BBVA | RESEARCH

Banking Outlook

Mexico

January 2015
Economic Analysis

- Lending to the private sector had a mixed performance in 2014, while traditional deposit-taking lost pace throughout 2H14. The loss of momentum was mainly due to the slowdown in economic activity
- Growth in portfolio balances and credit card numbers in the last year-and-a-half has eased up, which points to a downturn in available income. A close eye should be kept on a potential build-up of risk, to ensure that the market progresses in good health
- The transition to formality is important, because it brings better conditions for gaining access to financial services. The socio-demographic characteristics and employment status of each individual play a significant part in transitioning to the formal sector and remaining there
- Branchless banking has grown substantially, but still needs to make the most of its potential as a vehicle for financial inclusion. Branchless channels are still utilised less than traditional means, and are mostly used for paying for services or making transfers

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Content

Closing date: January 5, 2015

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1. Summary

Both lending and deposit-taking in the Mexican banking system posted lower growth rates in 2014 than in recent years. This can be **explained by a less-spirited performance by the Mexican economy**. We expect that, as the economy begins to turn in higher growth rates again, bank lending and deposits will rediscover the same vigour which it had shown before the downswing in 2013.

The credit card market has been hit by the economic slowdown. Both portfolio balances and credit card numbers have ebbed in the last two years on the sluggishness of the economy and the resulting drop in available income. It should be recalled here that employment and wage levels are the key drivers of consumer credit, the largest component of which is credit cards.

If the overall wage bill continues to flag, it would be advisable for lending institutions to toughen up on their card origination criteria if they are to manage to head off an impairment in their credit status of the kind witnessed in 2009. By the same token, one policy objective should be to continue efforts to expand financial education programmes, so that consumers can make more effective use of cards.

In previous ***Mexico Banking Outlook*** notes we have argued that **the high level of informality in Mexico is at the heart of the low levels of financial penetration observed in the country**. This is because it is very hard to screen irregular individuals or companies for creditworthiness when they do not have reliable mechanisms to prove their income levels. Moreover, in ***Mexico Economic Outlook*** notes we have presented analyses which suggest that the high informality level is one of the factors which account for the low productivity in the Mexican economy. In this note we examine the characteristics that make it more likely that an individual who works in the informal sector of the economy will transition to formality. We find that **workers with a higher educational level, who are older, live in urban population centres, and who earn larger incomes are the most liable to formalise their situation**. Therefore public policies aimed at improving the quantity and quality of education could lead to falling percentages of workers in Mexico's informal sector.

To conclude, in this ***Mexico Banking Outlook*** we make a comparative analysis of the various branchless banking models. We find that in the countries which have backed these models there has been a substantial rise in access to and usage of alternative channels (mainly banking agents and mobile banking). **Until now**, however, **these channels have not been instrumental in boosting new customers for banking**, as they have mostly been used by consumers who already had access to the banking system, above all to make payments against loans and for services.

2. Current Situation

2.a Private sector lending by commercial banks: mixed performances over 2014, with signs of stabilising towards year-end

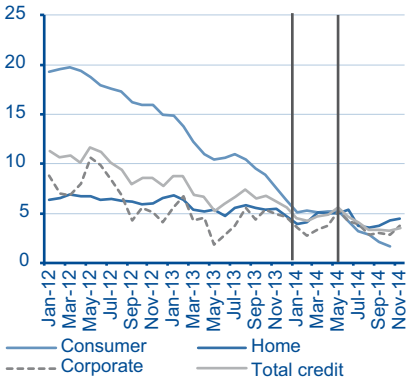
2.a.1 Recent trends in overall lending and components

During the first 11 months of 2014, performing loans granted by commercial banks to the private sector was uneven. Initial signs of recovery were noted in the first five months of the year and lending growth hit a high in May 2014, marking a real annual rate of 5.6%. Despite this, from the close of 2Q14 the unfolding rally lost steam and slowdown was the leitmotif in the second half, although lending did seem to settle towards the end of the year, showing a gentle upturn as the real annual growth rate moved from 3.3% in October (a level that had been held for three months) to 3.6% in November. This meant that real average annual growth between January and November 2014 came in at 4.2%, which was lower than the figure of 6.9% for the comparable period in 2013, and below the rates seen in recent years.

