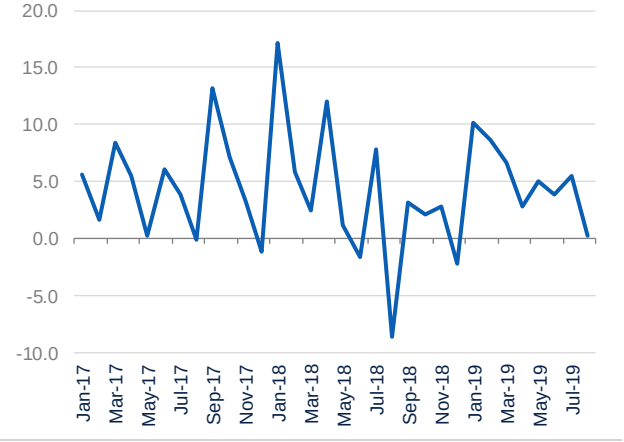
Given the momentum in demand for safe assets, investment flows to fixed income instruments were concentrated among developed countries at the expense of some emerging markets. In fact, according to figures from the Institute of International Finance (IIF), during the second quarter of the year, non-resident flows to fixed income instruments in emerging markets slowed by 28% from the first quarter. The months with the greatest reduction were associated with an upsurge in trade tensions. The slowdown was more pronounced for LATAM countries, as during the second quarter of the year flows to fixed income instruments were 54% lower than during the first quarter of 2019 (see Figure 2c.4).

Figure 2c.3 **VALUE OF GLOBAL DEBT MARKET WITH NEGATIVE YIELDS TO MATURITY** (USD MILLIONS)



Source: BBVA Research based on Bloomberg data

Figure 2c.4 **FLOWS TO DEBT INSTRUMENTS IN LATAM COUNTRIES** (USD BILLIONS)



Source: BBVA Research based on IIF data

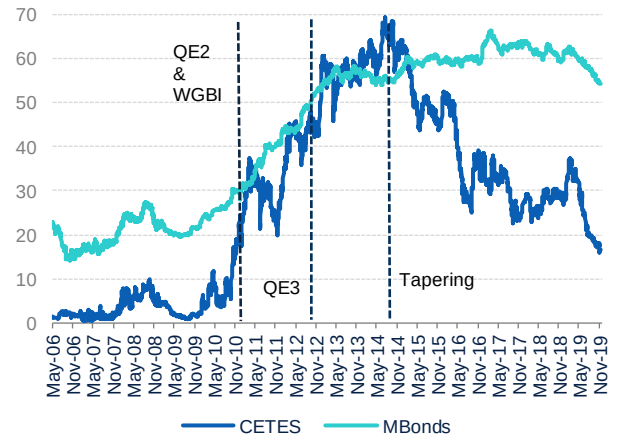
2c.1 External financing through investment in government fixed income and equity instruments decelerates significantly in 2019

In the specific case of Mexico, growth in external financing via investment in nominal government fixed income instruments by foreigners not only declined, but has contracted during the second and third quarters of the year. This pattern has occurred in different magnitudes along the yield curve.

In the short term, there has been a significant drop to the point that foreign-held CETES as a percentage of the total for this type of instrument outstanding is below 20% for the first time since 2010. Foreigners accounted for 69% of the total amount for these instruments outstanding in 2014 (see figure 2c.5). This fall in foreign-held CETES may be connected with the closure of arbitration opportunities. For several years, the combination of domestic short-term rates above those offered in the US, liquidity injection via the purchase of bonds by the FED and reduced exchange rate coverage costs resulted in investment in CETES financed in dollars with exchange coverage resulting in positive returns without risk. Since 2015, interest rates in the US have risen, excess liquidity has fallen and the cost of exchange coverage has increased, eliminating the risk-free return of this investment strategy. In fact, since the FED announced that it was

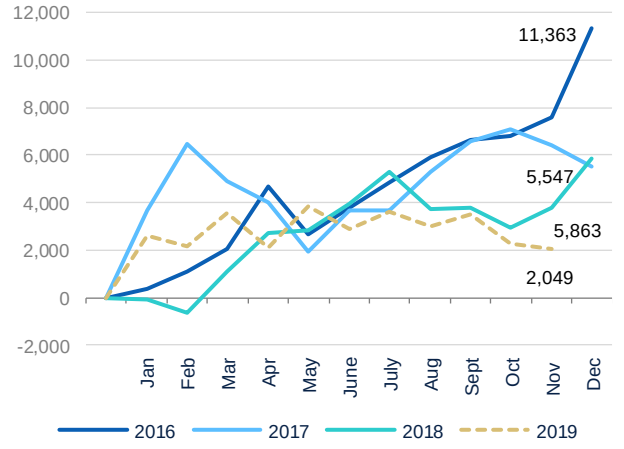
stopping its bond purchases foreign ownership has been on the wane. The additional fall in recent months may be associated, in addition to the factors mentioned above, with an expected significant reduction in the domestic benchmark rate in coming months, as the Interest Rate Swap curve is discounting a fall in the region of about 80 bps next year. Since 2016, the year of the US presidential election, the cost of exchange coverage has gradually risen. That is, the difference between the forward exchange rate and the spot rate has been widening and is currently at levels similar to 2008.

Figure 2c.5 **FOREIGN-HELD CETES AND M BONDS** (% OF TOTAL OUTSTANDING)



With information available as of November 11, 2019
Source: BBVA Research based on Banxico data

Figure 2c.6 **CUMULATIVE CHANGE IN FOREIGN-HELD M BONDS** (USD MILLION)



With information available as of November 11, 2019
Source: BBVA Research based on Banxico data

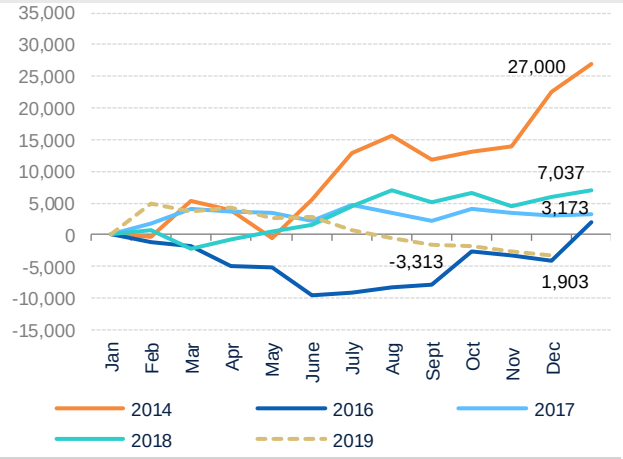
With regard to medium- and long-term nominal rate bonds (M bonds), the change in ownership by foreign residents during 2019 remains positive, but on a lower scale than observed in recent years. With information available as of November 11, the change in foreign-held M bonds accumulated in the year amounts to USD 2,049 million, its lowest level since 2008 (see figure 2c.6). This lower growth in the purchase of medium- and long-term bonds by foreigners, coupled with the increase in the issuance of this type of instrument in the last year, puts foreign-held M Bond tenure as a percentage of total outstanding at nominal value below 55% for the first time since 2013. This is interesting, since during the last five years this indicator had remained stable at around 60%, underpinned by the inclusion of this type of instrument into global fixed income indices (e.g. WGBI by Citi).

There are two reasons for this lower appetite of foreigners for financial assets in the country. The first is the combination of lower yields in the long part of the curve and a relatively stable exchange rate with higher coverage costs. Between December 2018 and November 2019, the yield at maturity of the 10-year M bond has fallen by just over 150 basis points, which has been reflected in a yield curve with negative slope. Meanwhile, the exchange rate has appreciated by 0.3% over the year so far, making the peso the sixth most appreciated currency in this period, despite all the ups and downs in terms of trade. The second factor behind the lower appetite by foreigners may be related to the perception of risk. The rating agency's stripping PEMEX of its investment grade and the close relationship between the oil company and public revenues have raised the question of a possible, albeit distant, downgrading of sovereign debt investment grade. Plus, in the international credit derivatives market (CDS), Mexico's sovereign risk premium,

even though it has recently declined, is comparable to that of BBB- countries, when most rating agencies place our country as BBB+ (See figure 2c.7).

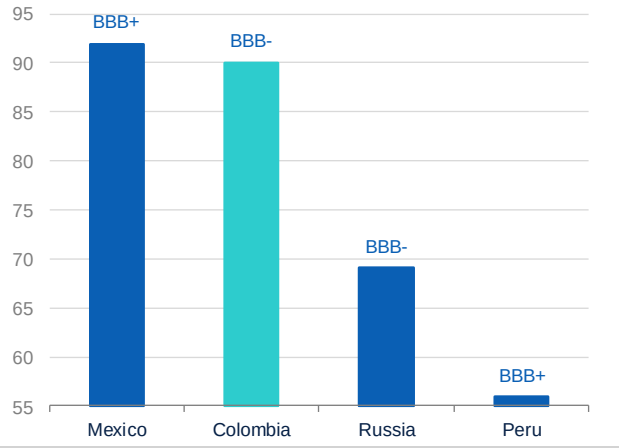
When we add up the change of trend in accumulated foreign-held CETES and M bonds between December 2018 and November 11, 2019, we get a negative balance of USD 3.3 billion. This figure is the lowest balance since 2016, the year of the US presidential election (see figure 2c.8). For the time being, it seems unlikely that the conditions of the financial variables will change in the coming weeks in such a way as to reverse the trend in the holding of CETES or for there to be a significant rebound in the holding of M bonds. Therefore, it cannot be ruled out that investment by non-residents in government fixed-rate instruments will end 2019 on negative ground for the first time since 2008.

Figure 2c.7 **ACCUMULATED FOREIGN-HELD CETES AND M BONDS** (USD MILLION)



With information available as of November 11, 2019
Source: BBVA Research based on Banxico data

Figure 2c.8 **CDS SPREAD AS OF DECEMBER 2, 2019** (BASIS POINTS)



Source: BBVA Research based on Bloomberg data

Along the same lines as the fixed-income market, investment by non-residents in equity instruments also grew at a reduced rate. Between December 2018 and October 2019, the change in foreign-held equity instruments amounted to about USD 3.5 billion, representing a nominal growth rate of 2.6%. This growth rate discounts the gains by valuations of the equity index and the exchange rate. In other words, even discounting the gains in CPI and the exchange rate appreciation, foreigners increased their position in equity instruments. This can be explained by the widespread optimism in equity markets given the partial trade agreement between the US and China announced in October. In comparative terms, the accumulated change in foreign-held fixed-income as of October 2019 is even lower than that recorded in the same period of 2018. In fact, although the balance of foreign-held equity fell at that time as a result of the cancellation of the New International Airport of Mexico City (NAIM), by discounting the valuation effect of the index and the effect of the exchange depreciation, the foreign-held balance increased by just over USD 4 billion.

Thus, 94% of the total investment of non-residents in domestic financial assets, represented by investment in fixed-income and equity instruments, has become weaker against an environment of uncertainty. Looking forward, these conditions are unlikely to change significantly, especially by the end of the year.

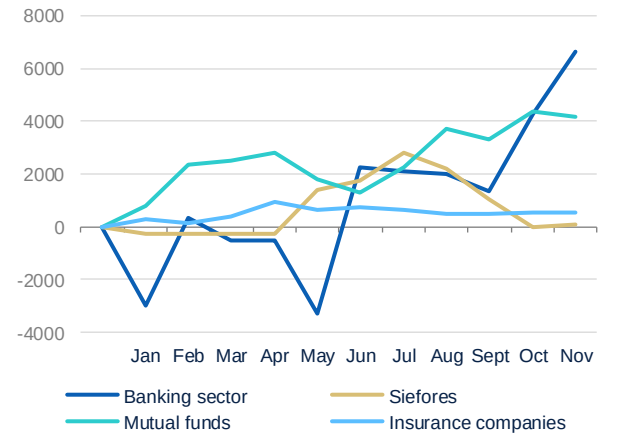
2c.2 The investment of residents in domestic financial assets recovered during the second half of the year driven by the strength of the compulsory retirement savings system

Investment by residents in local financial assets has been influenced by a significant fall in interest rates in the long part of the curve and changes in risk appetite arising due to the way that the US-China trade conflict has been played out.

The demand for government securities by Mexican residents, representing about 10% of the system's voluntary financial savings, was particularly sensitive to the withdrawal of President Trump's tariff threat last June and the announcement of a preliminary trade agreement between China and the US. This was particularly noticeable in the case of nominal fixed-rate bonds (CETES and M bonds). While between December 2018 and May 2019, residents' holding of this type of instrument was down -88%, by July, after the US tariff threat was lifted, this rate stood at around -5.0%. Moreover, it grew in the region of 93.0% between December 2018 and October 2019, the month in which a trade truce between China and the US was announced. All of these figures are at nominal value, i.e., discounting changes in bond prices. This significant increase in growth during the second part of the year was driven by the increased demand for M bonds by investment funds and banking institutions, which had almost USD 11,000 million more in their positions for this type of instrument in October (See figure 2c.9). This represents just over half of the increase in total resident-owned medium- and long-term nominal government bonds.

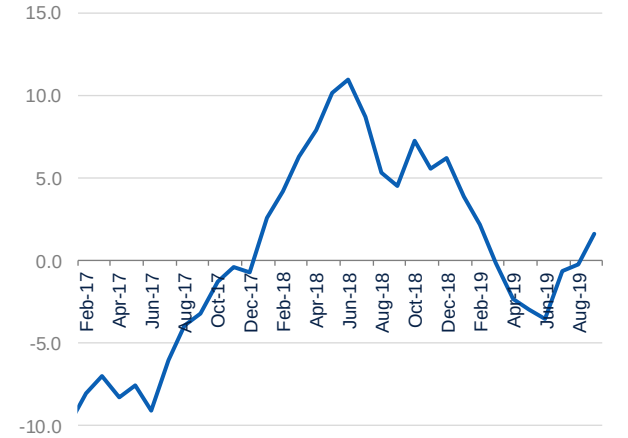
Resident-held equity instruments, which represent 35.0% of the system's voluntary financial savings, have shown a predominantly downward trend, albeit with ups and downs due to the events mentioned. Compared to December 2018, the cumulative change in resident-held equities has been negative in each of the months of this year. It reached its second lowest level in June (-4.1%), due to the US tariff threat, and by September, the last available figure, the fall had been reduced to 3.4%. The year-on-year comparison shows more obvious recovery, since in September the growth rate compared to the same month of 2018 was around 1.6%, the first positive rate after six consecutive months of negative year-on-year growth (see figure 2c.10). Importantly, all these figures discount the effects of variations in the stock index.

Figure 2c.9 **CHANGE IN RESIDENT-HELD M BONDS**
(USD MILLION)



With information available as of November 11, 2019
Source: BBVA Research based on Banxico data

Figure 2c.10 **RESIDENTS' INVESTMENT IN EQUITY INSTRUMENTS**
(YOY%)



Source: BBVA Research based on Bloomberg data

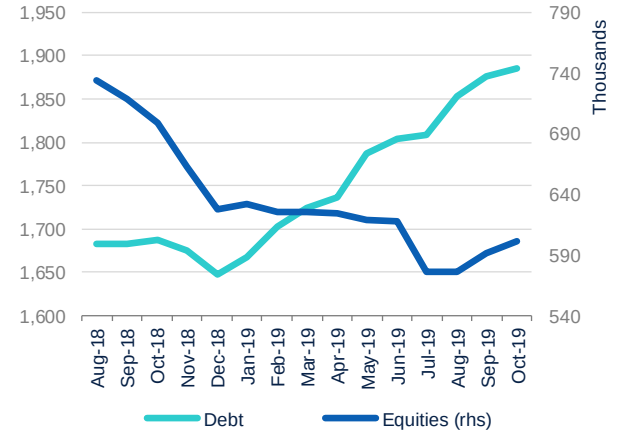
Residents have also increased the allocation of their resources to debt investment funds, which have grown at nominal double-digit annual rates in the past five months. The growth in this item, which represents just over 11.0% of the system's voluntary financial savings, has been shaped by the fact that long-term interest rates have returned to levels not observed since 2017. During the last quarter of 2018, the economic policy decisions of the incoming administration prompted an increase in perceived risk reflected in long-term interest rates that exceeded 9.2% in their 10-year rate. As the perception of idiosyncratic risk was partially reduced and a more accommodative global monetary policy environment was presented, long-term interest rates fell to such a degree that the 10-year rate reached 6.74% in October this year.

This growth in resident-held investment in debt funds has offset lower appetite for this type of instrument from foreign buyers, who have been reducing their exposure to double-digit rates, without discounting the valuation effect, since last June. The net assets of the debt investment fund industry in the country have thus grown at a nominal rate of about 14.5% between December 2018 and October 2019, higher than the level of 12.0% in September 2018, before the cancellation of the NAIM was announced. This growth in debt funds may have been prompted by the reduction in both residents' and non-residents' funds in equity funds, which have reported a 4.3% nominal drop from December 2018 to October of this year (see figure 2c.11). Because of this contrary movement in the allocation of funds between debt and equity, debt has gained 5.0 percentage points (pp) in the share of the total industry.

Hence, 56% of the country's voluntary savings, represented by residents' investments in government securities, investment funds and equity, have maintained positive year-on-year growth rates toward the latter part of the year. This growth has been driven by lower risk perception in financial markets and further reduction in interest rates. Looking forward, while local interest rates are expected to continue with their downward trajectory, this may be less pronounced at the end of the FED's mid-cycle cut. Additionally, the issue of trade disputes is far from resolved, so episodes of market volatility are still common, and especially so with the US presidential election fast approaching. In view of this scenario, we cannot rule out a scenario of slowing growth in the analyzed components of the country's residents' voluntary savings over the next few months.

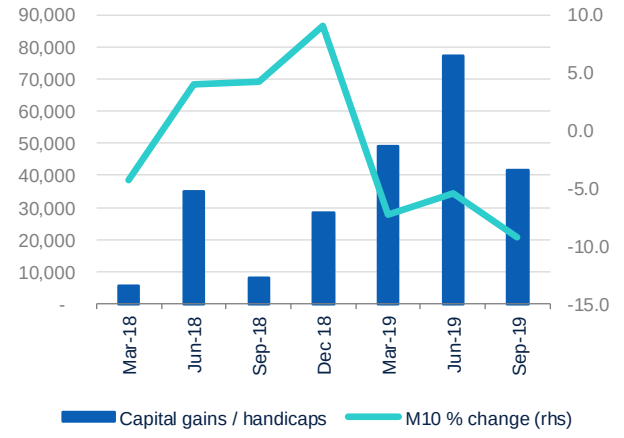
Lastly, compulsory savings, which account for 26.0% of residents' financial savings, also maintain double digit nominal growth, albeit with greater dependence on capital gains. The highest growth within compulsory savings has been in retirement savings funds, which represent 75%. In these funds in particular, the fall in interest rates and, to a lesser extent, the recovery of equity indices have been reflected in significant gains. In fact, after having recorded losses in the order of 3.2% of net assets during the fourth quarter of 2018 (4Q18), in October 2019 net assets grew at a nominal rate of 18.6% compared to the same month last year. Of this growth, 13.0% was from capital gains and only 5.6% from the net inflow of funds. This is the highest year-on-year growth in capital gains since April 2013 and is clearly linked to the favorable comparison of current maturity yields with those of the year 2018 that were affected by the decision to cancel NAIM (see figure 2c.12). As an example, the 10-year bond's yield on maturity closed October 2018 at 8.87% while a year later it was already at 6.77%.

Figure 2c.11 **NET MUTUAL FUND ASSETS IN EQUITIES AND FIXED INCOME** (MILLIONS OF PESOS)



Source: BBVA Research based on AMIB data

Figure 2c.12 **CAPITAL GAINS ON RETIREMENT FUNDS AND 10-YEAR INTEREST RATE** (MILLIONS OF PESOS AND %)



Source: BBVA Research based on CONSAR data

The impact of lower rates is so pronounced because the retirement savings system funds keep about 52% of their assets invested in government bonds. As the yield calculations are used to compare with the high interest rates of the last quarter of 2018 and, without sudden movements of the financial markets, the rate of growth in capital gains from these funds is expected to stabilize at about 5.0% per year(the average rate at which it has grown over the past five years). Net inflows of funds are expected to maintain growth of about 5.5 per cent annually, also its average of the last five years.

In short, the FED's change of position and changes in risk appetite, catalyzed by the increase in trade tensions, have prompted changes in the conditions of financial markets, which, in turn, have been reflected in a significant slowdown in foreign investment in domestic financial assets. Domestic sources of funding have benefited from the significant reduction in interest rates as against the end of 2018, optimism about a partial trade agreement between the US and China, and the reduction in idiosyncratic risks. Looking forward, and in the most likely scenario, weak foreign demand for domestic assets is expected to be maintained, while we cannot rule out slower residents' purchase of local financial instruments should there be an additional fall in interest rates on a lesser scale than that observed this year and faced with inevitable episodes of risk aversion due to global and local events. For the above reasons, growth in the country's financial assets is expected to continue to grow at low rates.

3. Special topics

3.a Substitution effect between sight deposits and term deposits

3a.1 Introduction

Deposits by economic agents in the banking system are the main source of financial intermediation in the country. In other words, banking deposits are the raw material for generating credit for the economy. As of October 2019, demand and term deposits by individuals and companies in banks in the country accounted for three quarters of the total banking deposits in Mexico and amounted to almost 24 percentage points of GDP.