The performances of the three key credit segments (consumer, housing and corporate) were similar, with growth peaking in 1H and then easing off (Graph 2.a.1). Consumer credit presented as the weakest, with a real average annual growth rate in 1H14 of 5.0%, while from July to November it only grew by 2.2%. Growth was also down on the previous year, with a real average annual growth rate (AAGR) for the first 11 months of 3.7%, which was less than half the figure of 10.9% for the like period in 2013. On the other hand, corporate lending growth between 1H14 and the first five months of 2H14 slipped back from 3.9% to 3.3%, while housing credit did so from 4.8% to 4.0%. Even though these two components seem to have taken a positive change of direction in October and November, their 2014 performance was less robust than in previous years: in the first 11 months of the year the real AAGR for housing credit was 4.4% (0.8pp less than in 2013), while business credit grew at 3.6% (0.6pp down on the previous year).

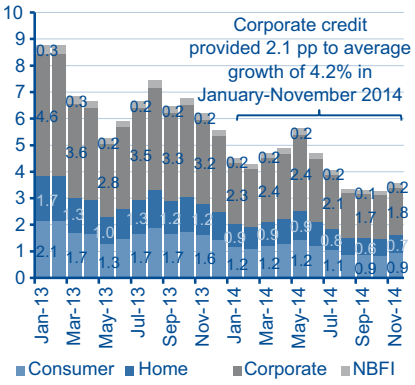
Graph 2.a.1

Performing loans from commercial banking to the private sector, total and by segment (real annual growth rate, %)



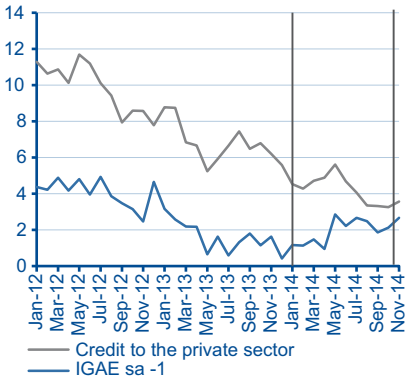
Graph 2.a.2

Performing loans from commercial banking to the private sector (segment contribution to growth, %)



Graph 2.a.3

Performing loans from commercial banking to the private sector, with IGAE (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI

In terms of the contribution by each segment to total growth, corporate lending notably accounted for 2.1pp of the overall figure of 4.2% by which credit grew on average between January and November. This was followed by consumer, at 1.1pp, and housing, with 0.8pp (Graph 2.a.2). These figures suggest that corporate and consumer credit are still the key drivers of banking credit to the private sector.

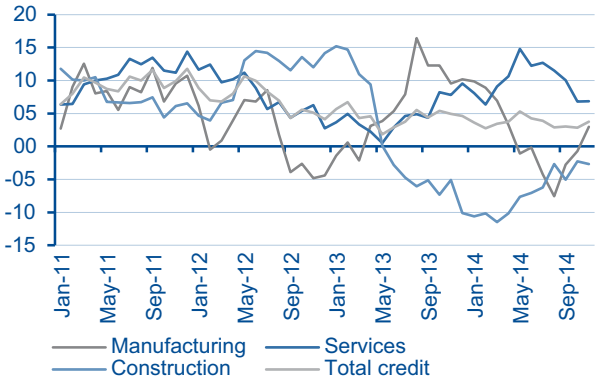
Lending patterns have been tied in with the sluggishness of economic activity since 2013. Graph 2.a.3 shows the growth rate for credit and the IGAE with a one-month lag, where similarities in both readings can be observed: a mild recovery in H1, ups and downs in Q3, and signs of an upturn from October on. Since the economy is expected to recover towards the end of 2014 (a real annual rate of 2.5% in 4Q14) and that this should continue into 2015 (3.5%), the signs of a pick-up in lending that we are seeing could extend into this year, as long as recovery is also manifested in rising domestic demand and an increase in household income levels.

2.a.2 Corporate credit

At the November close, performing loans to companies stood at a real AGR of 3.8%, which was up on October (2.8%) but below the comparable month's rate from the previous year (5.0%). Due to the fact that this segment accounts for 50.6% of the balance of performing loans to the private sector, its contribution to growth was the biggest, at 1.8pp of the total of 3.6% for November.

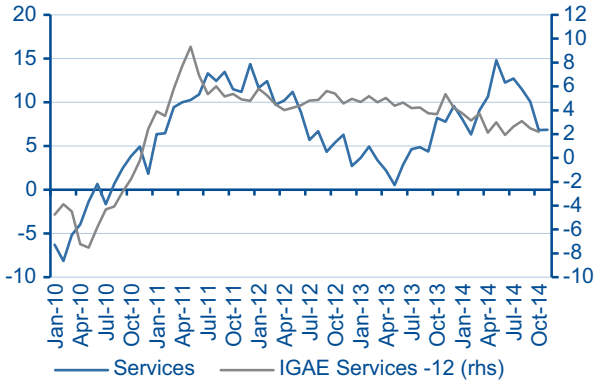
The performance of corporate lending was shaped by contrasting movements in the sectors of activity of borrower companies. As can be seen from Graph 2.a.4, lending to companies in the services sector grew at a substantial rate in 1H14 (an AAGR of 10.2%), which was tempered slightly in 2H14 (averaging 9.6% from July to November). This sector's performance and the large share of total corporate lending it accounts for (52.8% as of November 2014) to a great extent determined the overall portfolio's performance. In contrast, corporate credit into the manufacturing sector over most of 2014 stuck to the downward course it had been charting since 4Q13, though this trend has been in reverse since September 2014, and after six months of displaying negative rates in November 2014 it broke back into positive territory (3.0% in real annual terms). Lastly, lending growth to construction companies remained at negative rates throughout the whole year, although since April it has shown signs of recovering and shown progressively smaller negative rates.

Graph 2.a.4
Corporate lending by borrowing company sector (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI

Graph 2.a.5
Corporate lending to services sector companies and services IGAE (real annual growth rate, %)

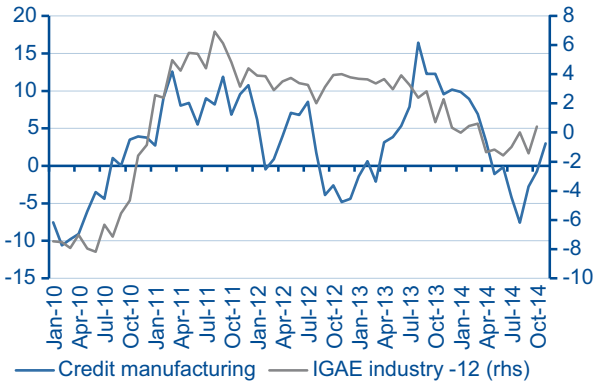


Source: BBVA Research with data from the central bank and INEGI

The pattern of corporate lending is in line with the performances in terms of economic activity for certain sectors, yet, as is clear from graphs 2.a.5 to 2.a.7, there is a certain lag. For example, in the case of lending to services and manufacturing companies, a close correlation emerges with the IGAE's performance in the tertiary (services) and

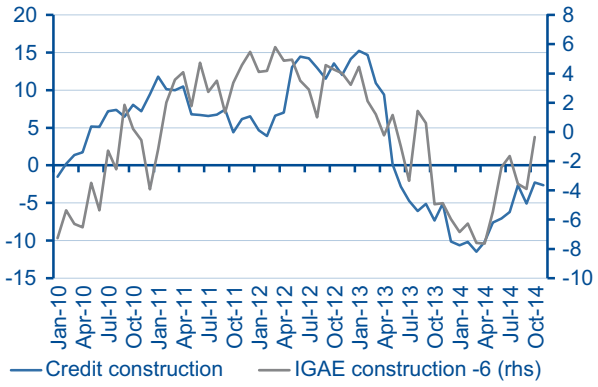
secondary (industry) sectors some 12 months earlier. This implies that the better portfolio performance for lending to the services sector in 1H14 (a real annual average of 10.2%) with respect to 2H14 (a comparable 9.6%) could have been associated with the higher growth observed in the services IGAE in 1H13 (a real annual 2.9% sa) relative to 2H13 (a comparable 2.2%). Likewise, the lower growth in credit to manufacturing companies in 2014 (1.4% in annual average real terms vs 6.2% in 2013) could have been linked to the slowdown in the industrial IGAE in 2013 (a real annual 4.1% in 2012 vs 1.1% in 2013). Similar relationships can also be seen in the construction sector, although involving a shorter period (Graph 2.a.7). This indicates that the performances in economic activity of certain sectors in 2014 will continue to feed through into how the business credit portfolio behaves in 2015.