Given the importance of this source of funds, it is important to know the dynamics of its components, especially in the current environment in which investment is needed to drive the national economy. At first sight, we may observe that the way banking system deposits behave is—according to the economic theory—largely determined by variables related to household income and interest rates. However, the combined behavior of income and interest rates can have a number of effects on the banking deposit components. In fact, it can be observed that, in certain periods, as in the great recession of 2009, growth in sight and term deposits have a negative correlation, suggesting that there is some degree of substitution between them. This can happen because the conditions of the economic environment translate into incentives of a different nature for the different types of savers. In other words, variations in household income and interest rates, and certain other factors, generate different incentives depending on whether it is an individual or a business or whether it is a sight or term deposit.

The purpose of this exercise is to analyze this substitution effect between term and sight deposits in the Mexican banking system. In particular, the aim is to document whether this effect is significant, to quantify its magnitude and to verify under what conditions it occurs, as well as studying its behavior over time. The most relevant contribution of this exercise is the quantification of the aforementioned effect by saver type, for various data frequencies and their performance over the last few years.

3a.2 Estimation of the substitution effect between term deposits and sight deposits

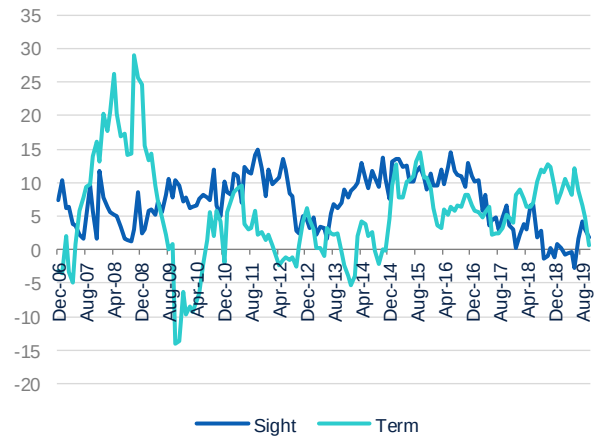
The substitution effect between sight and term deposits may be observed in the growth rates of the balances of these variables at various time periods, especially when it comes to annual growth rates of monthly data in real terms (see figure 3a.1). Since these variables are not stationary, their first differences in analysis are used. In addition, to verify that the substitution effect exists for other frequencies, the quarterly growth rate of the balances of the variables in question is analyzed.

A seemingly unrelated regression (SUR) model and a linear regression model are estimated for quarterly and monthly samples, respectively, to analyze the above series. In order to isolate the substitution effect between term deposits and sight deposits, additional regressions are included based on assumptions of economic theory. Thus, to control the effect of income variations on deposits, the factors included are the number of workers registered in the IMSS, the average real rate of contribution in the IMSS and the monthly rate of gross fixed investment. To control for the effect of

variations in the opportunity cost of holding cash over deposits, the 28-day Equilibrium Interbank Interest Rate (TIIE 28) and the rate of interest rate swaps at 3 months were included. To discount a possible valuation effect, the exchange rate is included. As a complement, various dummy variables are used to discount variations associated with disruptive events (e.g. major recession).

All these variables are introduced in first differences to ensure their seasonality, in addition to being found in real terms. For the quarterly frequency, the sample used in the estimate covers the first quarter of 2000 to the third quarter of 2019, while for the monthly frequency the sample covers January 2007 to September 2019.

Figure 3a.1 **SIGHT AND TERM DEPOSITS IN REAL TERMS** (YOY %)



Source: BBVA Research based on Banxico data

Table 3a.1 **RESULTS OF THE ESTIMATION OF THE SUR MODEL FOR DEPOSITS BY INDIVIDUALS**

Δ Sight Deposits Individuals		Δ Term Deposits Individuals	
Variable	**Coefficient**	**Variable**	**Coefficient**
ΔIMSS Employment{1}	1.138***	ΔTIIE 28{1}	0.0201***
ΔTerm Deposits Indiv.	-0.148*	ΔIMSS employment{3}	0.500**
ΔExchange rate{2}	0.073*	Δreal Wage{4}	1.314**
DUMMY09Q4	0.075***	DUMMY08Q4	0.097***
Dummy08Q1	-0.074***	DUMMY10Q1	-0.057***
Dummy10Q1	-0.048**	DUMMY18Q3	-0.114***
Dummy19Q2	0.034*	DUMMY17Q2	0.033*

***, **, * refers to statistical significance at 1%, 5% and 10%, respectively.
Δ indicates a simple difference and {.} denotes the number of lag times of the variable. The frequency of the data is quarterly
Source: BBVA Research

The results of the estimates (Tables 3a.1 to 3a.4) show that, by controlling the variables mentioned above, there is a statistically significant substitution effect between sight deposits and term deposits for both individuals and companies. This result is maintained for both frequencies of analyzed data.

The magnitude of the substitution effect and its characteristics vary both by economic agent and by data frequency. For the quarterly sample and for natural persons, for each percentage point that increases the balance of the term deposits in real terms, the balance of the deposits in real terms is reduced by 0.15%. This magnitude is very similar for companies—however, the substitution occurs with a different lag. While for individuals the substitution effect is presented in the same quarter (without lags), for companies the significant impact is given by the movement of term deposits three quarters ago. This difference may be because companies generally have a higher level of financial education and, in several cases, have access to cash that allows them to switch their investments anticipating likely future movements in the market (e.g. interest rate variations). This is possibly, why the variations in sight deposits, which are more related to the operation, are affected not by what happens in the contemporary period, but by what the investment decisions of the companies estimated some quarters ago. One point in favor of this hypothesis is the fact that the 3-month swap rate is a statistically significant variable to explain the behavior of term deposits.

Table 3a.2 **RESULTS OF THE ESTIMATION OF THE SUR MODEL FOR DEPOSITS BY BUSINESSES**

Δ Sight Deposits Business		Δ Term Deposits Business	
Variable	**Coefficient**	**Variable**	**Coefficient**
ΔIMSS Employment	1.282***	ΔTIIE 28	-0.130***
ΔTerm Deposits Busn.	-0.145*	ΔSwap TIIE 28	-0.130**
ΔExchange Rate	0.237***	ΔExchange Rate	0.188*
DUMMY08Q3	- 0.085***	ΔInvestment{1}	0.545**
DUMMY09Q3	0.120***	DUMMY18Q3	-0.067***
DUMMY18Q3	-0.067**		
DUMMY10Q2	0.047*		

***, **, * refers to statistical significance at 1%, 5% and 10%, respectively.
Δ indicates a simple difference and {.} denotes the number of lag times of the variable. The frequency of the data is monthly
Source: BBVA Research

Table 3a.3 **RESULTS OF THE ESTIMATION OF THE REGRESION MODEL FOR DEPOSITS BY INDIVIDUALS**

Δ Annual growth Sight Deposits Individuals	
Variable	**Coefficient**
ΔAnnual growth IMSS Employment{10}	1.17**
ΔAnnual growth Exchange Rate	0.11**
ΔAnnual growth Term Deposits Individuals	-0.45***

Δ Annual growth Term Deposits Individuals	
Variable	**Coefficient**
ΔAnnual growth TIIE 28 {1}	0.002*
ΔAnnual growth IMSS Employment{6}	1.794***
ΔAnnual growth Real Wages {6}	1.09**
ΔAnnual growth Sight Deposits Individuals	-0.435**

***, **, * refers to statistical significance at 1%, 5% and 10%, respectively.
Δ indicates a simple difference and {.} denotes the number of lag times of the variable. The frequency of the data is monthly
Source: BBVA Research

With regard to monthly frequency data, the magnitude of the substitution effect is greater. In the case of individuals, for each percentage point (pp) by which the balance of term deposits increases in real terms, the reduction in the balance of sight deposits in real terms amounts to 0.44%. This effect occurs without delay or, in other words, in the same month as the variation in term deposits. For companies, for each pp by which the balance of term deposits increases in real terms, the reduction in the balance of sight deposits in real terms amounts to around 0.28%. Similar to individuals, this effect occurs without lags.

In order to study the variation of this substitution effect over time, a rolling regression with mobile windows of 120 months was estimated from the monthly specification used previously. The results of this new estimate indicate that there has been a reduction of 4 bps in the monthly substitution effect between term deposits and sight deposits over the past 12 years. Beyond this slight reduction, the most salient point is that this substitution rate has tended to increase in windows that include a greater number of observations in periods of economic slowdown (see figure 3a.2). This is in line with the idea that in periods of lower economic activity, economic agents tend to reduce their term deposits in favor of more immediately available funds (sight deposits) to deal with contingencies. Because of this phenomenon, periods of economic slowdown or contraction often coincide with cuts in the benchmark interest rate, meaning that there are fewer incentives to save in term instruments. This is what happened in the 2008-2009 crisis and what is possibly also happening in the economic stagnation observed during 2019.

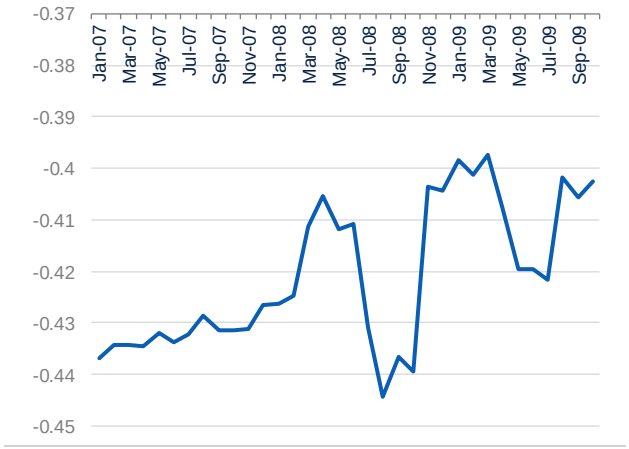
Table 3a.4 **RESULTS OF THE ESTIMATION OF THE REGRESION MODEL FOR DEPOSITS BY BUSINESSES**

Δ Annual growth Sight Deposits Business	
Variable	**Coefficient**
ΔAnnual growth IMSS Employment	1.507
ΔAnnual growth Real Wages	2.28***
ΔAnnual growth Exchange Rate	0.260***
ΔAnnual growth Term Deposits Busn.	-0.221***

Δ Annual growth Term Deposits Business	
Variable	**Coefficient**
ΔAnnual growth TIIE 28	- 0.03
ΔAnnual growth Swap TIIE 1Y {6}	0.029*
ΔAnnual growth Real Wages {1}	2.39**
ΔAnnual growth Sight Deposits Indiv.	-0.349***

***, **, * refers to statistical significance at 1%, 5% and 10%, respectively.
Δ indicates a simple difference and {.} denotes the number of lag times of the variable. The frequency of the data is monthly
Source: BBVA Research

Figure 3a.2 **REGRESSION COEFFICIENT BETWEEN SIGHT AND TERM DEPOSITS FOR 120-OBSERVATION WINDOWS**



Source: BBVA Research

The substitution effect between term deposits and higher-magnitude sight deposits in periods of lower growth and lower interest rates should not give the false impression that the banking system benefits from lower-cost funds during these periods. As mentioned, the specification used in the estimates includes economic activity variables to check for any possible income effect on deposit behavior (Tables 3a.1 to 3a.4). Having reviewed the estimates, it is clear that this income effect is of greater magnitude than the substitution effect for all types of agents and for both frequencies analyzed. For the quarterly sample, with a 1.0% reduction in the quarterly growth rate of the number of workers affiliated to the IMSS, deposits by individuals are reduced by 1.1%. This figure is 1.3% for sight deposits by businesses. If we look at the monthly sample, with a 1.0% reduction in the quarterly growth rate of the number of workers affiliated to the IMSS, sight deposits by individuals are reduced by 1.2%. This figure increases to 1.5% in the case of businesses.

Judging by the results of the estimates it appears that, although there is a substitution effect toward lower-cost deposits in times of low economic activity, the effect of a widespread reduction in deposits as a result of lower income in the economy is much larger and tends to predominate.

3a.3 Final considerations

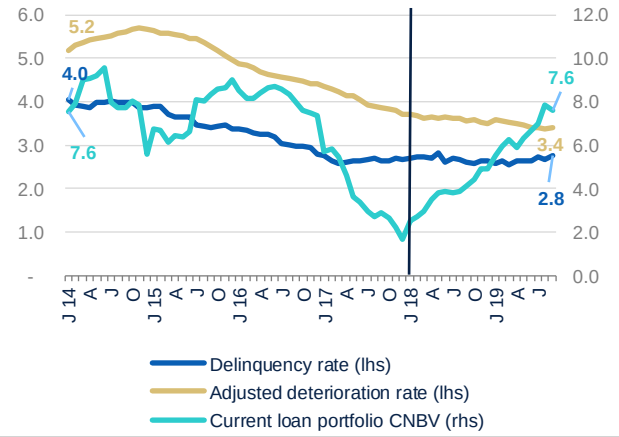
Four conclusions may be drawn from the results of these exercises. First, there is a statistically significant substitution effect between the real variations in term deposits and sight deposits that occur both in the short term (monthly frequency) and in the medium term (quarterly frequency). Second, the magnitude and lag with which this substitution effect occurs varies depending on whether it is an individual or a business and on the frequency of the data. Third, the magnitude of the substitution between changes in term deposits and sight deposits tends to increase in times of economic slowdown and interest rate reduction. Fourth, the favorable effect of the substitution between sight and term deposits during economic slowdowns is less than the widespread reduction in bank deposits due to income of economic agents as a result of the same economic weakness.

3.b Determinants and Evolution of Mortgage loans in Mexico

3b.1 Introduction

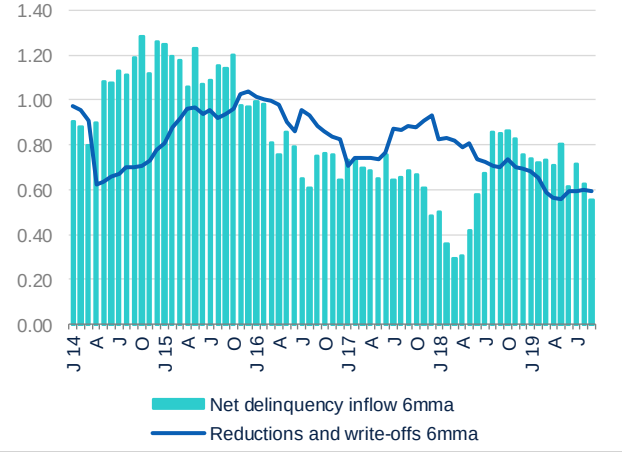
The dynamism of the current loan portfolio granted by commercial banking for housing purposes increased from January 2018 to September 2019 (Jan-18 to Sept-19) in a sustained and gradual manner. Thus, its annual real growth rate rose from 1.7% in December 2017 to 4.6% in December 2018, and from that month to September 2019 the growth rate continued to rise to 7.6%. The expansion of mortgage loans in 2018 occurred against the background of GDP growth, which amounted to 2.1% in that year. In contrast, the observed expansion in mortgage loans in the first three quarters of 2019 has occurred against a background of zero GDP growth, according to official data. What is more, it is interesting that arrears indicators do not reflect impairment in this loan portfolio, whether in terms of the non-performing loans rate (IMOR) or the adjusted deterioration rate (ADD[5]). The latter is clear taking into account that in December 2017, the IMOR and the ADD were 2.7% and 3.7%, respectively, and in September 2019 these indicators were 2.8% and 3.4%. In other words, the Delinquency Rate recorded a marginal increase in the period indicated, while the deterioration measured through the Adjusted Deterioration Rate reduced. This article attempts to identify the factors that have allowed mortgage lending to maintain its growth rate in the first nine months of 2019 without its impairment rates having deteriorated, despite the complex prevailing macroeconomic environment.

Figure 3b.1 **MORTGAGE PORTFOLIO: CURRENT LOAN PORTFOLIO, NPL RATIO AND ADDD RATE**
(ANNUAL REAL % VAR AND %)



Source: BBVA Research based on INEGI and CNBV data

Figure 3b.2 **MORTGAGE LENDING: WRITE-OFFS AND NET DELINQUENCY INFLOW** (MONTHLY FLOW, DEC-18 MILLIONS, 6-MONTH MOVING AVERAGE, 6MMA)



Source: BBVA Research based on CNBV data

5: TDA or Adjusted deterioration rate = (Overdue Portfolio (average 12m) + (12 m flow of accumulated Reductions and Write-offs)) / (Total Portfolio (average 12m) + (Reductions and Write-offs)

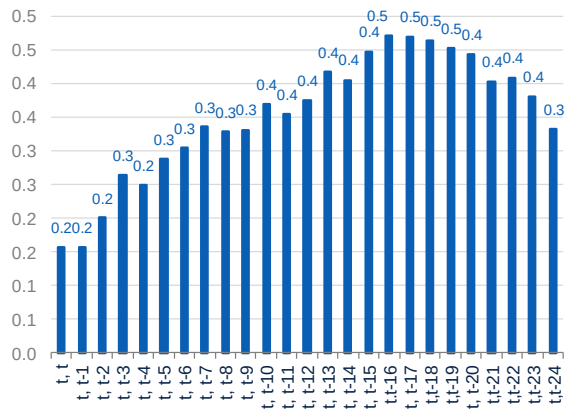
3b.2 Macroeconomic variables that influence the performance of mortgage lending

A number of macroeconomic variables influence the demand for bank mortgage lending. If these macroeconomic variables result in a favorable environment, then they will encourage the growth of this type of lending to families. These relevant macroeconomic variables include: i) economic activity (Gross Domestic Product (GDP) for quarterly data and Global Economic Activity Indicator (IGAE) for monthly data); ii) formal employment of permanent workers registered with the Mexican Social Security Institute (IMSS); iii) IMSS real wages of formal workers; and iv) consumer confidence.

There is a positive relationship between economic activity and mortgage lending. This means that if economic activity grows, so will income; and therefore the demand for bank mortgage lending can also grow. This is because the expansion in income increases the funds that families have, so they can meet the payments involved in a long-term financial commitment, such as a mortgage loan. The causal relationship between income growth and increased mortgage loans is not immediate, and this is reflected after a lag of a number of months. In fact, the correlation is positive between the annual growth rate of the IGAE with respect to the growth rate of the current mortgage loan portfolio, and it takes different values depending on the number of months in which mortgage lending lags. The correlations calculated from January 2013 to September 2019 indicate that the highest correlation coefficient between these two variables is 0.47, and occurs with 16 months of lag (Figure 3b.3).

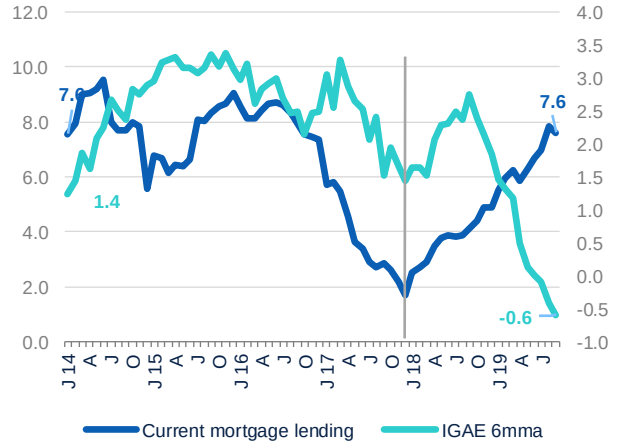
The delay in performance and the significant number of months delay between the growth rate of mortgage lending and the IGAE partly explains why if economic activity began to slow down by the end of 2018 this has not yet been reflected in the trend in mortgage lending, as in September 2019 the real annual growth of the current mortgage loan portfolio was 7.6% and that of the IGAE was negative, at -0.6% (Figure 3b.4). This delay indicates that the impact of the slowdown in economic activity on the momentum of bank mortgage lending could begin to be seen in the early months of 2020. The latter could happen if it is taken into account that the average annual growth rate of the IGAE for January-September 2019 was 0.0%.

Figure 3b.3 **CURRENT MORTGAGE LENDING AND IGAE: CORRELATION COEFFICIENT OF GROWTH RATES**



Source: BBVA Research based on INEGI and CNBV data

Figure 3b.4 **MORTGAGE LENDING AND IGAE: CORRELATION COEFFICIENT OF GROWTH RATES**

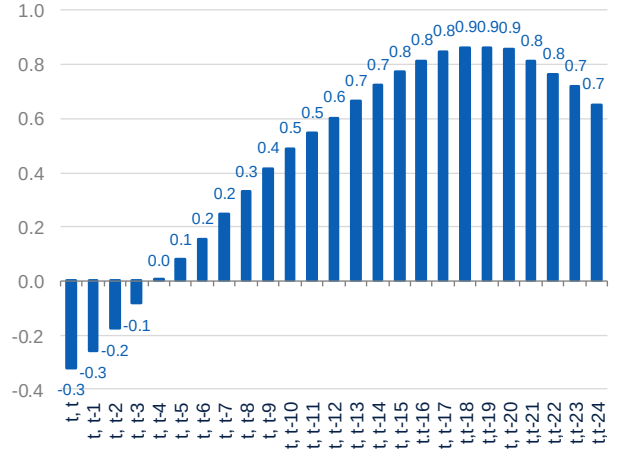


Source: BBVA Research based on INEGI and CNBV data

Furthermore, the increase in the number of formal permanent workers registered in the IMSS makes the expansion of bank mortgage lending possible. This is because these types of workers are the potential clients for this type of loan, because they have a stable job and can confirm their source of income. These two elements are indispensable requirements for banks to decide to grant a mortgage loan, in addition to their approval also requiring a certain period or number of months of time in service or permanent employment. This latter ensures that, although there is a positive correlation between the real annual growth rates of existing mortgage lending and the growth rate of formal employment of permanent workers registered in the IMSS, this association also involves a delay of a certain number of months, similar to that between bank mortgage lending and economic activity.

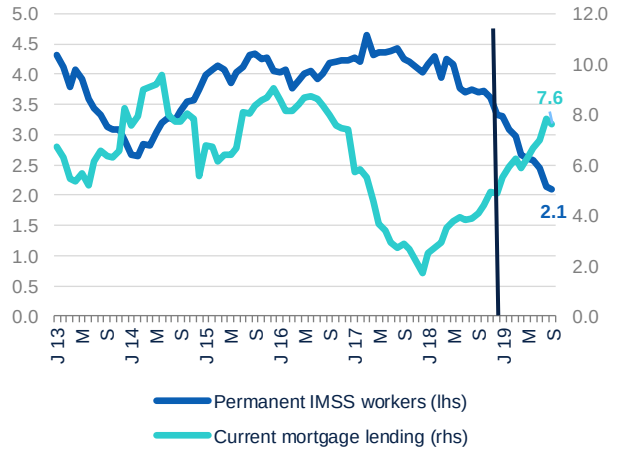
The minimum required time in service requirement to obtain a mortgage indicates that the stimulus of formal employment on mortgage lending is observed after a lag of several months. The correlation coefficients between these two variables indicate that the effect of the increase in formal IMSS employment on the demand for mortgage lending is not relevant for a period of about a year or less. However, this effect increases significantly as the delay increases, so that the maximum correlation coefficient of 0.86 is reached when the lag between growth in mortgage lending and IMSS employment is 19 months. In the following months, this correlation coefficient gradually decreases (Figure 3b.5).

Figure 3b.5 **CURRENT MORTGAGE LENDING AND PERMANENT IMSS EMPLOYEES: CORRELATION COEFFICIENT OF GROWTH RATES**



Source: BBVA Research based on INEGI and CNBV data

Figure 3b.6 **MORTGAGE LENDING AND IGAE** (ANNUAL REAL % VAR)



Source: BBVA Research based on INEGI and CNBV data

Based on IMSS data, the annual growth rate in the number of permanent workers registered with the institute began to slow down starting in May 2018, when it was 4.2%. In December 2018 it dropped to 3.3%, and this rate has continued to decrease as a result of the observed economic slowdown in 2019, at such a magnitude that it was 2.1% in September 2019. The growth rate of IMSS formal permanent employment may continue to slow down in the coming months as a reflection of the lag due to the slowdown in economic activity that has occurred throughout the year.

It should be mentioned that the slowdown in the growth of IMSS formal permanent employment did not affect the pace of expansion of bank mortgage lending in the first nine months of 2019. This may be a consequence of the aforementioned lag effect of the development in this type of employment on mortgage lending. However, as a result of

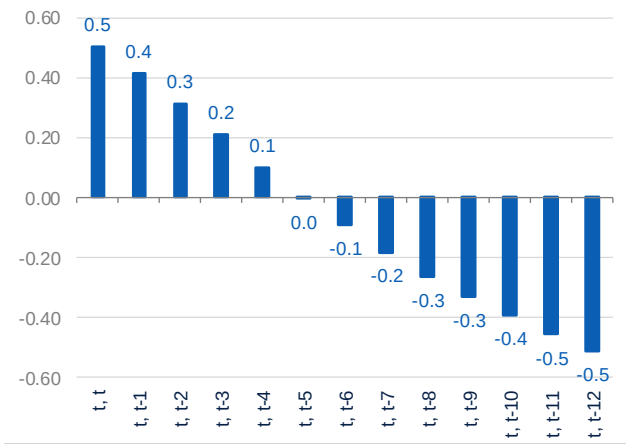
this lag, it is possible to anticipate that the lower growth in permanent IMSS formal employment can begin to be reflected in lower demand for mortgage lending by the first half of 2020 and reach a higher level during the second part of that year.

Another relevant variable that influences the development in bank mortgage lending is the average IMSS quotation salary expressed in real terms (i.e., discounting the effect of inflation). If this average real remuneration increases, this allows the purchasing power of formal workers to increase. This increased ability to pay is the factor that could translate into a higher demand for loans to purchase housing. This also occurs in reverse. That is, a reduction in the demand for mortgage loans can be expected when there is any decrease in the real wages of formal workers registered with the IMSS (Figure 3b.7). This last point is relevant, as from 2013 to 2016 IMSS real wages showed generally positive real annual growth rates. However, from January 2017 to January 2018, IMSS real wage variation was negative, and the monthly average of this rate in this period was -1.1%. On the other hand, starting in February 2018 IMSS average real wages registered growth rates again. The average monthly growth rate from February 2018 to December 2018 was 0.9%. In the first nine months of 2019, the IMSS real wage growth rate continued to rise, and from January-September 2019 its average real annual growth rate was 2.7%.[6]

Figure 3b.7 **CURRENT MORTGAGE LENDING AND IMSS AVERAGE REAL WAGES**
(ANNUAL REAL % VAR)

Source: BBVA Research based on INEGI and CNBV data

Figure 3b.8 **CURRENT MORTGAGE LENDING AND IMSS AVERAGE REAL WAGES: CORRELATION COEFFICIENT OF GROWTH RATES**



Source: BBVA Research based on INEGI and CNBV data

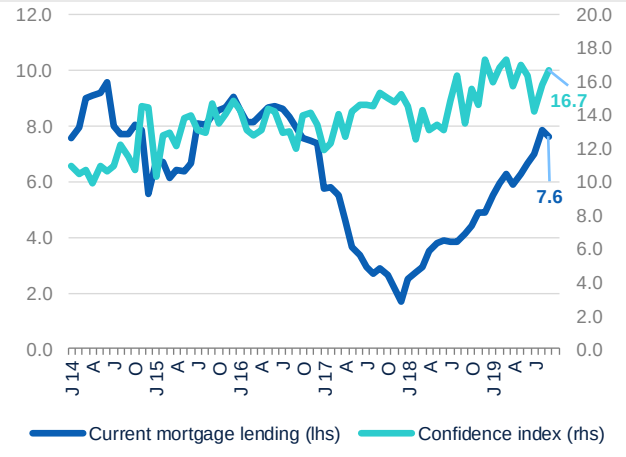
It should be mentioned that the development in the annual growth rate of IMSS average real wages correlates positively with the growth of the current mortgage loan portfolio balance (Figure 3b.7). The correlation coefficient of these two variables for the period from January 2014 to September 2019 is high (0.50) and decreases rapidly until a correlation with a four-month lag is considered (Figure 3b.8). This positive relationship disappears in the fifth month (t-5) and then becomes negative. The latter can be interpreted to mean that real wage increases have only a short-term effect on the development in mortgage lending; once a mortgage has been taken out, additional increases will not have

6: It should be mentioned that the average IMSS wage quotation and its development, both in nominal and real terms, is a reference for the performance of the employee earnings that take place in the formal and informal labor markets of the country. In this last point lies the indicative importance of the average IMSS wage on how average earnings could develop in other sectors of the economy.

a positive effect on the margin. If real wages contract quickly, as happened in 2017, then this can quickly affect the demand for new mortgage loans and be reflected in a lower rate of growth (first rectangle of figure 3b.7). In contrast, if real wages show sustained growth, this can lead to a greater momentum in mortgage lending, as happened in the first nine months of 2019 (second rectangle of figure 3b.7). In this sense, for the real wage to continue to boost the growth in mortgage loans, it must continue to grow steadily, and at high rates.

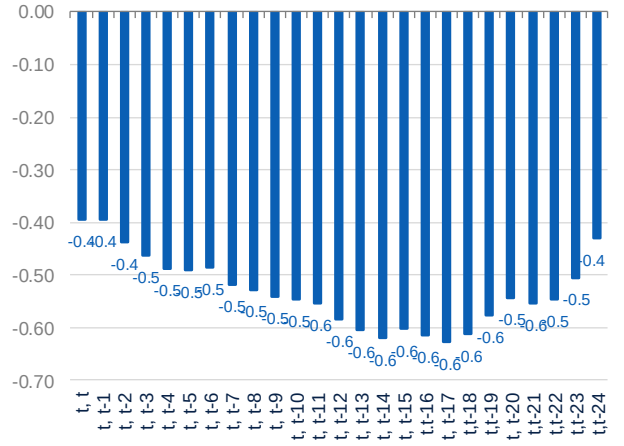
Furthermore, another indicator that could theoretically be related to the growth development in bank mortgage lending is the consumer confidence index. The consumer confidence index and growth rate of the current mortgage loan portfolio appear to be out of step with each other (Figure 3b.9). However, the correlation coefficient between these variables for the period January 2014 to September 2019 is positive and smaller in magnitude. The correlation coefficient is negative and increasing for the other periods in which there are lags (Figure 3b.10). The negative correlations between growth in mortgage lending and the consumer confidence index may possibly indicate that there is basically no lasting relationship between these two variables. It is possible that the relevant point consists of the fact that taking out a mortgage implies a commitment, and long-term income expectations that go beyond the 12-month expectations that are considered in the consumer confidence index. Another factor that would explain this lack of relationship is that the confidence index only reflects expectations, not actual payment capabilities or specific intentions of payment commitments, so, although consumers foresee good performance of the economy, they may not individually have a budget that allows them to absorb the payment of a mortgage. In other words, their optimism or pessimism about the economic environment does not reflect the real payment potential of consumers.[7]

Figure 3b.9 **CURRENT MORTGAGE LENDING AND CONSUMER CONFIDENCE INDEX** (ANNUAL REAL % VAR)



Source: BBVA Research based on INEGI and CNBV data

Figure 3b.10 **GROWTH RATE IN CURRENT MORTGAGE LENDING AND CONSUMER CONFIDENCE INDEX CORRELATION COEFFICIENT**



Source: BBVA Research based on CNBV data

7: An additional indicator of consumer confidence that INEGI publishes is the one that asks the following question: Is any member of this household planning to buy, build or remodel a house in the next two years? If correlations with different months of delay are calculated in the same period as in the year mentioned in the text between the real annual growth rate of the existing residential loan and this complementary index, all calculated correlations consequently are negative. This result reinforces the point that confidence indexes only reflect expectations, and not real payment capacity.

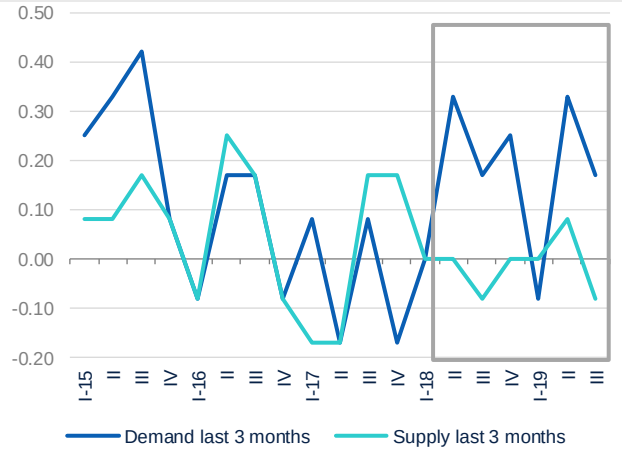
In conclusion, it can be said that the effect of macroeconomic variables on mortgage lending indicates that it has grown over 2019, due to the effect on one hand of the delayed momentum in the expansion of economic activity and in IMSS formal permanent employment, which was recorded until the first half of 2018. Added to this momentum has been the increase in real wages that has been observed in the first nine months of 2019. This may well indicate that the increased economic activity and employment in the past few months have made an increase in the number of mortgage loans possible. Furthermore, the higher IMSS real wage could have supported the retention of a certain amount of mortgage lending in real terms and also enabled anyone qualified to obtain a bank loan of this sort to do so without greatly affecting their financial situation. It should be added that the favorable performance of mortgage lending observed in the first nine months of 2019 was also observed at the same time that there was a slight increase in the interest rate charged for new mortgage loans, or loans made in the past month. The increase of this interest rate from December 2018 to September 2019 was 32 basis points. This topic is addressed in the last part of this article.

3b.3 Survey by Banco de México on the conditions for bank mortgage loans

The Bank of Mexico (Banxico) conducts a quarterly survey of general conditions and standards in the mortgage loan market, and the information it publishes is in terms of diffusion indexes. If the index has a positive sign it means increase or expansion, and if it has a negative sign it means decrease or contraction. In the case of the quarterly credit demand diffusion index, which refers to the 3 months prior to the quarter in which the survey is conducted, this index has shown an expansion in all quarters from 2Q18 to 3Q19 except 3Q18 and 3Q19. In the same period, however, the index for mortgage loan offering conditions indicates that these conditions were slightly more restrictive only in 2Q19 (Figure 3b.11). These indexes point out that demand for mortgage lending flowed without being significantly offset by more restrictive offering conditions throughout 2018 and the first three quarters of 2019.

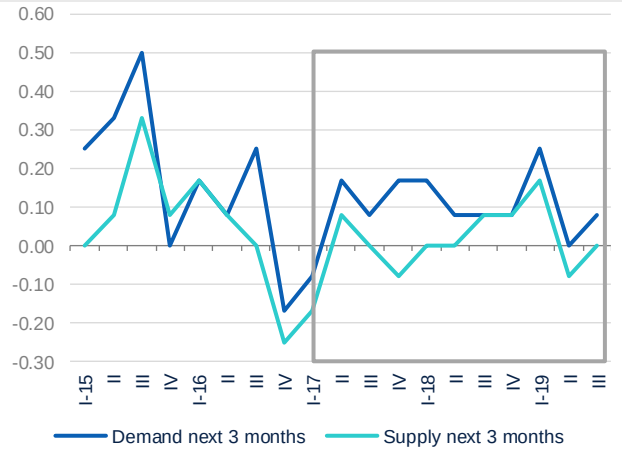
With regard to the expectation in each quarter of future developments or within the next three months both in terms of supply and demand for residential lending, the Banxico survey indicates that the demand for mortgage lending was expected to continue to increase from 2Q17 to 3Q19. For its part, the survey also indicates that in the same period the expectation has been maintained that the conditions for offering mortgage loans will not become more restrictive and will even improve for clients in the following quarter, except for 4Q17 and 3Q19. For these last two quarters, it was expected that in the next three months the supply conditions of bank mortgage loans would be slightly more restrictive (Figure 3b.12).

Figure 3b.11 **SURVEY OF MORTGAGE LENDING CONDITIONS: SUPPLY AND DEMAND DIFFUSION INDEXES FOR THE LAST THREE MONTHS**



Source: BBVA Research based on Banxico data for large banks (70% of the market)

Figure 3b.12 **SURVEY OF MORTGAGE LENDING CONDITIONS: SUPPLY AND DEMAND DIFFUSION INDEXES FOR THE NEXT THREE MONTHS**



Source: BBVA Research based on Banxico data for large banks (70% of the market)

Information from Banxico's survey on the conditions and standards of the mortgage lending market indicates that in the recent past mortgage lending has grown driven by its demand and because supply conditions, from being virtually unchanged to returning to being more restrictive, facilitated the process of expanding this credit to families. The Banxico survey also notes, on the one hand, that there has been an expectation since the second quarter of 2017 that the demand for mortgage lending will continue to grow and, on the other hand, that expectations about the supply conditions for the following quarter only became a bit more restrictive on two occasions.

It is possible that banks have not made the conditions of the mortgage loans they grant more restrictive, as indicated by the Banxico survey results, due to the stable development of the delinquency rate for this loan portfolio. In December 2017 the delinquency rate was 2.7%, and in September 2019 it was 2.8%. The delinquency rate in this period has been stable, and its average was 2.7% (Figure 3b.1). In other words, the delinquency rate figures suggest that to the extent that the mortgage lending portfolio does not deteriorate, and therefore its delinquency rate does not increase, banks will not have to modify or largely tighten their criteria for allocating this type of credit to families in the absence of any deterioration of the portfolio that reflects significant increase in risk for the portfolio. Thus, as long as the quality indexes of the mortgage lending portfolio remain stable, this credit will continue to flow under conditions and requirements similar to those recorded up to 3Q19.

3b.4 Detailed statistics of the National Banking and Securities Commission (CNBV) on mortgage loans

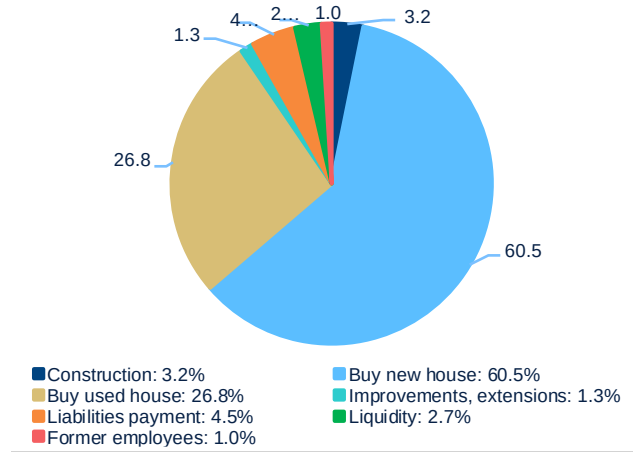
Also, the National Banking and Securities Commission (CNBV) publishes a number of statistics that allow a more detailed analysis of bank mortgage lending. One of these is the bank mortgage lending balance based on purpose. In particular, CNBV statistics distinguish seven different purposes for mortgage lending: i) construction; ii) new home

purchase; iii) second-hand home purchase; iv) improvements, extensions and remodeling; v) payment of mortgage liabilities; vi) credit for liquidity; vii) mortgage loans to former bank employees. While CNBV also refers to the old or restructured credit categories and others, it does not provide data for the last few years.

It should be mentioned that the balance of these loans in the CNBV statistics on mortgage lending by purpose is less than the balance that the Commission reports in the consolidated historical commercial bank monthly balance sheet statistics.[8] Despite this important limitation, the analysis of information on the purpose of bank mortgage lending published by CNBV helps to understand the development and source of growth of this lending to families, in addition to the fact that no other source of statistics on this subject is available to the public.

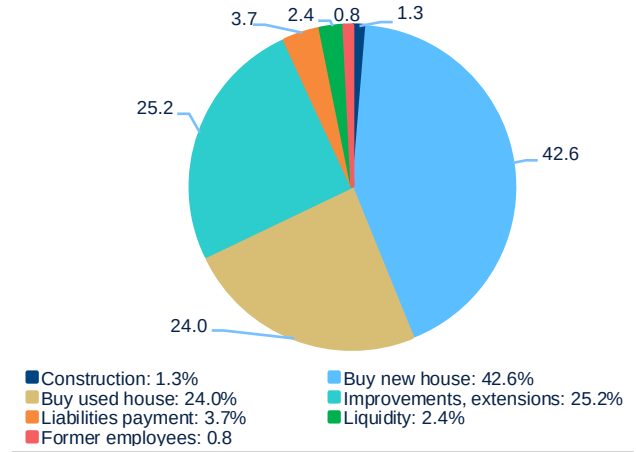
According to CNBV statistics, 60.5% was for new housing loans and 26.8% were to acquire second-hand homes, based on the balance of the total loan portfolio in September 2019. In other words, 87.3% of mortgage lending has been channeled to two categories (Figure 3b.13). It should be mentioned that in December 2016, 70.6% of the balance of mortgage lending corresponded to loans to acquire new homes and 16.1% to acquire existing homes. Together, these two categories accounted for 86.7% of the total mortgage loan portfolio balance. In addition, in terms of the number of loans, loans for new (42.6%) and existing (25.2%) homes in September 2019 came to 66.6% of the number of loans granted, with the number of loans for improvements and extensions (25.2%) taking third place. 91.8% of the total number of mortgages were channeled into these three categories of mortgage loans (Figure 3b.14). In contrast, 50.7% of the total number of loans granted in December 2016 were for new homes, 10.4% for existing homes and 32.3% for improvements and extensions.

Figure 3b.13 **MORTGAGE LENDING BY PURPOSE: PERCENTAGE BREAKDOWN OF SEPTEMBER 2019 BALANCE** (%)



Source: BBVA Research based on CNBV data. Total loan portfolio balance

Figure 3b.14 **MORTGAGE LENDING BY PURPOSE: PERCENTAGE BREAKDOWN NUMBER OF LOANS (**SEPT 2019, %)



Source: BBVA Research based on CNBV data. Total number of loans, current and redeemed

8: The information from the CNBV analyzed below comes from the Information Portfolio, Housing, Table 040-13a-R1, which is entitled: Housing portfolio: Number of loans and portfolio balance. Total portfolio.

Furthermore, the real annual growth rate of the current mortgage loan portfolio by purpose of the loan in September 2019 was 6.6%. The following contributed to the 6.6 percentage point (pp) growth by the components of their balance: loans to acquire new homes contributed 6.4 pp to this growth; improvements and extensions, 0.2 pp, and construction (0.2 pp), liquidity (0.2 pp) and loans to former employees (0.2 pp) all contributed the same amount. In contrast, some categories reduced growth, such as loans to purchase second-hand homes (-0.4 pp) and loans for payment of liabilities (-0.3 pp).

The above figures regarding the contribution to growth by purpose of mortgage lending indicate that the most important loan category in the twelve months from September 2018 to September 2019 was lending to purchase new homes. In other words, the main source of expansion of total mortgage lending in the twelve months from September 2018 to September 2019 was granted to acquire new homes.

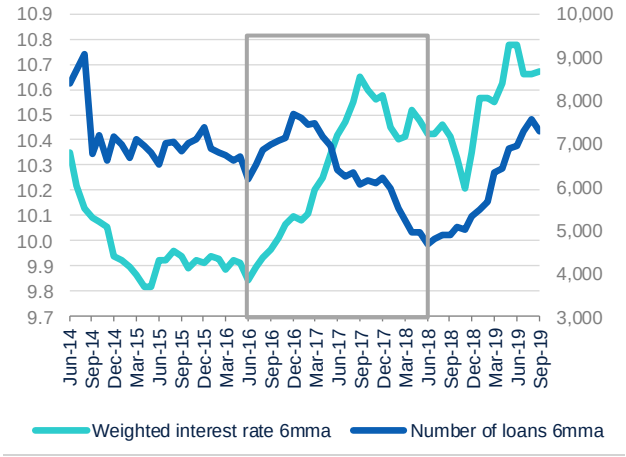
3b.5 Characteristics of bank lending for the purchase of new homes

The various statistics provided by CNBV on new housing loans or new loans made in one month include information on the weighted interest rates of the loans granted and the number of loans granted in the month. CNBV also provides statistics on the weighted term (months) of these credits per banking institution.