Graph 2.a.6
Corporate lending to manufacturing sector and secondary sector IGAE (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI

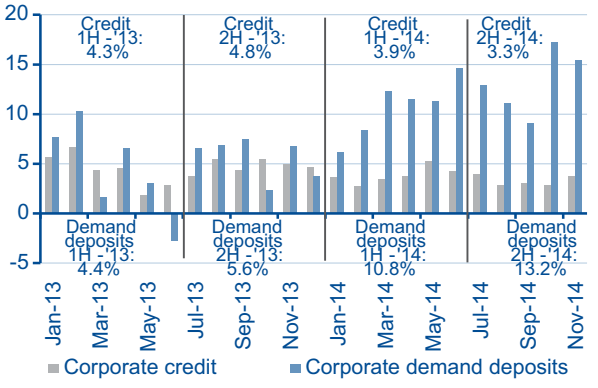
Graph 2.a.7
Corporate lending to construction sector and construction IGAE (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI

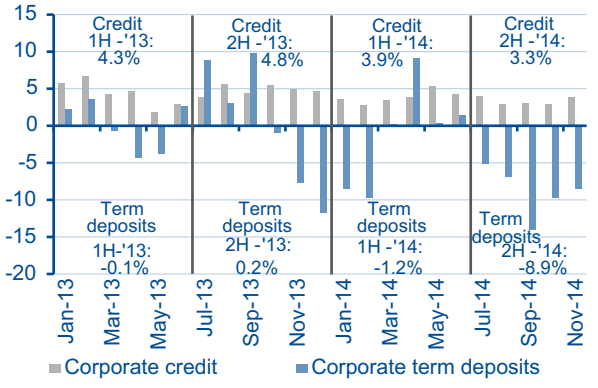
An added factor, which could have had a bearing on trends in credit for this segment, is that from 2H13 savings by companies, as measured through sight and term deposits, rose (Graphs 8 and 9), and so in 2014 they had enough cash to fund their operations and investments before taking out new loans. This is reflected in the real annual 4.7% fall in term deposits by companies in the first 11 months of the year and one of -8.1% in November. Thus, as private investment grows and the cash requirements of companies increase, greater demand for credit is also to be expected.

Graph 2.a.8
Companies: credit and demand deposits (real annual growth rate, %)



Source: BBVA Research with central bank data

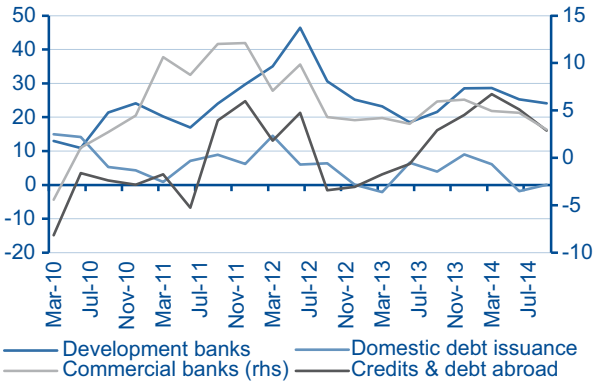
Graph 2.a.9
Companies: credit and term deposits (real annual growth rate, %)



Source: BBVA Research with central bank data

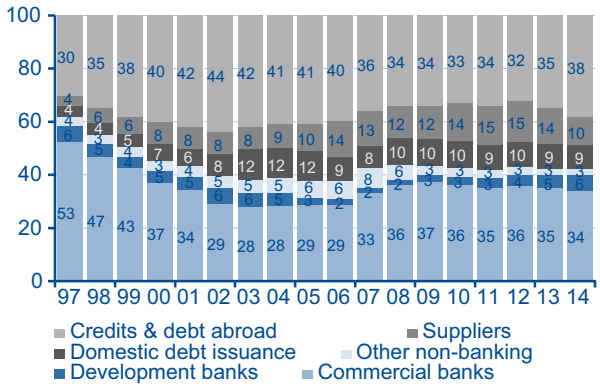
A third factor associated with the performance of corporate lending is the recent increase in alternative sources of funding, in particular development bank lending and financing abroad (Graph 2.a.10). In the first three quarters of 2014 the balance of credit from commercial banking grew at a real average annual rate of 4.2%, while from development banking this mushroomed by 26.0% in real terms. At the same time, lending raised and debt issued abroad by companies surged ahead by 21.7%. In the case of credit arranged by commercial banks, growth in 2014 was down on the comparable period in 2013 (4.6%), yet on the other hand credit from development banks and funds raised abroad gathered pace against the previous year (21.1% and 8.5% in 2013, respectively). All this has prompted a shift in the mix of business borrowings, whereby credit from commercial banks has been displaced by foreign financing as the leading source of funds (Graph 2.a.11), while development bank lending has tripled its share since 2008. As mentioned in the Banking Watch report which was recently published by BBVA Research and covered the central bank report on the financial system, the larger companies are mainly responsible for the increased funding abroad. They have benefitted from the low interest rates and therefore enjoyed better credit conditions there. This increase might, however, be reversed as monetary policy in the developed countries returns to normal.