The average interest rates for these and the total number of loans granted by banking institutions overall can be calculated based on data on new loans granted per month to purchase new homes.[9] The six-month moving average was calculated for both statistics, and based on the latest data it is noted that interest rates on loans to purchase new homes began to increase starting in July 2016. As for the average number of new loans or loans made in the previous month, these in turn began to decline consistently between January 2017 and July 2018. This may have been a consequence of the observed increase in the interest rate of these loans and also of the contraction in real wages that occurred throughout 2017, among other things. With regard to the increase in interest rates for the new loans granted to purchase new homes, this appears to have been 9.8% in June 2016; first they increased to 10.1% in December 2016, and in December 2017 they were 10.6% (Figure 3b.15). In other words, interest rates on new loans to purchase new homes increased at the same time as the IMSS average real salary quotation contracted.

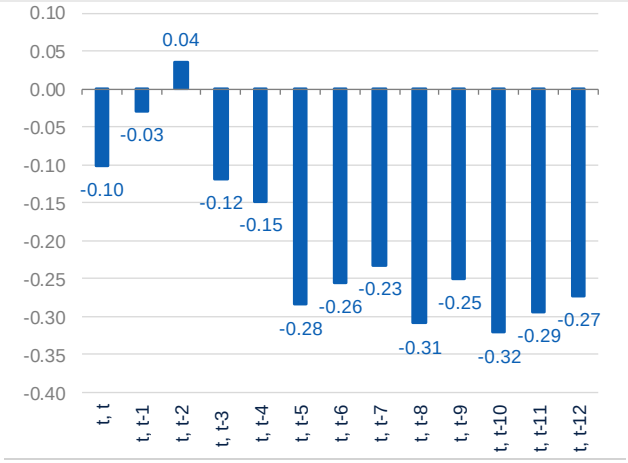
9: The CNBV statistics used in the analysis of this section come from Information Portfolio, housing, table 040_13a_R4, called Housing Portfolio: Weighted rate and term. Loans granted in last thirty days.

Figure 3b.15 **LOANS TO PURCHASE NEW HOMES: INTEREST RATE AND MONTHLY AVERAGE NUMBER OF LOANS MADE IN THE PAST MONTH** (%)



Source: BBVA Research based on CNBV data

Figure 3b.16 **LOANS TO PURCHASE NEW HOMES: CORRELATION COEFFICIENT OF THE INTEREST RATE AND AVG. NUMBER LOANS APPROVED MONTHLY**



Source: BBVA Research based on CNBV data Total number of loans, current and redeemed

Furthermore, the average monthly number of new housing loans has been increasing since August 2018, which may have been partly a consequence of the lower interest rate until November 2018. However, since December 2018 the interest rates of new loans to purchase new homes increased again while the average monthly number of new loans has continued to increase. This is noteworthy because there is an inverse relationship between the interest rates of the new loans to purchase new homes and the number of monthly average loans granted (Figure 3b.16). This inverse relationship implies that interest rate increases should be reflected in lower demand, and therefore a lower number of loans. This argument would lead one to expect that the recorded increase in interest rates for new home loans since December 2018 would be reflected in a decrease in the monthly number of new bank mortgage loans. However, this has not happened. This point is discussed in the next section.

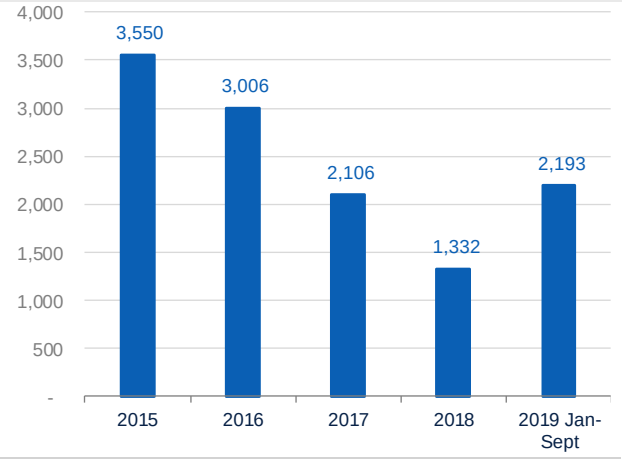
3b.6 Some possible causes of the dynamism in mortgage lending for 2019

A possible explanation of why the monthly number of loans for new homes has continued to increase since January 2019 while the interest rate on these new loans increased 32 basis points between December 2018 and September 2019 (Figure 3b.15) could be the effect of the observed increase in the IMSS average real wage. The average real annual growth rate of these wages during the first nine months of 2019 was 2.7%. Although this average real wage growth is the highest that has been recorded, for example, since 2006, its size does not represent a substantial increase in payment capability of formal workers who might request this type of loan (Figure 3b.17). In this regard, the explanation for why the monthly number of mortgage loans granted has continued to grow in 2019 is due to other factors.

Furthermore, it should be noted that part of the loans that commercial banking grants for housing are made in conjunction with official housing entities. This is the case with loans that banking institutions grant in co-financing with Infonavit (the National Fund Institute for Housing for Workers, which grants financing to people working in the private

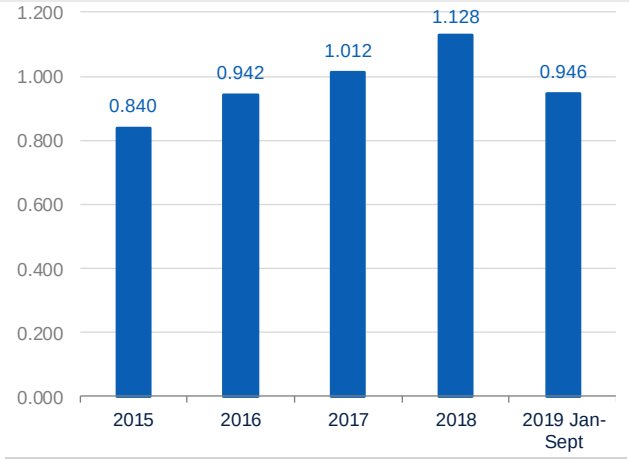
sector) and with Fovissste (the Housing Fund of the Institute for Security and Social Services of State Workers).[10] In this regard, it is possible that the number of loans to purchase new homes granted by the bank may increase if the number of co-financings also increases. This means that the bank customers could increase the demand for this loan so as to be able to access more expensive housing by supplementing the funds they need to purchase housing with non-bank funds from their home sub-accounts at Infonavit or Fovissste. This would mean that these customers, instead of acquiring low-income housing through the development institutes, could apply for a loan with a higher amount of co-financing, increasing the number of housing loans granted by commercial banking

Figure 3b.17 **NUMBER OF LOANS TO PURCHASE NEW HOUSING MONTHLY AVERAGE PAYMENT FROM CO-FINANCING** (INFONAVIT & FOVISSSTE)



Source: BBVA Research based on CNBV data

Figure 3b.18 **ANNUAL AVERAGE OF FUNDS FROM CO-FINANCING BY LOAN** (MILLIONS OF PESOS, SEPT 2019)



Source: BBVA Research based on CNBV data

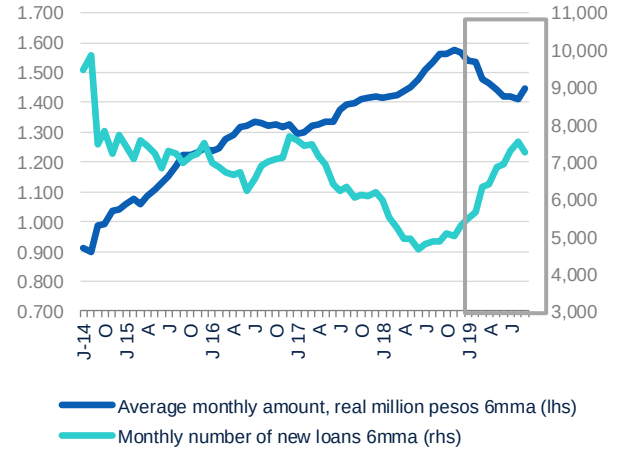
The data from CNBV indicate that, on a monthly average between January and September 2019, a greater number of loans have been awarded to housing with co-financing than was done in 2017 and 2018 (Figure 3b.18). In comparison with 2018, the number of co-financing home loans awarded on a monthly average in the first nine months of 2019 was 64.6% higher than the monthly average of 2018. In this regard, the greater number of co-financed loans that have been granted is possibly one of the various relevant factors that have contributed to the increased momentum observed over the first nine months of 2019 in mortgage lending to families.

Another possible explanation for the greater number of home loans recorded in the first nine months of 2019 may be because customers have required a lower amount of credit in real terms to purchase new housing. According to CNBV data,[11] the average amount of loans granted for housing has increased significantly in recent years. For example, in 2015 the average amount of credit granted by banks was almost 1.2 million pesos, and it increased by 2018 to 1.5 million pesos, both at September 2019 prices. For the first nine months of 2019, the actual average amount of credit obtained was somewhat lower, and slightly higher than 1.4 million pesos. This issue is becoming more relevant, since

10: The information from the CNBV used in this section comes from the table: 040_13a_R16, Number of credits and amount of credits granted in co-financing. Loans granted in last thirty days.
11: The information in this section comes from the CNBV table in the Information Portfolio, Housing, Table 040_13a_R3, Portfolio: Number of credits and amount of credit. Loans granted in last thirty days.

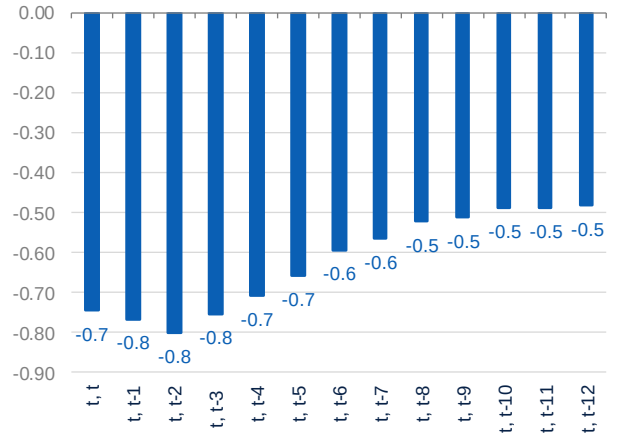
a reduction in the average amount of lending for new housing has been observed in the nine months of 2019, while the number of loans granted monthly has continued to simultaneously increase (Figure 3b.19).

Figure 3b.19 **LENDING TO ACQUIRE NEW HOMES: ACTUAL AVERAGE AMOUNT OF LOAN AND MONTHLY NUMBER OF NEW LOANS** (MILLIONS OF PESOS, SEPT 2019 %)



Source: BBVA Research based on CNBV data

Figure 3b.20 **LENDING TO ACQUIRE NEW HOMES: CORRELATION COEFFICIENT OF ACTUAL AVERAGE LOAN AMOUNT AND NUMBER OF LOANS GRANTED MONTHLY**



Source: BBVA Research based on CNBV data Total number of loans, current and redeemed

The last point in the previous paragraph indicates that there is an inverse relationship between the number of new mortgage loans granted per month and the average loan amount granted. It should be mentioned that the average amount of mortgage loan granted increased continuously from July 2014, when it was 1,050 million pesos to 1,635 million pesos in August 2018, both at September 2019 prices. The average price of the amount of credit granted in real terms began to decrease gradually starting in September 2018 (Figure 3b.19). However, the inverse relationship between the number of loans granted to acquire new homes and the average amount of new loans is exemplified by the correlation coefficient between these two variables. For example, the correlation coefficient of these two variables for the same month confirmed was negative and -0.74 (Figure 3b.20). This relationship indicates that the lower the amount required for a bank credit to acquire housing, the higher the number of loans of this type that customers will request. Behind this relationship is also the fact that the lower the required amount of credit is, the more likely that potential customers consider assuming this debt in time and form, as the total cost of credit for the customer will be lower.

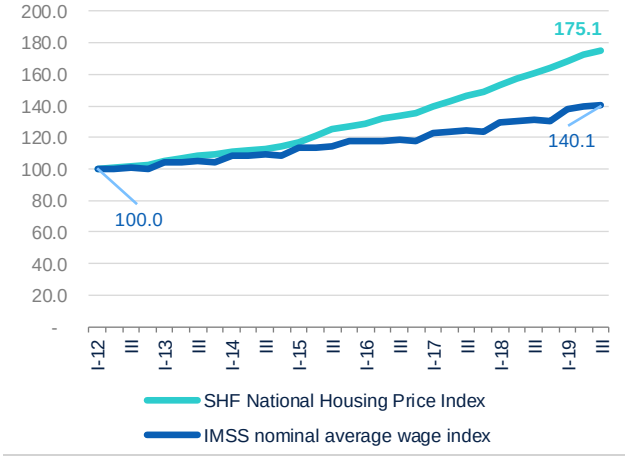
In short, it can be said that, while the increase in the IMSS average real wage that has been observed throughout 2019 is a positive event that strengthens the payment capability of people whose income is in line with the development in these wages, the increase observed to date that real wages have had is not of such a magnitude as to be a relevant source of stimulus for mortgage lending. Instead, the fact that a higher monthly average number of co-financing mortgage loans have been granted over the first nine months of 2019 along with a lower amount of bank lending obtained are two factors that are quite possibly relevant in the stimulus that this type of loan is experiencing.

Moving into the near future, the question arises as to whether the monthly average number of loans granted in co-financing will continue to increase as it has in the first nine months of 2019, compared to what happened in 2018. Similarly, the question also arises as to whether in the future the amount of credit to purchase housing will not increase, since if this happens then the expansion of this type of credit to families would cease to have one or both sources of momentum.

3b.7 Development of mortgage lending and its price index

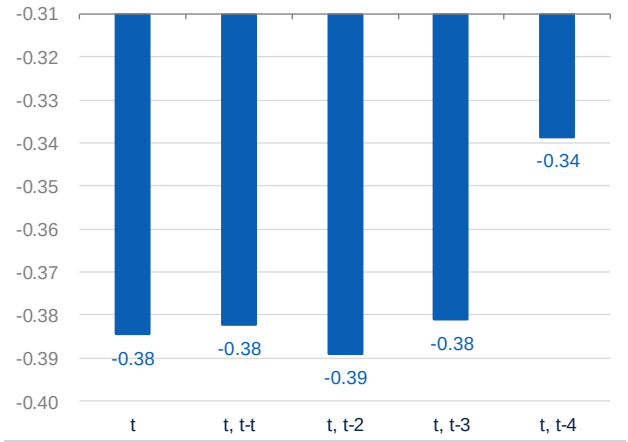
In addition, the cost of housing is a subject that is related to the demand for mortgage lending. According to statistics from the national index of housing prices in Mexico that the Federal Mortgage Society (SHF) publishes quarterly, it appears that the cost of housing has grown faster than the average nominal wage of the workers registered in the IMSS has. From 1Q12 to 3Q19, the national housing price index of the SHF increased by almost 25.0%, more than the average nominal wage quotation of the workers registered in the IMSS (Figure 3b.21). In other words, the increased price of housing divided by the payment capacity of potential customers is a factor that decreases the demand for bank lending. In addition, these figures help to understand why since April 2012 the current mortgage loan portfolio stopped growing by double digits in real terms.

Figure 3b.21 **SHF NATIONAL HOUSING PRICE INDEX AND IMSS NOMINAL AVERAGE WAGE INDEX** (1Q12 =100)



Source: BBVA Research based on CNBV data

Figure 3b.22 **CORRELATION COEFFICIENT BETWEEN THE AVERAGE NUMBER OF LOANS GRANTED MONTHLY AND THE SHF HOUSING PRICE INDEX** (Q=QUARTERS)



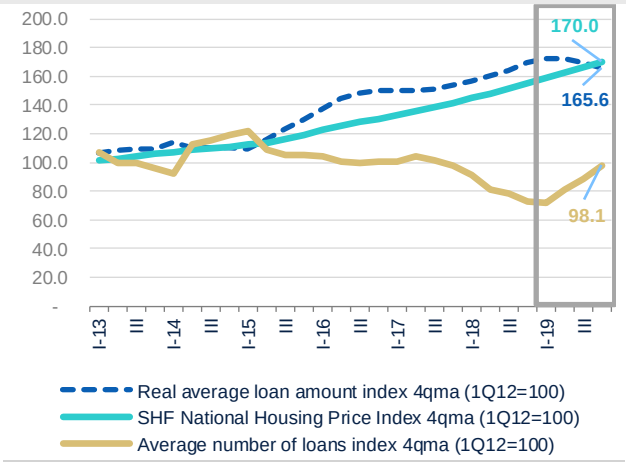
Source: BBVA Research based on CNBV data. Total number of loans, current and redeemed

Furthermore, there is an inverse relationship between the index of the number of loans granted monthly on a quarterly average and the SHF price index. For the period from 1Q12 to 3Q19, the correlation coefficient between these two variables is negative and -0.38 for data from the period (Figure 3b.22). That is, the higher price of housing is another factor affecting housing demand. However, this did not happen during the first three quarters of 2019 (Figure 3b.23).

The increase in the number of loans to purchase new homes that has been observed over the first nine months of 2019 in an environment in which interest rates for new loans or loans issued over the previous thirty days increased

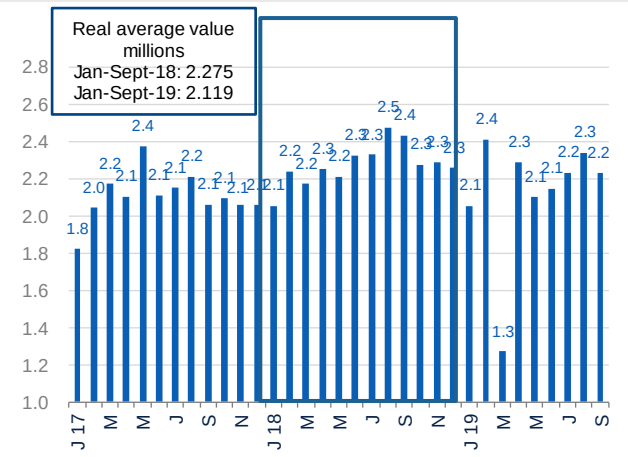
(Figure 3b.15) at the same time that the price of housing has continued to increase (Figure 3b.21) is possibly due to a significant change in the supply conditions of the new home market.

Figure 3b.23 **SHF NATIONAL HOUSING PRICE INDEX, REAL INDEX OF THE AVERAGE LOAN AMOUNT AND MOBILE INDEX OF THE AVERAGE NUMBER OF LOANS 4Q** (1Q12 =100)



Source: BBVA Research based on CNBV data

Figure 3b.24 **MONTHLY AVERAGE VALUE OF HOUSING COVERED BY MORTGAGES** (FIGURES IN MILLIONS OF PESOS AS AT SEPT 2019)



Source: BBVA Research based on CNBV data

It should be noted that Banxico's quarterly survey data do not indicate any relevant changes in the supply of credit; the possible change in residential property market supply is related to a modification in the type of housing offered where loans require a lower principal to acquire it (Figure 3b.19). It is possible that the latter may result if the price of the new home offered to the real estate market has decreased because new properties of smaller dimensions or size have now started to be offered where the price per square meter of construction continues to increase, but the price for the finished property is now the same or lower because it is a smaller property. Another reason could be because banking institutions now seek more to service segments of the population that demand bank lending to acquire lower-value housing (without this being considered public housing).

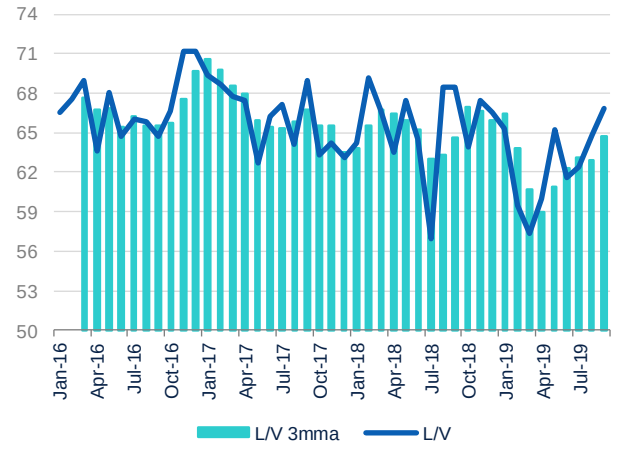
According to CNBV statistics, the average monthly value of a home covered by a new loan granted by the banks has reduced at September 2019 prices. The average value of a home covered by a loan between January and September 2018 was 2,275,000 real pesos, and it fell to 2,119,000 between January and September 2019. In other words, the real average value of housing covered by a loan to acquire new housing in this period dropped 6.9% (Figure 3b.24).

Moreover, in the first nine months of 2018 the average ratio of the value of a loan to acquire new housing of like value (LV) was 65.5%, and this ratio fell slightly, to 62.6%, in the same months of 2019.[12] In other words, the ratio of the amount of the loan to the value of the home recorded a slight decrease on average during the first months of 2019 compared with the same period of 2018. If only the average data for this June-September 2019 ratio is considered, the LV ratio was 64.2%, similar to what it was for the same months in 2018. In this regard, it can be thought that although

12: The loan-to-value (LV) ratio data discussed comes from the CNBV Information Portfolio, Housing, Report 040-13a-R7. Housing portfolio. Average household value and loan amount figures. Loans granted in last thirty days.

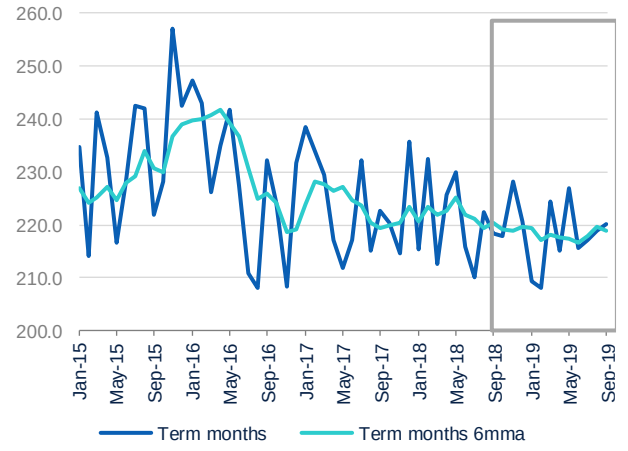
the average amount of credit to acquire a new home dropped during the first nine months of 2019, this occurred without a major change in the ratio of the loan amount ratio to the value of the property (Figure 3b.25).

Figure 3b.25 **RATIO OF LOAN AMOUNT TO AVERAGE MONTHLY PROPERTY VALUE (LV)** (%)



Source: BBVA Research based on CNBV data

Figure 3b.26 **MONTHLY AVERAGE VALUE OF PROPERTY COVERED BY MORTGAGE** (FIGURES IN MILLIONS OF PESOS AS AT SEPT 2019)



Source: BBVA Research based on CNBV data

Finally, it should be mentioned that the average term in months of a residential bank loan during January to September 2019 was 218.1 months, while it was slightly longer, at 221.9 months, in the same period in 2018 (Figure 3b.26). These figures and the ratio of loan value to property value indicate that no significant changes were recorded in the general conditions for granting new mortgage loans during the first nine months of 2019. These points are consistent with the results of Banxico's surveys of the general conditions for granting mortgage loans, which indicate that these were virtually no more restrictive throughout 2018 and the first three quarters. The above figures indicate that the lowest amount of credit granted in real terms to acquire new housing on average from January to September 2019 (Figure 3b.19) did not affect the conditions of this type of credit in terms of significantly changing the amount of the ratio of the loan to the value of the property and the term of the loan.

3b.8 Conclusion

There are several macroeconomic factors behind the growth of residential bank lending, which due to its delayed effect and current performance anticipate a complex macroeconomic environment that could affect the momentum of mortgage lending to families in the near future or from the first half of 2020.

Furthermore, the momentum observed in residential bank lending has also been related to specific factors in the first nine months of 2019, as has the existence of a greater number of loans granted in co-financing arrangements compared to the previous two years and the development in the real value of homes covered by mortgages. This value ceased to increase and began to decrease in real terms starting in September 2018. The latter may be due to the fact that both real estate developers and banking institutions are making this type of credit more accessible to larger segments of the population. Possibly this is happening because real estate developers began offering smaller housing

at the same time that the square meter price of construction continued to rise in line with the SHF housing price index. In this way, a home can be offered at the same or lower price, but of smaller dimensions, to important segments of the population that can purchase it with a bank loan.

To the extent that specific factors in the mortgage market that have had a positive effect on its performance persist, residential bank lending will have an important stimulus that may help mitigate the adverse impact of the macroeconomic environment on credit demand that is likely to occur in the first half of 2020. In particular, it is expected that the slowdown in formal permanent employment will eventually be reflected in lower demand for mortgage lending, and a slower pace of expansion would be observed in this loan portfolio if there are no factors to mitigate this shock.

3.c Financing to businesses: Main results of ENAFIN 2018

In October 2019, the National Banking and Securities Commission (CNBV) and the National Institute of Statistics and Geography (INEGI) released the results of the National Survey on Business Financing (ENAFIN 2018). The objective of this survey is to collect data to identify the needs, sources and conditions of access to financing of private non-financial businesses in Mexico, as well as to investigate how businesses use such financing and other financial services. It should be noted that ENAFIN 2018 provides continuity to the survey conducted in 2015 (ENAFIN 2015).

In this section, by comparing the results of both surveys, we analyze what progress has been made in financing businesses in the country. This exercise allows us to identify relevant changes in the situation and problems of businesses in accessing financing in Mexico, information that, in addition to being useful for the designing of public policies (one of the main purposes for which CNBV and INEGI conduct the survey), it may be of use in identifying areas of opportunity for commercial banking to adapt, expand or improve the services it provides to the different types of businesses nationwide.

While the ENAFIN 2018 survey was carried out seeking comparability with ENAFIN 2015, the most recent survey modified some questions to make them clearer and included questions on the use of new financing tools and schemes. Based on the above, it is not possible to compare all of the responses between one survey and another. In the present exercise, based on publicly available tabulations, a comparison of answers to questions that are equivalent in both questionnaires was made to obtain a measurement of the progress achieved, with emphasis on issues related to the financing obtained by businesses[13]. When published information permits, the results are analyzed by company size.

3c.1 Business structure in terms of size continues without significant changes, and profit and debt indicators improve

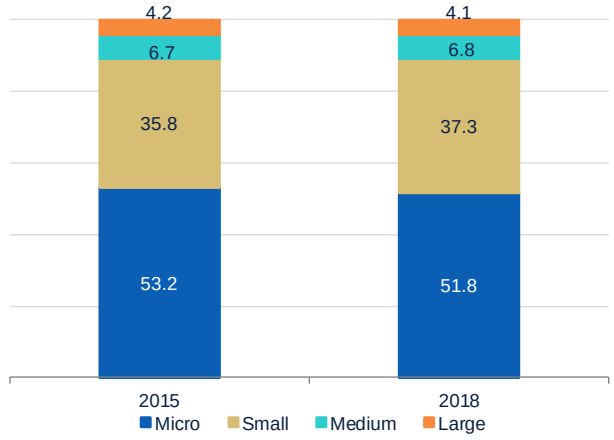
The target population (both in ENAFIN 2015 and ENAFIN 2018) is composed of businesses with six or more employees (micro, small, medium and large enterprises[14]), belonging to the construction, manufacturing, commercial and private non-financial services sectors, situated in localities with 50,000 or more inhabitants. According to these characteristics, ENAFIN 2015 was representative of 233,155 businesses, while ENAFIN 2018 was representative of 273,909. ENAFIN 2015 was conducted between September and November 2015 and most of its responses are referenced to 2014, while ENAFIN 2018 was conducted between August and October 2018 and most of its responses are referenced to 2017.

Of the businesses represented in ENAFIN 2018, 89.1% are micro and small businesses, the same percentage as that recorded in ENAFIN 2015 (Figure 3c.1). In ENAFIN 2018, businesses in the services sector accounted for 53.8% of the total, those in the commercial sector 26.5%, those in the manufacturing sector 15.3% and those in the construction sector 4.3%. These percentages show slight variations over the sectoral distribution recorded in 2015 (Figure 3c.2). As for the size of the locality, 45.4% of the total number of businesses in 2018 were in localities with between 50,000 and 499,999 inhabitants, while the rest (54.6% of the total) were in localities with more than 500,000 inhabitants. These

13: In particular, no analysis is being performed of progress in issues related to capital and reserve contributions or those related to knowledge from other sources or intermediaries, such as the stock market sector, development banking, financial technologies or the use of credit auxiliary services (factorings and leasing).
14: The classification by size of business used in both surveys corresponds to the definitions established by the Ministry of Economy in the Official Journal of the Federation of June 30, 2009, which takes into account both the number of workers and the economic sector of the business.

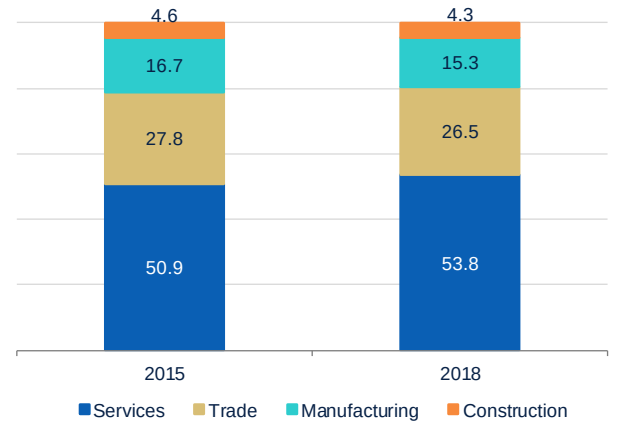
percentages are similar to the percentages observed in 2015, 45.0% and 55.0% respectively. Thus, the similarity in the distribution of businesses by size, sector and locality between the two surveys imparts validity to the comparability of their respective results.

Figure 3c.1 **DISTRIBUTION OF BUSINESSES BY SIZE** (% OF TOTAL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

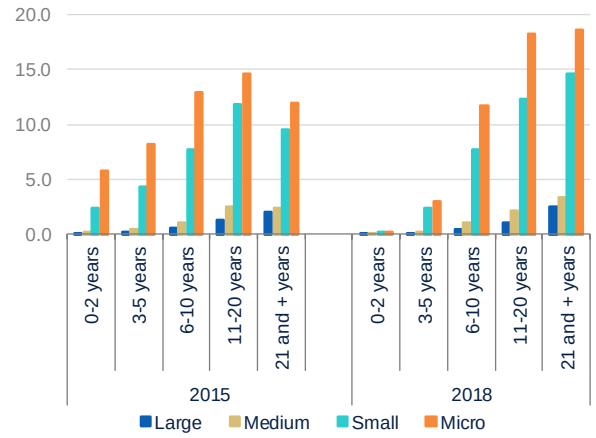
Figure 3c.2 **DISTRIBUTION OF BUSINESSES BY AREA OF ACTIVITY** (% OF TOTAL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

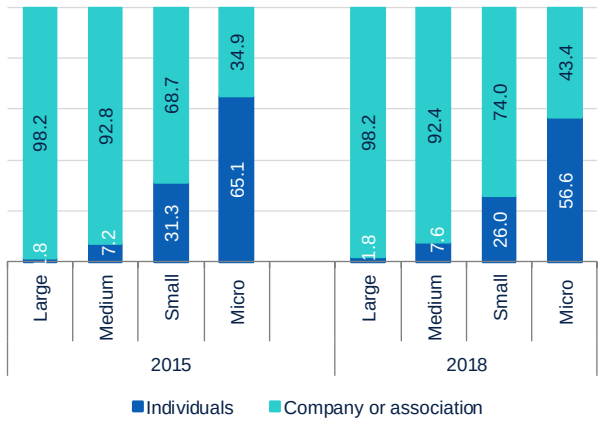
The percentage of businesses with the highest number of years in operation increased compared to 2015 for any size of business, so that in 2018 73% of businesses had more than 10 years in operation (vs 56.2% in 2015). It also draws attention to the fact that the percentage of businesses that have up to two years in operation fell significantly, from 8.4% in 2015 to 0.5% in 2014 (Figure 3c.3). While this could be an indicator that businesses in that segment managed to survive to be classified in the next tier, it could also indicate that few new businesses managed to establish themselves between the comparison periods. As for the type of ownership, the proportion of micro and small businesses that were constituted as a company or association increased from 34.9% to 43.4% in the case of micro businesses, and from 68.7% to 74.0% in the case of small businesses (Figure 3c.4).

Figure 3c.3 **BUSINESSES BY OPERATING AGE GROUP** (% OF TOTAL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

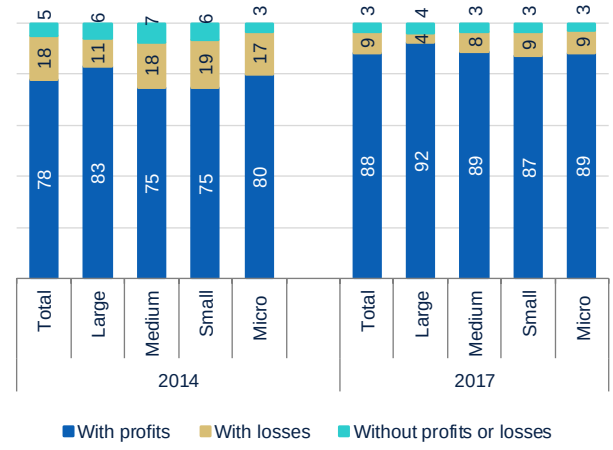
Figure 3c.4 **BUSINESSES BASED ON TYPE OF OWNERSHIP** (% PER SIZE OF BUSINESS)



Source: BBVA Research with data from ENAFIN 2015 and 2018

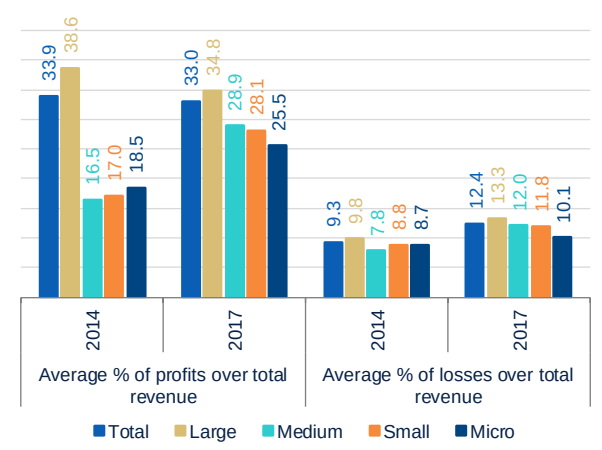
In terms of financial performance, the percentage of businesses that registered profits increased from 78% in 2014 to 88% in 2017. Small and medium-sized businesses achieved a more significant improvement in their results, as the percentage of businesses that registered profits increased by more than 10 percentage points (pp) between 2014 and 2017 (Figure 3c.5).

Figure 3c.5 **BUSINESSES BASED ON THEIR FINANCIAL RESULTS** (% BY BUSINESS SIZE)



Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.6 **PROFIT AND LOSS BY BUSINESS SIZE** (% OF TOTAL INCOME)

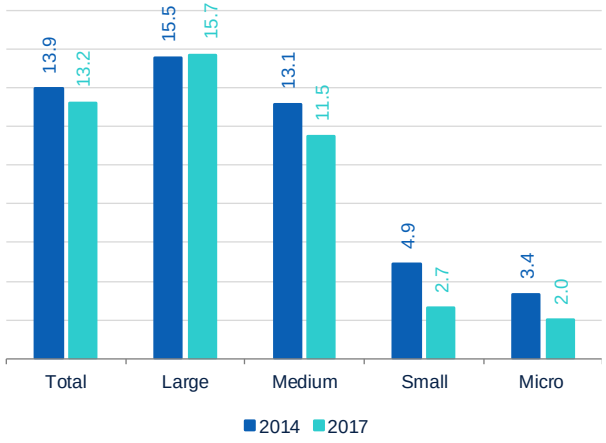


Source: BBVA Research with data from ENAFIN 2015 and 2018

Among the businesses that registered profits, the average of these profits compared to total revenues decreased for large businesses (from 38.6% to 34.8%) while the percentage increased for the rest of the businesses. For businesses that recorded losses, the percentage of such losses compared to total income increased widely, and increased from 9.3% to 12.4% for all businesses (Figure 3c.6). The increase, both in the number of businesses that made profits and in the profits as a proportion of total revenues, suggests an increase in payment capability for these agents in the comparison period that could have facilitated taking out either a greater number of loans or higher loans.

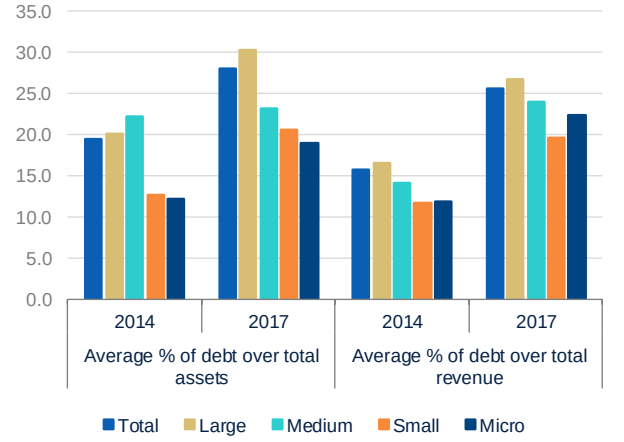
As for the origin of revenues from the sale of products and services, foreign revenue registered a slight decrease, from an average of 13.9% of total revenues in 2014 to 13.2% in 2017. Large businesses maintained a stable share of revenue from foreign sales, while it dropped for the rest of the businesses, with a sharp reduction in small businesses (from 4.9% to 2.7% average total revenues, Figure 3c.7).

Figure 3c.7 **INCOME FROM FOREIGN SALES OF PRODUCTS AND SERVICES** (AVERAGE % OF TOTAL INCOME)



Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.8 **DEBT BY COMPANY SIZE** (% OF TOTAL ASSETS AND INCOME)



Source: BBVA Research with data from ENAFIN 2015 and 2018

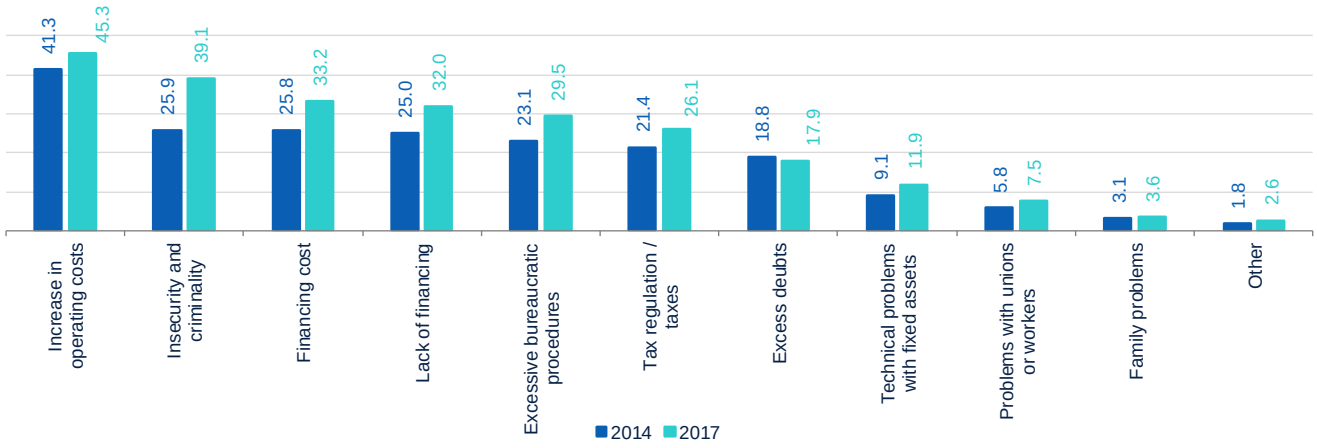
Debt as a percentage of total revenues and total assets increased for any business size, but the increase for large businesses is noteworthy (from 20.1 to 30.3% of total assets and from 16.6 to 26.8% of total revenues, Figure 3c.8). This increase would be in line with the growth in profits in businesses and profits as a percentage of total revenues; in other words, the higher indebtedness seems to be matched with the increase in businesses' payment capability in the comparison period (2014 vs 2017).

Out of the factors that highly affect the operation of businesses, the most frequently mentioned by businesses is the increase in operating costs (including payment of services, payroll and input price, among others). The percentage of businesses that mention this factor increased from 41.3% of the total in 2014 to 45.3% in 2017. The second largest was insecurity and crime, a factor that registered the greatest increase in percentage points between 2014 and 2017, from being mentioned as a factor of significant impact by 25.9% of businesses in 2014 to 39.1% in 2017 (Figure 3c.9).

The cost of the financing increased its percentage as a factor affecting operations, from being mentioned by 25.8% of the businesses to 33.3% of the businesses. This response coincides with the period in which the monetary policy

interest rate was adjusted upward, rising from 3.0% at the end of 2014 to 7.25% in December 2014. This increase was reflected in the reference rates for the placement of different types of loan, and in particular for loans to businesses, whose implicit interest rate (according to CNBV information) went from 6.6% to 8.0% between 2014 and 2017.

Figure 3c.9 **FACTORS AFFECTING BUSINESS OPERATION**
(% OF TOTAL BUSINESSES)



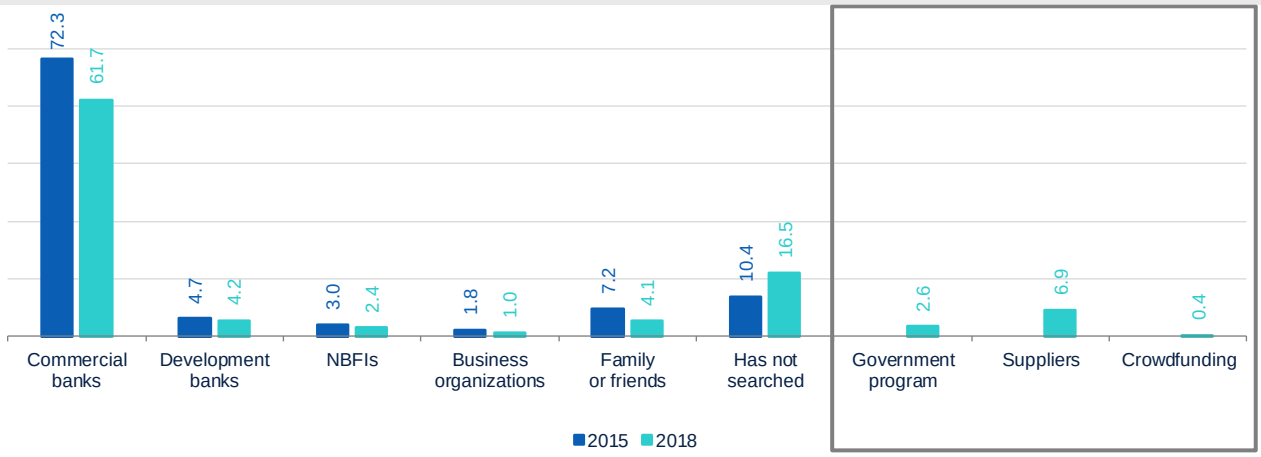
It refers to the factors cataloged with scale 5, considered the highest degree of impact.
Source: BBVA Research with data from ENAFIN 2015 and 2018

It also notes that lack of financing continues to be one of the factors perceived as having a high degree of impact on the operation of businesses, and was mentioned even more, from 25.0% of the total in 2014 to 32% in 2017. In addition, excess debts reduced their recurrence as a high impact factor for operations, mentioned by 17.9% of the businesses in 2017, less than the 18.8% recorded in 2014.

3c.2 Evolution of financing to businesses: advances in access to financing with more prudent use in a higher interest rate environment

In 2018, 61.7% of the businesses mentioned commercial banking as the main means by which they have sought financing, a lower percentage than indicated in 2015 (when it was 72.3%). Part of this decrease can be attributed to the increase in the number of businesses that did not seek any type of financing, which went from 10.4% of the total in 2015 to 16.5% in 2018. In addition, the 2018 survey included additional funding sources than those indicated in 2015, such as suppliers, government programs (federal, state, or municipal), and crowdfunding. The absence of these alternatives in the 2015 survey may have skewed upward the percentage of responses attributable to commercial banking (Figure 3c.10).

Figure 3c.10 **MAIN MEANS OR INSTITUTION WHEREBY BUSINESSES HAVE SOUGHT OR WOULD SEEK FINANCING** (% OF ALL BUSINESSES)

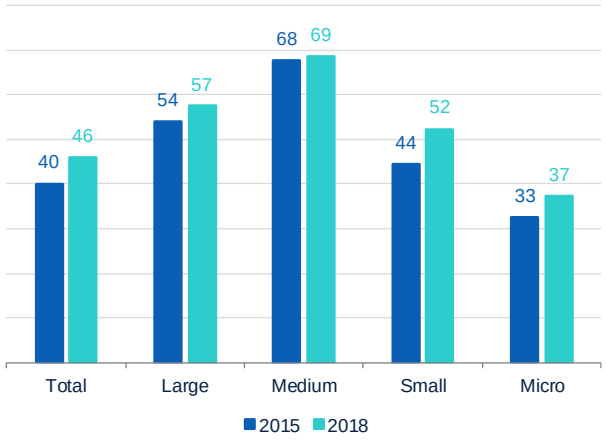


Source: BBVA Research with data from ENAFIN 2015 and 2018

Businesses that have had some financing in place since their start of operations have grown. In 2018, the percentage of this type of business accounted for 46% of the total, up from 40% in 2015. Small businesses saw the largest increase in the use of financing, followed by micro businesses (Figure 3c.11). This increase points to progress in the financial inclusion of smaller firms. Despite this general advance, there was a decrease in the number of businesses using credit for any given year (prior to the survey). For the total number of businesses, this percentage decreased from 31% of total businesses in 2014 to 27% in 2017. The most significant reduction was in medium and micro businesses (Figure 3c.12).

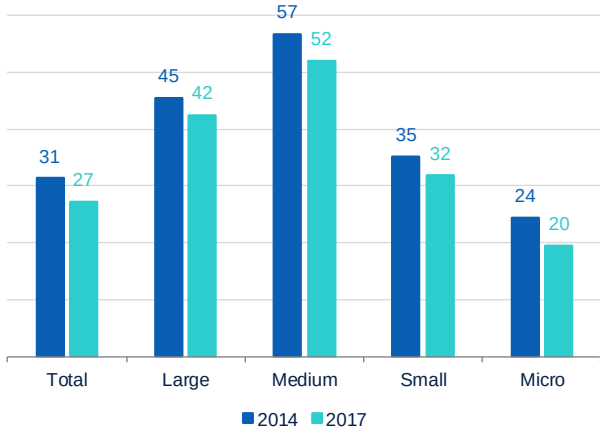
Regarding financing by type of currency, the decline in large and medium-sized businesses that used foreign currency (FC) financing is noteworthy. In 2014, 15.6% of large businesses used financing in FC, and by 2017 that percentage fell to 11.7%. For medium-sized businesses, this percentage went from 7% to 6.2% in the same period. Small and micro businesses did not see a significant change in the use of FC financing (Figure 3c.13).

Figure 3c.11 **BUSINESSES THAT HAVE FUNDING IN PLACE**
(% BY SIZE OF BUSINESS)



Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.12 **BUSINESSES USING ANY CREDIT OR FINANCING IN THE PREVIOUS YEAR**
(% BY SIZE OF BUSINESS)



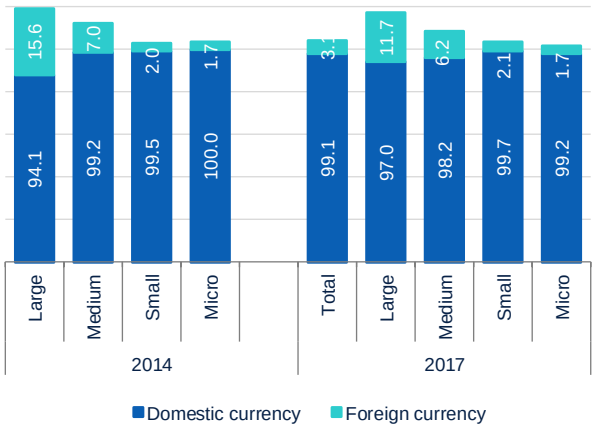
Source: BBVA Research with data from ENAFIN 2015 and 2018

Part of this decrease in the number of businesses that used FC financing could be associated with the phenomenon of substitution of foreign sources of financing with local ones. There was a slowdown in the foreign financing of businesses in favor of local sources of financing starting in 2017 and throughout 2018. In particular, the balance of foreign financing (bank and market) of businesses reduced its growth rate from an average annual real rate of 22.5% in 2014 to an average annual real contraction of (-)5.7% in 2017. In this way, the substitution of sources could also have generated a restructuring of financing by currency type. Another factor that may have influenced the decline of businesses with FC financing is the reduction in the percentage of foreign sales, as by having less income flow in other currencies (which provide natural coverage against changes in the exchange rate), businesses would have had fewer incentives to obtain FC financing.

In terms of national currency (NC) financing, the main source for which businesses obtain this type of resource remains commercial banking (Figure 3c.14). In 2017, 80% of the businesses with NC financing obtained it from commercial banking, a percentage higher than the 77% recorded in 2014. By size of business, micro businesses were the segment that most increased the use of this source, from 69% of micro businesses with financing in 2014 to 80% in 2017.

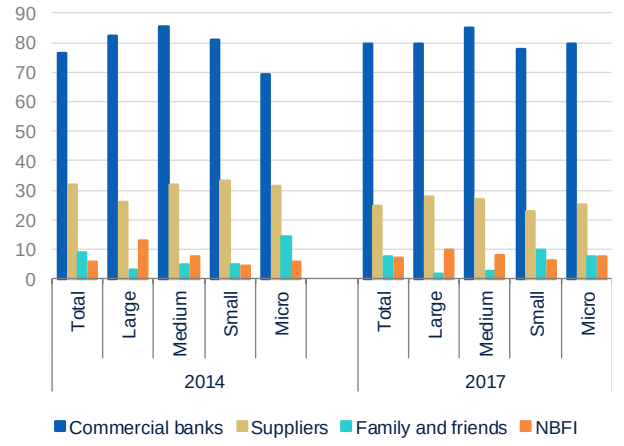
The second most important source of NC financing for businesses is suppliers, although their share has declined. By 2014, 32% of the businesses with financing had obtained it from suppliers, and by 2017 that percentage fell to 24%. The third most widely used source of financing for businesses is loans from family and friends. In 2014, 9% of the businesses with financing used this source, and in 2017 that percentage fell slightly to 8%. In fourth place is financing from non-bank financial intermediaries (NBFIs), with use going from 6% in 2014 to 7% in 2017.

Figure 3c.13 **FINANCING USED BASED ON CURRENCY TYPE** (% BY BUSINESS SIZE)



The sum of the parts may be greater than 100%, as businesses might select more than one option (since financing in NC or FC is not exclusive)
Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.14 **NC FINANCING BY SOURCE** (% OF BUSINESSES WITH NC FINANCING BY COMPANY SIZE)



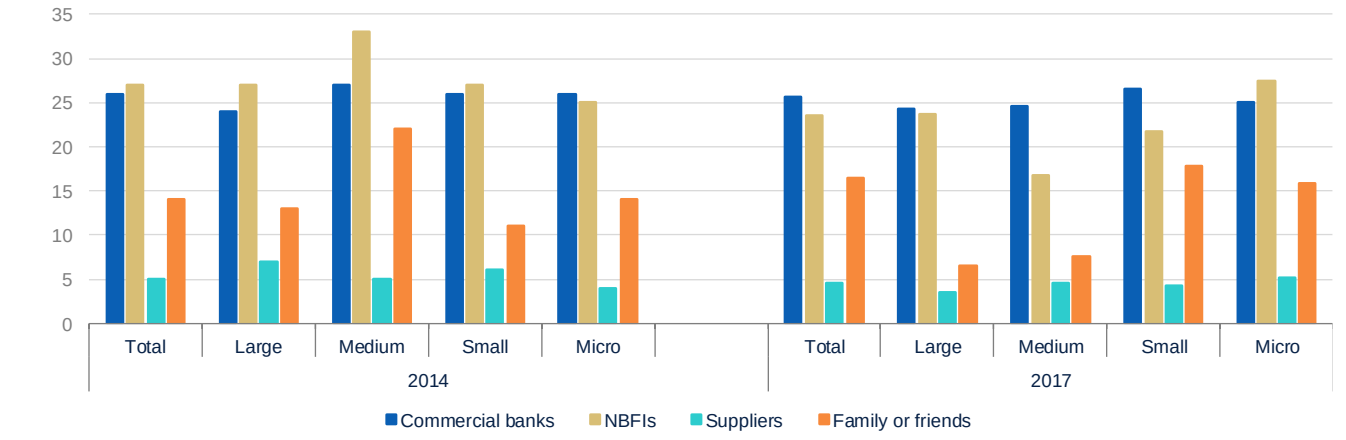
Source: BBVA Research with data from ENAFIN 2015 and 2018

ENAFIN 2018 also identifies three additional sources of NC financing that cannot be compared to ENAFIN 2015, as the latter does not specifically ask for such sources and could be grouped as “other sources of financing”. These sources correspond to development banks (0.3% of the businesses used it in 2018), crowdfunding (used by 0.1% of the businesses) and financing provided by the parent company and other entities in the group to which the business belongs (used by 2.1% of the businesses).

The information from the two ENAFIN surveys allows comparison of general characteristics of the financing used by the businesses based on their source, such as the average term, the average annual interest rate and the interest rate at which the financing was contracted (fixed or variable). For NC loans, those granted by commercial banks kept their average term virtually constant between 2014 and 2017. This term was 26 months for all businesses (Figure 3c.15). By business size, medium and micro businesses experienced a slight decrease in the average term of their financing (from 27 to 25 months and from 26 to 25 months respectively).

On the other hand, lending granted by non-banking financial institutions (NBFIs) registered a more marked decrease in their average term. For all businesses, this period decreased from 27 to 23 months, with medium-sized enterprises experiencing a greater reduction in the average term from these intermediaries, as this indicator went from 33 to 17 months. Furthermore, lending to suppliers experienced no significant changes in its average term, and continues to be the source with the shortest term, while financing from family or friends increased their average term for all businesses (from 14 to 17 months), with a more marked increase in the terms for micro and small businesses.

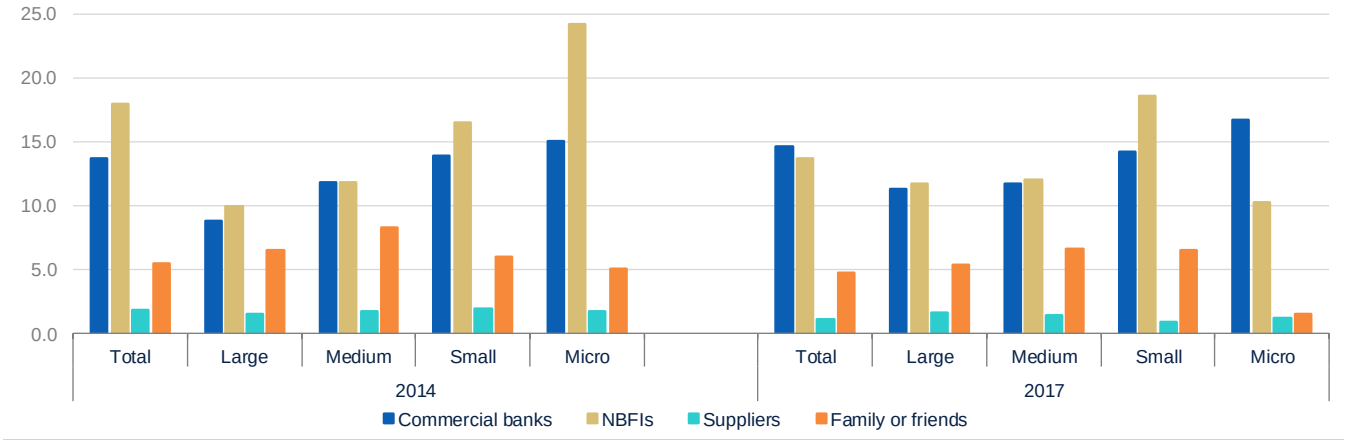
Figure 3c.15 **AVERAGE TERM OF NC FINANCING BY SOURCE** (MONTHS)



Source: BBVA Research with data from ENAFIN 2015 and 2018

The average annual interest rate of NC financing from commercial banking increased between 2014 and 2017, reflecting the upward adjustment of the monetary policy rate during that period (Figure 3c.16). In particular, this rate increased from 3.2% in 2014 to 6.8% on average in 2017. For all businesses, the increase in the rate recorded by the respective survey was 90 basis points (bps), rising from 13.7% in 2014 to 14.6% in 2017. The increase was not of the same magnitude by size of business, as large and micro businesses reported a more significant increase, while the interest rate of medium-sized businesses remained virtually unchanged. For large businesses, the average annual interest rate rose from 8.7% to 11.2%, while for micro businesses the increase was 14.9% to 16.7%.

Figure 3c.16 **ANNUAL AVERAGE NC FINANCING INTEREST RATE BASED ON SOURCE** (%)

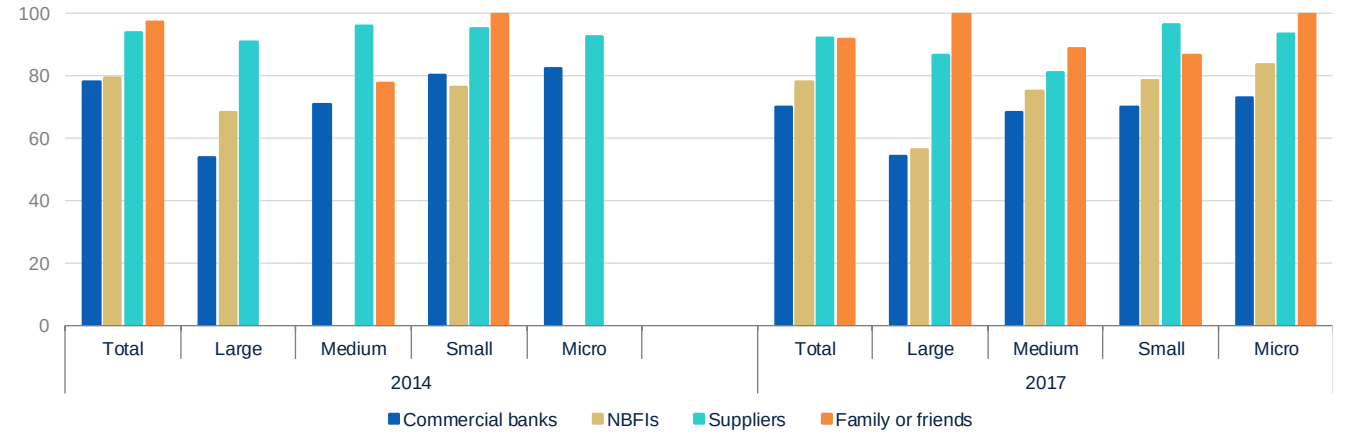


Source: BBVA Research with data from ENAFIN 2015 and 2018

NC financing from NBFIs also increased its average interest rate for small, medium and large businesses, with the least significant increase for medium-sized businesses (whose average interest rate rose from 11.8% to 12.0%). For this source, the reduction in the average interest rate of micro businesses (from 24.1% to 10.2%) should be noted. In the case of supplier financing and financing from family and friends, businesses reported a decrease in the average interest rate, from 1.8% to 1.1% for all businesses in the first case, and from 5.5% to 4.7% in the second.

As for the interest rate at which NC financing was placed, the decrease in the proportion of fixed interest rate credits for the four sources of financing for which the comparison can be made should be noted (Figure 3c.17). In the case of commercial banking, the proportion of businesses that had a fixed rate loan fell from 78% in 2014 to 70% in 2017; for NBFIs that proportion fell from 79% to 78%; for suppliers, the reduction was 94% to 92% and for funding from family and friends 97% to 91%.

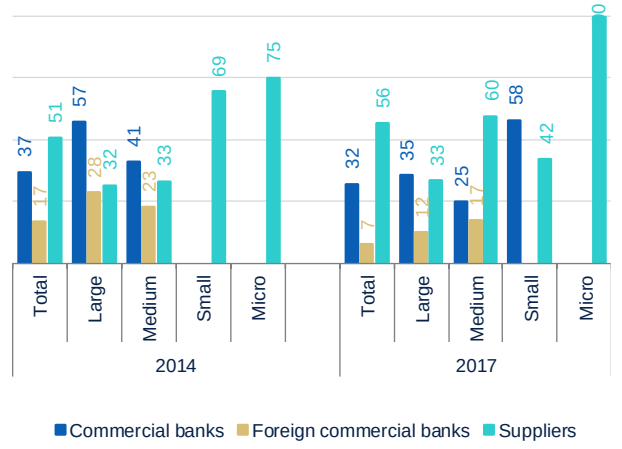
Figure 3c.17 **BUSINESSES THAT OBTAINED FIXED INTEREST RATE NC FINANCING BY SOURCE** (% BY COMPANY SIZE)



Source: BBVA Research with data from ENAFIN 2015 and 2018

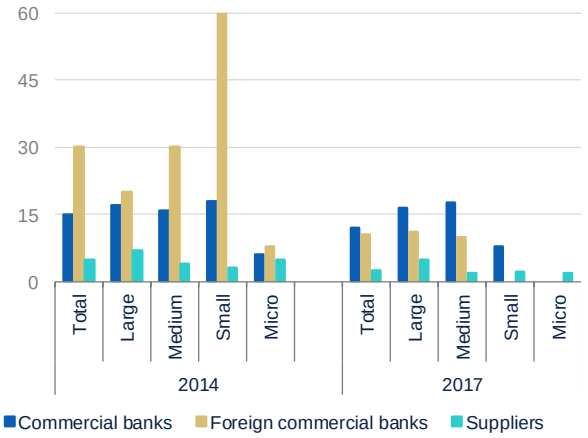
In the case of financing in FC, survey information makes it possible to compare between three main sources: commercial banking, foreign commercial banking and suppliers. The percentage of businesses with commercial bank financing in FC declined from 37% (of total businesses with financing in FC) in 2014 to 32% in 2017. The reduction is even more pronounced in the case of foreign commercial banking, as the percentage of businesses using this source decreased from 17% in 2014 to 7% in 2017, and micro and small businesses failed to fully report the use of this source. This decrease in businesses that used foreign commercial banking is consistent with the process of replacing external sources of financing in favor of local sources discussed above. In contrast to the case of domestic and foreign commercial banking, the percentage of businesses that registered some financing in FC with their suppliers increased from 51% of the total businesses with financing in FC in 2014 to 56% in 2017 (Figure 3c.18).

Figure 3c.18 **FINANCING IN FC BY SOURCE** (% BY BUSINESS SIZE)



The sum of the shares may be greater than 100% as businesses could select more than one response option.
Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.19 **AVERAGE TERM OF FC FINANCING BY SOURCE** (MONTHS)



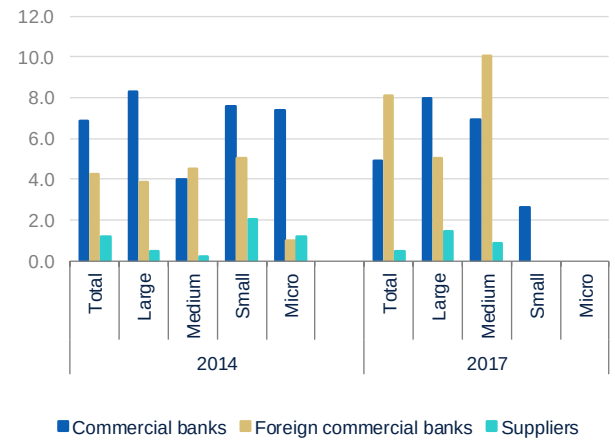
Source: BBVA Research with data from ENAFIN 2015 and 2018

As in the case of financing in NC, ENAFIN 2018 identifies additional sources of funding in FC that it is not possible to compare against ENAFIN 2015, as these sources are not identified separately. In this case, these sources correspond to development banking (1.4% of the businesses with financing in NC used it in 2017), parent companies or other entities of the group (used by 6.9% of the businesses) and the financing provided by international organizations (no business reported using this source in 2017).

As for the average financing term in FC, there was a widespread decline by source and business size (Figure 3c.19). The average term of financing from commercial banking fell from 15 months in 2014 to 12 months in 2017; that of foreign commercial banking fell from 30 to 10 months; and financing by suppliers reduced its average term from 5 to 3 months in the same period of comparison.

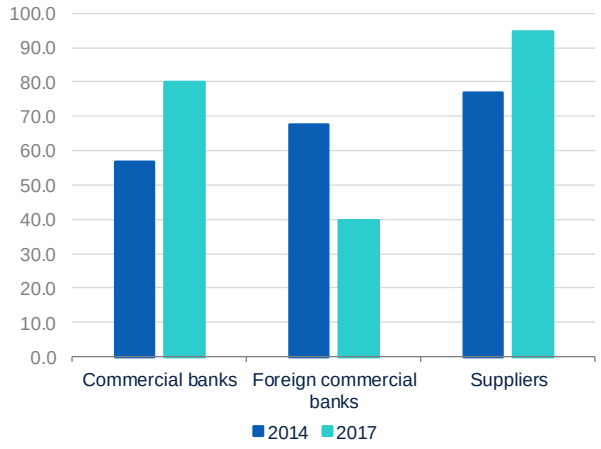
The average annual interest rate in turn had movements differentiated both by source and by size of business (Figure 3c.20). For financing via commercial banks, the average annual interest rate for large and small businesses declined between 2014 and 2017 (from 8.3% to 8.0% and from 7.6% to 2.6% respectively), while the average interest rate for medium-sized businesses increased (4.0% to 6.9%). In the case of financing from foreign commercial banks, the interest rate increased for both large and medium-sized businesses (small and micro did not use this source), and on average increased from 4.3% to 8.1%. Finally, in the case of supplier FC financing, the average interest rate for large businesses increased from 0.5% in 2014 to 1.4% in 2017 and for medium-sized businesses from 0.2% to 0.9% in the same period. Finally, it is noted that the percentage of businesses with fixed rate financing in FC increased in the case of commercial banking and suppliers (Figure 3c.21).

Figure 3c.20 **AVERAGE ANNUAL INTEREST RATE IN FC FINANCING BY SOURCE** (%)



Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.21 **FINANCING IN FC GRANTED AT FIXED INTEREST RATE** (% OF COMPANIES WITH FC FINANCING)

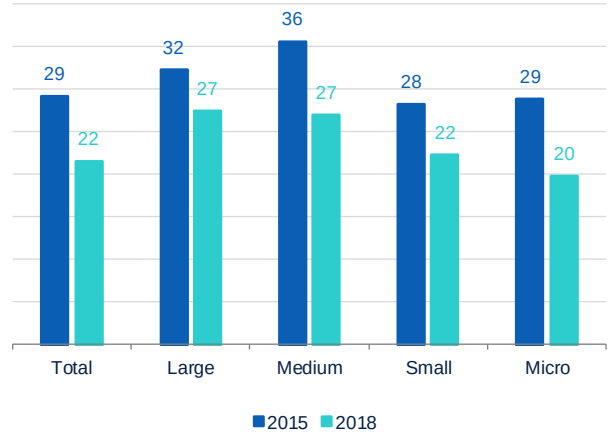


Source: BBVA Research with data from ENAFIN 2015 and 2018

3c.3 Perspectives and limitations on business financing

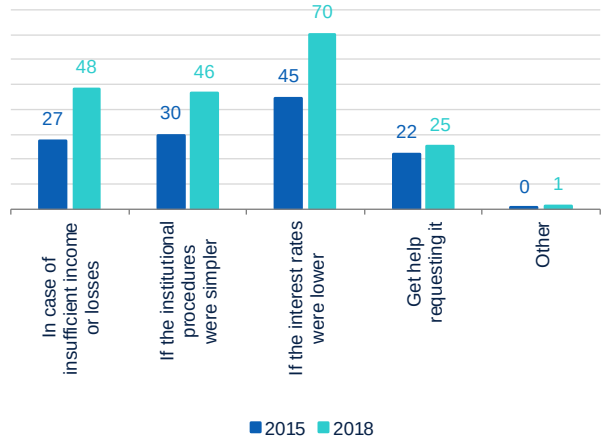
The two ENAFIN surveys make it possible to identify some details about the intention of businesses to contract financing in the near future, the circumstances in which they would consider obtaining a loan and what use they would make of it, in addition to their perception of factors that could limit their access to financing

Figure 3c.22 **BUSINESSES THAT CONSIDER APPLYING FOR ANY FINANCING IN THE FOLLOWING 12 MONTHS** (% OF ALL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

Figure 3c.23 **CIRCUMSTANCES FOR WHICH THEY WOULD REQUEST ANY FINANCING** (% OF ALL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

In particular, the ENAFIN results indicate that the percentage of businesses that considered applying for financing in the next 12 months decreased, regardless of the size of the business. Overall, this percentage fell between 2015 and 2018, from 29% to 22% of all businesses. This lower tendency to apply for short-term financing was more marked among medium and micro businesses (Figure 3c.22).

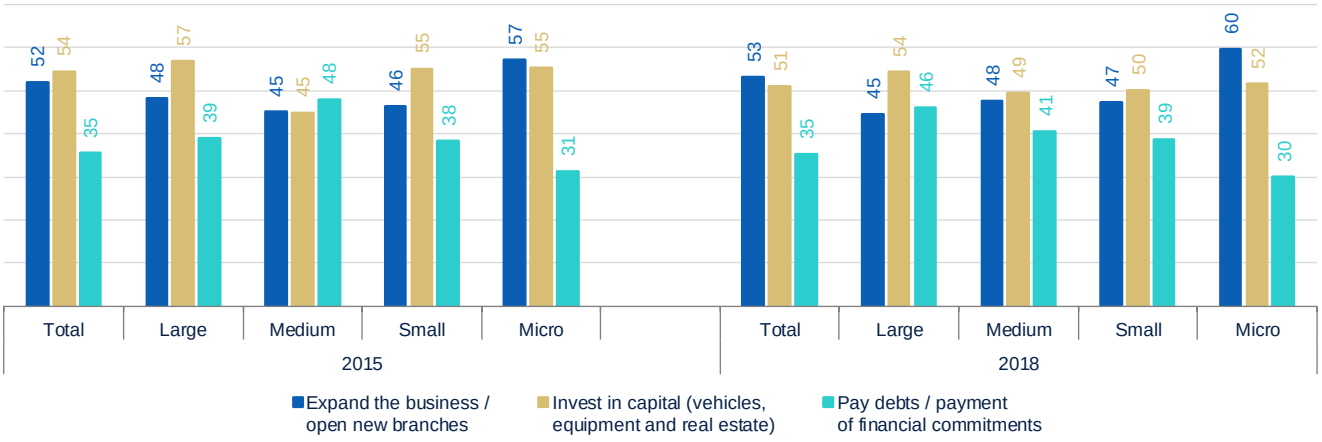
Of the businesses that considered obtaining financing in the following 12 months, the surveys identify under what circumstances they would request it. It notes that the percentage of businesses that would apply for a loan if interest rates were lower increased from 45% in 2015 to 70% in 2018 (Figure 3c.23). The above suggests that the increase in the cost of financing discouraged a greater number of businesses from obtaining financing. Secondly, the businesses mentioned insufficient income or losses as a reason to apply for lending. In this case, the percentage of businesses increased from 27% to 48% between 2015 and 2018. In particular, this case should be noted as, given this situation, businesses would be resorting to financing when they probably do not have the resources to service it. Furthermore, in this situation it would be difficult for banking institutions to grant the loan requested after making the respective risk analysis.

In 2018, 46% of businesses that would apply for financing in the next 12 months would do so if the procedures were simpler, and 25% if they received help in applying for it, percentages greater than the 30% and 22% respectively recorded in 2015. The latter two responses indicate an area of opportunity for intermediaries, who could simplify some of their procedures and give greater advice to potential borrowers in the process of obtaining funding.

As for the use they would give to the loan or financing requested, the differences by size of company stand out. In the case of large businesses, the percentage of businesses that would allocate credit to expand their business or invest in capital decreased compared to 2015, but the percentage of those that would allocate financing to pay debts or financial commitments increased; in 2018, a higher percentage of large businesses would apply for financing for refinancing (Figure 3c.24).

The opposite is true in the case of medium-sized businesses: the percentage of businesses that would apply for financing to pay debts decreased between 2015 and 2018, but the percentage of businesses that would apply for credit to expand their business or invest in capital increased. In the reference period, the percentage of small businesses that would apply for credit to expand their business or refinance increased; however, the number of small businesses that would request it to invest in capital declined. Finally, the percentage of micro businesses that would apply for credit to expand their business increased compared to 2015, and the percentage for those that would allocate financing to invest in capital or refinance decreased (Figure 3c.24). As a result of these preferences, comparing between 2015 and 2018 overall there would be a higher percentage of businesses that would allocate credit to expand their business, the percentage of businesses that would allocate financing to refinancing would remain virtually constant and that of businesses that would use the credit to invest in capital would be lower.

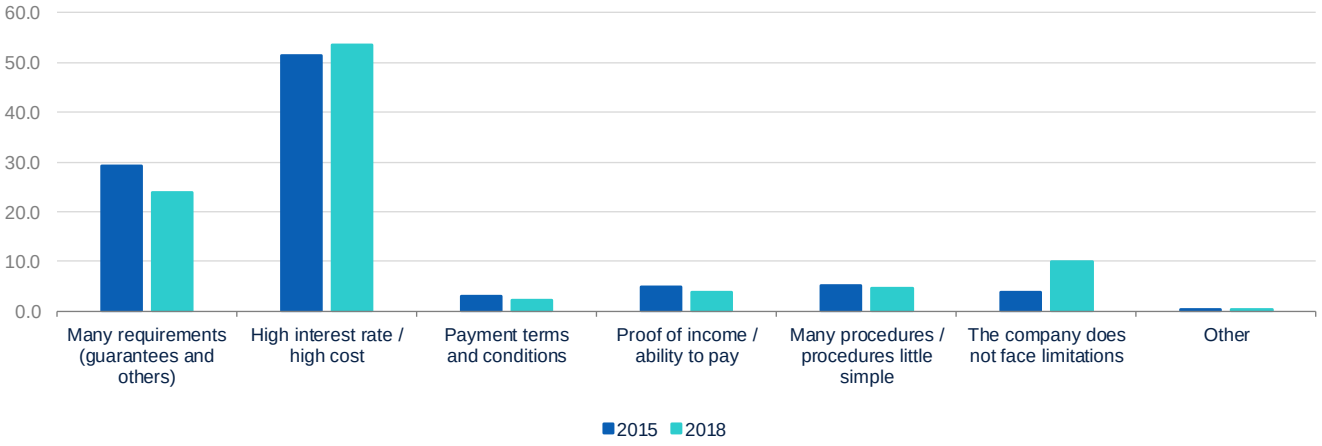
Figure 3c.24 **BUSINESSES THAT WOULD APPLY FOR LOANS OR FINANCING BASED ON THE USE IT WOULD BE PUT TO**
(% OF BUSINESSES INTENDING TO APPLY FOR ANY LOAN OR FINANCING)



Source: BBVA Research with data from ENAFIN 2015 and 2018

For the total number of businesses (including those that are not considering applying for financing), the surveys make it possible to identify factors that are perceived as the main constraints in accessing financing (Figure 3c.25). In both surveys, the factor most frequently mentioned was high costs (more than 50% of the total businesses consider it a limiting factor). Secondly, the presence of many requirements (which fell slightly between 2015 and 2018) is mentioned. Finally, it is noted that in 2018 the percentage of businesses that do not care to deal with limitations to accessing financing increased (from 3.7% to 10%).

Figure 3c.25 **FACTORS THAT BUSINESSES CONSIDER MAY LIMIT ACCESS TO FINANCING** (% OF ALL BUSINESSES)



Source: BBVA Research with data from ENAFIN 2015 and 2018

3c.4 Major advances in the use of financing in Mexico

The ENAFIN survey and publication is an important tool for assessing progress in the financial inclusion of businesses, which facilitates not only the designing of public policies, but also the improvement of products and services offered by financial intermediaries to the businesses in the country, so we consider it very useful in furthering the preparation of this exercise.

Based on the comparison between the results of ENAFIN 2018 and ENAFIN 2015, it is mentioned that a greater number of businesses have used financing since their start-up, noting the observed increase among small and micro businesses. In addition to this increase in the financial inclusion of businesses, there was also an increase in credit penetration, as debt as a percentage of total assets and total revenues increased from 2014 to 2017. It also emphasizes that commercial banking is maintained as the institution in which businesses most often seek financing in both domestic and foreign currency.

The information from the two ENAFIN surveys shows that with respect to 2014, in 2017 businesses faced more restrictive conditions for financing from financial intermediaries for both domestic and foreign currency loans, as higher interest rates and shorter average terms were recorded and fewer businesses were able to obtain lending at a fixed interest rate. Although these factors might discourage the use of financing for some businesses, some indicators suggest that those businesses that opted for financing acquired it in larger amounts. Furthermore, the same surveys show an increase in the ratio of debt to total assets or total income. In addition, official statistics on financing balances to businesses document an increase in the rate of expansion of these balances in the comparison period.

While the information collected regarding the average term and interest rate is useful for comparing the supply conditions for the different sources of financing, in the future it would be important to supplement the information with some indicator reflecting the average amount of the credit (for example, the amount of financing as a proportion of total income). Such an indicator would make it possible to more clearly distinguish complementary or interchangeable features existing between the different financial sources (commercial banking and NBFIs) and non-financial sources (suppliers and family or friends). In other words, it would be desirable for the survey to provide qualitative information as well as quantitative information on average funding amounts by source type and by business size.

The composition of financing by currency reflects to some extent the process of replacing external sources of financing by local sources, which is also documented in official credit balance statistics. In addition, a lower proportion of income from foreign sales could have discouraged loan applications in other currencies by decreasing the source of income that could provide natural coverage against changes in the exchange rate.

Despite the increase in interest rates observed in the comparison period, there was an increase in ratios of debt to total income and total assets, while at the same time the percentage of businesses that used financing declined and the percentage of profits increased. The above would indicate that, although a smaller number of businesses used financing at a certain point in time (2014 vs 2017), those that used it did so for a greater amount, and this would be consistent with the greater payment capability resulting from the increase in their profits.

It calls attention to the fact that businesses still consider the complexity and number of formalities to be a factor restraining obtaining financing, and that their likelihood of obtaining a loan would increase if they were helped to apply for it. These responses reveal an area of opportunity for intermediaries, who could simplify some of their procedures while at the same time providing more advice to potential borrowers on the process of obtaining financing.

Different indicators suggest that the increase in interest rates in the period between the two surveys discouraged businesses from applying for more credit, as this issue was repeatedly mentioned as a factor limiting their access to financing. It is expected that the obstacle of high costs will lose relevance to the extent that macroeconomic conditions exist for interest rates to decrease. However, a reduction in interest rates alone would not be the only factor needed to encourage greater use of financing. As one of the main uses that businesses give for the financing they get is the expansion of their business or investment in capital, it may be assumed that greater demand for their goods and services is the main factor that fuels the need to expand their operations or invest, and thus increase their demand for credit. Without this stimulus, businesses will have no incentive to obtain more financing, even in an environment of lower rates.

References

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National Survey on Business Financing, Methodological Document, INEGI, 2018.

National Survey on Business Financing, Methodological Document, INEGI, 2015.

4. Statistical Annex

Table 4.1 **DOMESTIC FINANCIAL SAVINGS (F) BY COMPONENTS.**
BALANCES IN BILLIONS OF SEPTEMBER 2019 PESOS

	IV 11	IV 12	IV 13	IV 14	IV 15	IV 16	IV 17	IV 18	III 19
Domestic Financial Assets (F)	**20,674.0**	**23,335.3**	**24,146.2**	**25,281.8**	**25,625.1**	**26,415.4**	**27,423.1**	**26,378.5**	**27,520.0**
- Currency held by money holders	894.0	951.3	988.3	1,112.3	1,276.0	1,432.6	1,459.9	1,516.5	1,409.8
= Net Domestic Financial Assets (AFN)	**19,780.0**	**22,384.0**	**23,157.8**	**24,169.4**	**24,349.1**	**24,982.9**	**25,963.1**	**24,862.0**	**26,110.2**
- Shares and other equities	7,624.4	8,758.5	8,694.2	8,702.6	8,386.6	8,476.9	9,120.8	8,022.5	8,142.6
= Estimated Financial Savings	12,155.6	13,625.4	14,463.7	15,466.9	15,962.5	16,506.0	16,842.4	16,839.5	17,967.6
I. Deposit Institutions	**3,640.6**	**3,789.5**	**3,992.9**	**4,208.3**	**4,635.6**	**5,114.8**	**5,282.1**	**5,346.7**	**5,270.6**
Banking	3,531.7	3,673.7	3,858.7	4,067.7	4,483.6	4,946.9	5,108.5	5,163.2	5,082.1
NBFIs	108.9	115.8	134.2	140.6	152.0	167.8	173.6	183.6	188.4
II. Money-market mutual funds shares (MMMF)	**1,372.8**	**1,431.2**	**1,457.0**	**1,567.8**	**1,522.0**	**1,530.1**	**1,536.6**	**1,566.6**	**1,781.4**
III. Repurchase agreements & Other bank liabilities	**1,047.6**	**983.3**	**1,186.4**	**1,077.5**	**801.8**	**1,006.9**	**991.0**	**902.8**	**1,001.4**
IV. Public securities	**2,504.3**	**3,458.2**	**3,718.8**	**4,216.7**	**4,358.1**	**3,992.4**	**3,958.4**	**3,872.0**	**4,177.4**
Federal Government	2,052.9	2,948.8	3,142.1	3,636.4	3,667.5	3,357.2	3,288.1	3,166.2	3,520.9
Banco de México (BREMS) & IPAB	97.7	168.1	166.9	140.9	182.9	101.1	137.4	186.9	188.9
Other public securities	353.7	341.3	409.8	439.5	507.6	534.1	532.8	518.8	467.6
V. Private sector securities	**266.3**	**252.7**	**271.5**	**256.4**	**300.7**	**325.2**	**312.6**	**323.5**	**310.7**
VI. Savings funds for housing and retirement	**3,324.0**	**3,710.5**	**3,837.0**	**4,140.2**	**4,344.3**	**4,536.5**	**4,761.7**	**4,827.9**	**5,426.2**
Housing	918.4	958.6	999.6	1,043.0	1,118.9	1,181.8	1,202.4	1,277.2	1,375.7
Infonavit	770.7	803.6	841.2	879.6	948.5	1,011.6	1,036.9	1,104.5	1,193.6
Fovissste	147.7	154.9	158.4	163.4	170.4	170.2	165.4	172.7	182.1
Retirement	2,405.6	2,752.0	2,837.4	3,097.2	3,225.4	3,354.6	3,559.3	3,550.7	4,050.5
Siefores shares	2,076.6	2,432.9	2,518.0	2,797.6	2,930.0	3,068.3	3,279.0	3,279.1	3,779.2
In Banco de Mexico	109.1	110.9	124.7	117.5	126.3	130.8	135.5	137.9	138.0
ISSSTE Pension Bond	219.9	208.2	194.7	182.1	169.0	155.6	144.8	133.7	133.3
VII. Shares and other equities	**7,624.4**	**8,758.5**	**8,694.2**	**8,702.6**	**8,386.6**	**8,476.9**	**9,120.8**	**8,022.5**	**8,142.6**
Net Domestic Finan. Assets = I + II + III + IV + V + VI	**19,780.0**	**22,384.0**	**23,157.8**	**24,169.4**	**24,349.1**	**24,982.9**	**25,963.1**	**24,862.0**	**26,110.2**
				Real annual % change					
Domestic Financial Assets	**6.7**	**12.9**	**3.5**	**4.7**	**1.4**	**3.1**	**3.8**	**-3.8**	**-0.9**
- Currency held by money holder	7.0	6.4	3.9	12.5	14.7	12.3	1.9	3.9	-0.4
= Domes. Finan. Assets – Cncy. held by money holder	**6.7**	**13.2**	**3.5**	**4.4**	**0.7**	**2.6**	**3.9**	**-4.2**	**-1.0**
- Shares and other equities	-1.8	14.9	-0.7	0.1	-3.6	1.1	7.6	-12.0	-11.6
= Estimated Financial Savings	12.8	12.1	6.2	6.9	3.2	3.4	2.0	0.0	4.7
I. Deposit Institutions	**8.1**	**4.1**	**5.4**	**5.4**	**10.2**	**10.3**	**3.3**	**1.2**	**0.0**
Banking	8.2	4.0	5.0	5.4	10.2	10.3	3.3	1.1	-0.1
NBFIs	7.0	6.4	15.9	4.7	8.1	10.4	3.4	5.7	3.6
II. Money-market mutual funds shares (MMMF)	**4.4**	**4.3**	**1.8**	**7.6**	**-2.9**	**0.5**	**0.4**	**2.0**	**9.0**
III. Repurchase agreements & Other bank liabilities	**11.4**	**-6.1**	**20.6**	**-9.2**	**-25.6**	**25.6**	**-1.6**	**-8.9**	**18.5**
IV. Public securities	**38.9**	**38.1**	**7.5**	**13.4**	**3.4**	**-8.4**	**-0.9**	**-2.2**	**3.1**
Federal Government	50.1	43.6	6.6	15.7	0.9	-8.5	-2.1	-3.7	4.8
Banco de México (BREMS) & IPAB	-21.1	72.1	-0.7	-15.6	29.9	-44.7	35.9	36.0	3.6
Other public securities	13.3	-3.5	20.1	7.3	15.5	5.2	-0.2	-2.6	-8.4
V. Private sector securities	**16.5**	**-5.1**	**7.5**	**-5.6**	**17.3**	**8.1**	**-3.9**	**3.5**	**-4.2**
VI. Savings funds for housing and retirement	**6.4**	**11.6**	**3.4**	**7.9**	**4.9**	**4.4**	**5.0**	**1.4**	**7.9**
Housing	5.9	4.4	4.3	4.3	7.3	5.6	1.7	6.2	6.7
Infonavit	6.4	4.3	4.7	4.6	7.8	6.7	2.5	6.5	7.0
Fovissste	3.2	4.9	2.2	3.2	4.3	-0.1	-2.8	4.4	4.5
Retirement	6.6	14.4	3.1	9.2	4.1	4.0	6.1	-0.2	8.4
Siefores shares	8.4	17.2	3.5	11.1	4.7	4.7	6.9	0.0	9.3
In Banco de Mexico	2.3	1.7	12.4	-5.7	7.5	3.5	3.6	1.8	2.2
ISSSTE Pension Bond	-6.0	-5.3	-6.4	-6.5	-7.2	-8.0	-6.9	-7.7	-7.8
VII. Shares and other equities	**-1.8**	**14.9**	**-0.7**	**0.1**	**-3.6**	**1.1**	**7.6**	**-12.0**	**-11.6**
Net Domestic Finan Assets = I + II + III + IV + V + VI	**6.7**	**13.2**	**3.5**	**4.4**	**0.7**	**2.6**	**3.9**	**-4.2**	**-1.0**

Source: Banco de México (Monetary Aggregates, 2018 Methodology) and Inegi

Table 4.2 **PRIVATE SECTOR CREDIT AND FINANCING** (FIGURES FOR THE END OF THE PERIOD). BALANCES IN BILLIONS OF SEPTEMBER 2019 PESOS

	IV 09	IV 10	IV 11	IV 12	IV 13	IV 14	IV 15	IV 16	IV 17	IV 18	III 19
Total: All categories	6,114	6,289	7,441	7,659	8,406	9,010	9,890	11,264	11,353	11,309	12,113
Banking	2,498	2,614	2,973	3,217	3,460	3,627	4,064	4,512	4,710	4,950	5,143
Non-bank	3,616	3,675	4,469	4,442	4,946	5,383	5,826	6,752	6,643	6,359	6,970
Total Consumer	748	753	857	971	1,047	1,077	1,144	1,341	1,396	1,414	1,426
Banking	596	594	707	823	881	907	982	1,067	1,090	1,104	1,137
Non-bank	152	159	150	148	166	170	162	275	306	310	289
Total Housing	1,680	1,756	1,850	1,938	1,977	2,048	2,194	2,327	2,368	2,439	2,594
Banking	513	546	594	626	669	701	758	808	818	855	914
Non-bank	1,167	1,210	1,256	1,313	1,308	1,347	1,436	1,519	1,550	1,584	1,680
Total Companies	3,686	3,781	4,734	4,750	5,382	5,884	6,552	7,596	7,589	7,456	8,093
Banking	1,389	1,474	1,671	1,768	1,910	2,019	2,324	2,637	2,802	2,991	3,092
Non-bank	2,297	2,307	3,063	2,981	3,472	3,866	4,228	4,959	4,787	4,465	5,001
Real annual percentage change, %											
Total: All categories	-5.4	2.9	18.3	2.9	9.8	7.2	9.8	13.9	0.8	-0.4	8.3
Banking	-2.7	4.6	13.7	8.2	7.6	4.8	12.1	11.0	4.4	5.1	4.9
Non-bank	-7.2	1.6	21.6	-0.6	11.3	8.8	8.2	15.9	-1.6	-4.3	11.0
Total Consumer	-11.7	0.6	13.9	13.3	7.9	2.9	6.2	17.3	4.1	1.3	0.7
Banking	-18.3	-0.4	19.1	16.3	7.1	2.9	8.2	8.7	2.2	1.3	2.6
Non-bank	28.9	4.5	-5.6	-1.1	12.0	2.5	-4.8	69.4	11.5	1.2	-6.1
Total Housing	1.5	4.5	5.4	4.8	2.0	3.6	7.1	6.1	1.8	3.0	5.2
Banking	5.4	6.5	8.8	5.3	6.9	4.8	8.1	6.5	1.3	4.5	7.4
Non-bank	-0.2	3.7	3.8	4.5	-0.3	3.0	6.6	5.8	2.0	2.2	4.0
Total Companies	-7.0	2.6	25.2	0.3	13.3	9.3	11.4	15.9	-0.1	-1.8	10.9
Banking	2.7	6.1	13.4	5.8	8.0	5.7	15.1	13.5	6.2	6.8	5.0
Non-bank	-12.0	0.4	32.8	-2.7	16.5	11.3	9.4	17.3	-3.5	-6.7	14.9
Percentage of GDP, %											
Total: All categories	32.9	32.0	35.0	35.9	39.7	40.8	43.5	46.0	46.5	45.6	50.4
Banking	13.5	13.5	14.2	15.3	16.6	16.7	18.1	18.8	19.6	20.3	21.6
Non-bank	19.4	18.5	20.7	20.5	23.2	24.0	25.4	27.1	26.9	25.3	28.8
Total Consumer	4.0	3.9	4.1	4.6	5.0	5.0	5.1	5.6	5.8	5.8	6.0
Banking	3.2	3.1	3.4	3.9	4.2	4.2	4.4	4.4	4.5	4.5	4.8
Non-bank	0.8	0.8	0.7	0.7	0.8	0.8	0.7	1.1	1.3	1.3	1.2
Total Housing	9.1	9.1	8.9	9.2	9.5	9.5	9.8	9.7	9.9	10.0	10.9
Banking	2.8	2.8	2.8	3.0	3.2	3.2	3.4	3.4	3.4	3.5	3.8
Non-bank	6.3	6.2	6.0	6.3	6.3	6.2	6.4	6.3	6.5	6.5	7.1
Total Companies	19.8	19.1	22.0	22.0	25.2	26.3	28.6	30.7	30.8	29.8	33.5
Banking	7.5	7.6	8.0	8.4	9.1	9.3	10.4	11.0	11.7	12.3	13.0
Non-bank	12.3	11.5	14.0	13.6	16.1	17.0	18.3	19.7	19.2	17.6	20.5
Infrastructure and number of bank cards (units)											
ATMs	33,648	35,942	36,427	40,194	40,811	42,931	45,781	47,945	49,508	53,270	55,697
POS terminals	446,792	482,299	523,578	556,273	630,700	731,225	851,486	898,853	965,681	1021,594	1291,893
Branches*	10,731	11,291	11,785	12,407	12,581	12,698	12,234	12,522	12,743	12,792	13,023
Number of current cards (figures in millions)											
Credit (Source: CNBV)[1]	25.8	23.9	27.6	25.9	26.9	28.0	24.5	26.3	27.1	27.8	29.0
Credit (Source: Banxico)	22.1	22.4	24.7	25.4	25.9	28.5	29.6	31.2	27.2	27.2	27.2
Debit	52.3	61.7	74.0	85.3	100.2	105.3	104.9	103.5	104.6	104.6	101.1

Continue on the next page

Table 4.3 **PUBLIC SECTOR CREDIT AND FINANCING** (FIGURES FOR THE END OF THE PERIOD). BALANCES IN BILLIONS OF SEPTEMBER 2019 PESOS

	IV 09	IV 10	IV 11	IV 12	IV 13	IV 14	IV 15	IV 16	IV 17	IV 18	III 19
Commercial bank credit	442	432	456	503	498	598	638	441	415	381	351
Federal government	53	59	47	17	37	59	82	36	32	31	29
States & Municipalities	228	262	283	351	350	360	358	365	341	306	276
Decentralized gov't agencies	161	110	125	135	111	180	198	40	42	43	46
Development bank credit	186	171	166	191	206	250	274	269	270	291	276
Federal government	76	73	33	41	40	69	88	87	86	81	64
States & Municipalities	66	65	104	128	151	161	167	166	169	196	197
Decentralized gov't agencies	45	33	28	22	15	20	20	16	15	15	14
Debt issued in the country	6,227	5,787	6,665	7,351	8,046	8,563	8,931	8,671	8,711	8,811	9,298
Federal government	3,898	3,521	3,828	4,177	4,605	5,004	5,454	5,517	5,598	5,853	6,204
States & Municipalities	91	82	88	91	106	114	111	108	97	80	79
Decentralized gov't agencies	321	376	468	517	600	665	721	686	689	703	697
IPAB	1,249	1,075	1,110	1,095	1,111	1,055	1,065	1,043	1,012	977	992
Banco de México	405	502	947	1,249	1,402	1,504	1,357	1,095	1,093	976	1,106
FARAC	263	230	223	222	222	222	222	222	222	222	220
External financing	1,043	974	1,136	1,121	1,165	1,372	1,653	2,040	1,882	1,889	1,994
Credit and financing Total	7,898	7,363	8,423	9,166	9,915	10,784	11,495	11,421	11,278	11,372	11,919
Real annual percentage change of the balance, %											
Commercial bank credit	88.8	-2.3	5.5	10.4	-0.9	20.1	6.6	-30.9	-5.8	-8.2	-9.8
Federal government	62.8	11.6	-20.3	-64.9	122.2	59.6	38.7	-56.3	-9.5	-3.0	-1.1
States & Municipalities	75.8	15.1	8.1	24.1	-0.3	2.7	-0.6	2.1	-6.7	-10.0	-12.7
Decentralized gov't agencies	124.2	-31.5	13.4	7.9	-17.8	61.9	10.5	-79.9	5.1	2.7	5.3
Development bank credit	-11.3	-8.2	-3.3	15.4	7.9	21.5	9.3	-1.7	0.2	8.1	1.2
Federal government	-43.2	-3.6	-54.3	22.9	-2.2	71.8	26.8	-0.5	-1.3	-6.1	-19.9
States & Municipalities	71.0	-0.9	59.2	23.3	18.1	6.7	3.5	-0.4	1.6	16.3	10.3
Decentralized gov't agencies	17.7	-26.5	-13.7	-22.2	-32.1	35.1	-3.8	-19.0	-6.2	-2.1	6.3
Debt issued in the country	24.6	-7.1	15.2	10.3	9.5	6.4	4.3	-2.9	0.5	1.1	4.1
Federal government	29.4	-9.7	8.7	9.1	10.2	8.7	9.0	1.2	1.5	4.5	4.9
States & Municipalities	17.9	-9.6	8.0	2.8	16.9	6.9	-2.0	-2.9	-10.3	-17.8	-16.4
Decentralized gov't agencies	35.1	17.2	24.4	10.4	16.1	10.8	8.5	-4.9	0.4	2.0	3.9
IPAB	15.7	-13.9	3.3	-1.4	1.5	-5.0	1.0	-2.1	-3.0	-3.5	-1.2
Banco de México	8.9	24.0	88.5	31.9	12.2	7.2	-9.7	-19.4	-0.2	-10.7	7.5
FARAC	19.7	-12.4	-3.3	-0.1	-0.2	0.1	0.0	0.0	-0.1	0.1	1.9
External financing	21.1	-6.6	16.7	-1.3	3.8	17.8	20.4	23.5	-7.7	0.3	8.4
Credit and financing Total	25.3	-6.8	14.4	8.8	8.2	8.8	6.6	-0.6	-1.2	0.8	4.3
Public Sector Credit and Financing, % of GDP											
Commercial bank credit	3.9	4.2	4.1	4.7	4.6	5.3	5.3	3.5	3.3	3.0	2.8
Federal government	1.1	1.4	1.4	1.7	1.7	1.7	1.6	1.5	1.4	1.3	1.2
States & Municipalities	0.8	0.6	0.6	0.6	0.5	0.8	0.9	0.2	0.2	0.2	0.2
Decentralized gov't agencies	2.1	2.2	2.2	2.4	2.4	2.8	2.8	1.8	1.7	1.6	1.5
Development bank credit	0.9	0.9	0.8	0.9	1.0	1.2	1.2	1.1	1.1	1.2	1.2
Federal government	0.4	0.4	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3
States & Municipalities	0.3	0.3	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8
Decentralized gov't agencies	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Debt issued in the country	29.6	29.9	31.9	35.0	38.5	39.5	39.9	36.2	36.3	36.2	39.0
Federal government	18.5	18.2	18.3	19.9	22.0	23.1	24.3	23.0	23.3	24.0	26.1
States & Municipalities	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.3
Decentralized gov't agencies	1.5	1.9	2.2	2.5	2.9	3.1	3.2	2.9	2.9	2.9	2.9
IPAB	5.9	5.5	5.3	5.2	5.3	4.9	4.8	4.3	4.2	4.0	4.2
Banco de México	1.9	2.6	4.5	5.9	6.7	6.9	6.1	4.6	4.6	4.0	4.6
FARAC	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.9
External financing	5.0	5.0	5.4	5.3	5.6	6.3	7.4	8.5	7.8	7.8	8.4
Credit and financing Total	39.3	39.9	42.3	46.0	49.7	52.3	53.8	49.3	48.6	48.1	51.4

1: The data from CNBV and Banxico on the number of credit cards differ because CNBV includes the total number of cards. The Banxico data correspond only to generally accepted cards granted to individuals who are up to date on their payments and who used their credit cards during the period reported.
*Preliminary data subject to revision
Source: Banco de México for credit and financing to the private sector and number of current cards. CNBV for operational data. Banco de México, CNBV and SHCP for credit and financing to the public sector; and INEGI for GDP data

5. Changes to legislation and secondary regulation applicable to commercial banks

Table 5.1 **MAIN REGULATORY CHANGES APPLICABLE TO COMMERCIAL BANKS: 2019**

Publication	Summary	DOF
1. Resolution amending the general provisions applicable to credit institutions and financial technology institutions	It establishes the requirements and conditions that must be met by financial technology institutions and credit institutions interested in engaging in transactions with virtual assets as part of their internal operations.	Mar 8, 2019
2. Resolution amending the general provisions applicable to Innovative Models	Rules are established for applicants who intend to engage in activities relating to a clearing house, guidelines are established for the implementation of risk mitigation mechanisms derived from failures of an innovative model (start-ups) that could affect the operation in terms of cyber security and operational continuity. It contains the criteria and conditions that must be met by legal entities for services of routing, clearing or settlement of payment operations or transfers through innovative model schemes.	Mar 8, 2019
3. Resolution amending the general provisions applicable to group financing institutions	A case-by-case authorization scheme is established so that group financing institutions (crowfunders) can conduct operations in foreign currencies in accordance with Banxico's regulation, including in their application the way in which such operations are linked to their business, target population, risks to the client and risk mitigation mechanisms. In addition, it regulates the information to be sent to Banco de México; these information requirements are aligned with the requirements of the electronic payment fund institutions established in Circular 12/2018.	Mar 8, 2019
4. Resolution amending the general provisions applicable to Companies Authorized to Operate Innovative Models referred to in the Law for Regulating Financial Technology Institutions	Establishes the procedure to authorize businesses seeking to operate Innovative Models related to the activities within the purview of the National Commission for the Retirement Savings System (CONSAR), as well as to their public registry and the periodic reports to be sent to the Commission.	Mar 8, 2019
5. Resolution amending the general provisions applicable to Innovative Models referred to in the Law for Regulating Financial Technology Institutions	Requirements are established in addition to those provided by law to obtain temporary authorization to operate innovative models. The regulations further address the registration of firms that obtain such an authorization, as well as the reports to be presented regularly to the SHCP. These provisions apply to entities not regulated by financial authorities.	Mar 11, 2019
6. Resolution amending the Credit Institutions Act (Anti-Money Laundering - AML)	In January 2018, the FATF issued a report with recommendations to Mexico to strengthen its AML /CFT regime, with this resolution addressing the following specific recommendations: - R1 (Risk assessment and application of a risk-based approach), - R10 (Due diligence of the customer), - R12 (Politically exposed individuals), - R15 (New Technologies) and - R16 (Electronic Transfers).	Mar 22, 2019

Table 5.1 **MAJOR REFORMS TO THE REGULATORY SCHEME APPLICABLE TO COMMERCIAL BANKS: 2019**

Publication	Summary	DOF
7. Resolution amending the general provisions applicable to financial technology institutions	Amendment that extends the information cybersecurity regime applicable to credit institutions to financial technology institutions (FTIs). The regulations seek to: protect institutions and their customers from cyberattacks that might affect the confidentiality, integrity and availability of information. The modification focuses on information security, the use of electronic means, information security standards in third-party contracting and disclosure to customers of information relating to projects financed and their performance, and to the general public. They also establish the content and frequency of delivery of regulatory reports to the CNBV.	Mar 25, 2019
8. Resolution amending Circular 7/2019 replacing Circulars 3/2012 and 15/2018 (Payroll related-loan and payroll distribution services)	The Payroll-Related Loan system is amended to highlight in direct-debit request forms that the bank handling the payroll may periodically freeze work-related funds for up to five days, up to the corresponding amount of the installment, so that they will not be available to the worker. In addition, it is required to disclose in the form that the cancellation of current direct-debits will be reported to credit bureaus and will result in a nine-month blockage in the contracting of payroll loans. Finally, deadlines are extended (from March 2019 to March 2020) and the regime is extended to Multipurpose Financial Institutions (Sofomes) linked to banks. The regime applicable to the offering of the Payroll Services is in turn adjusted in issues such as: transparency in service provision, contracting, standards of conduct and annual internal audit procedures.	Apr 30, 2019
9. Resolution amending Circular 8/2019 (CoDi)	The amendment establishes the operational process for CoDi (Digital Collection) Transfer Orders: hours of operation, request verification, issuance, rejection, returns, and crediting. In addition, minimum rules are established for the issuer of the application and receiver or debtor to send charge messages: characteristics, amount, concept, numerical reference, operation folio and period of validity. It prohibits the collection of commissions in the sending and receiving of CoDi operations.	May 20, 2019
10. Resolution modifying the general provisions applicable to credit institutions	Adjustments are included to recognize the existence of more than one stock exchange, as well as an alignment of the automated system for order reception, registration and allocation of operations of credit institutions with the provisions applicable to Brokerage Houses. In addition, a person responsible for the compliance of the investment services provisions (sales practices) is included in the Internal Control System.	Jul 5, 2019

Table 5.1 **MAJOR REFORMS TO THE REGULATORY SCHEME APPLICABLE TO COMMERCIAL BANKS: 2019**

Publication	Summary	DOF
11. Resolution amending the general provisions of the National Commission for the Protection and Defense of Users of Financial Services (CONDUSEF) on transparency and sound practices applicable to financial technology institutions	The rules replicate for the FTIs the regulatory framework applicable to other financial institutions in the areas of: contracts of adhesion (format, minimum content, disclosure); advertising; disclosure and characteristics of Costs and Commissions; characteristics of account statements and proof of operations; the definition of activities that depart from good practices (misleading information, unclear offer conditions, conditions other than those offered, etc.), as well as clarifications for contracts of adhesion for collective financing operations and electronic payment fund contracts.	Jul 9, 2019
12. Resolution modifying the general provisions applicable to credit institutions	Conditions are modified in order to enable banks to better provide transfer services by loosening definitions that restricted Mobile Banking and Mobile Payment operations to the use of a mobile phone (and no other device), among others. It also facilitates contracting Mobile Payment services by removing existing restrictions regarding the linking of telephone numbers and accounts, establishing in its place the obligation to verify that the client is in fact requesting the service. Finally, the definition of authentication factors is broadened to include information generated by the institutions themselves.	Oct 1, 2019
13. Resolution modifying the general provisions applicable to credit institutions	The period in which banks must notify the securities depositary institution of transactions is established. For purchase and sales operations with debt instruments, it must not exceed thirty minutes and the time at which the operation was closed must be indicated.	Nov 3, 2019
14. Resolution modifying the general provisions applicable to credit institutions	It allows banks to enter into mandates with private assistance institutions and pawnbrokers provided they belong to their own consortium or business group.	Nov 25, 2019

Source: BBVA Research

6. Special topics included in previous issues

First Half 2019
Consumer Credit: recent developments and analysis of the slowdown in its growth rate
Mexican corporations' foreign debt: the scenario changes, but risks for the bank remain limited

First Half 2018
Risks limited to the financial system because of the possibility of the country's exiting NAFTA
The 2017 Delinquency Rate (IMOR) for the private sector credit portfolio

January 2016
Overview of debt from local governments and entities in Mexico
Mexican corporate borrowing in foreign currency
A portrait of Mexican households: assets, liabilities and balance
An optimal collection strategy for credit card management

January 2015
Habits in bank credit card usage over time
The informal economy in Mexico: Determining factors in the transition to formality and the viability of this process
Employment mobility
International branchless banking experience

First Half 2014
Household indebtedness in Mexico: two approaches to measurement
Determining factors of financial inclusion in Mexico based on the ENIF 2012 survey

December 2013
Penetration of credit in Mexico and Brazil: a comparison & brief description of some factors contributing to the difference
The outlook for mutual funds in Mexico
Is there market discipline in Mexico's bank debt market?
Demand factors that influence financial inclusion in Mexico: analysis of barriers based on the ENIF survey
The new financial reform

July 2013
Corporate lending: relationship between amount, company size and non-performing loan portfolio
Statistics of the CNBV on lending to SMEs by federal state and indicators in judicial proceedings efficiency
Recent patterns in efficiency and competition of the Mexican banking system
Amendments to the Securities Market Act
Bank lending to companies: How much can it grow with an ideal financial reform?
What does ENAMIN tell us about bank credit needs among microenterprises in Mexico?

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Creating Opportunities

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