Graph 2.a.10
Sources of corporate funding (real annual growth rate, %)



Source: BBVA Research with central bank data

Graph 2.a.11
Distribution of sources of corporate funding (%)



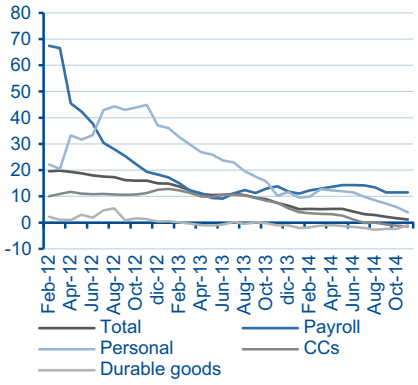
Source: BBVA Research with central bank data

2.a.3 Consumer credit

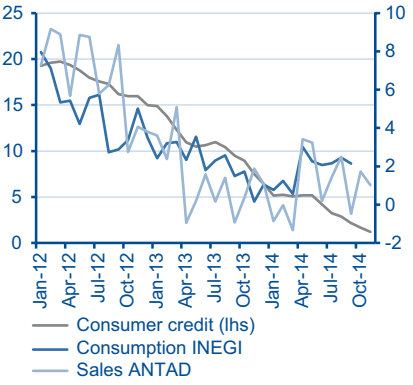
At the November 2014 close, consumer credit showed a real AGR of 1.2%, below the comparable figure for October (1.7%) and less than that of 7.5% for November 2013. This segment accounts for 25.8% of performing loans with the private sector, so its contribution to the growth of said portfolio was 0.9pp.

In 2014 the growth rate of virtually all of the consumer credit components fell back, thereby continuing the downward trend seen since 2Q13, which intensified in 2H14 (Graph 2.a.12). Card credit (43.9% of the consumer portfolio) was the segment which succumbed the most, with the real AAGR dropping from 3.0% in 1H14 to -0.7% in 2H (July to November). It also returned a fall of 1.6% in real terms in November, a figure not seen since March 2011, when it fell 1.7%. This meant that the contribution of credit cards (CCs) to consumer credit growth was a negative 0.7pp. Payroll loans (22.3% of consumer credit) grew less in 2H14 (a real 12.4% annually) relative to 1H14 (13.1%), although from January to November its average growth rate was above the comparable figure in 2013 (12.8% vs 12.3%). At the November close the growth rate was 11.5%, which had held since September. This is still the segment which contributes most to the consumer portfolio, at 2.3pp of the overall 1.2% growth rate.

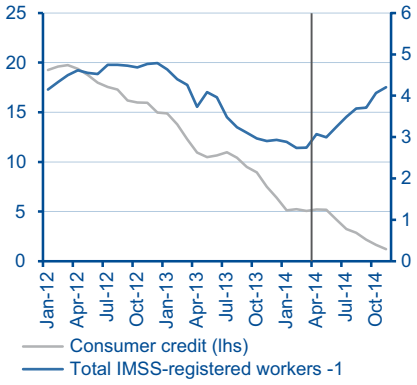
Graph 2.a.12
Consumer credit: total and by segment (real annual growth rate, %)



Graph 2.a.13
Consumer credit and domestic consumption (real annual growth rate, %)



Graph 2.a.14
Consumer credit (real annual growth rate, %) and total workers with the IMSS (growth rate, %)



Source: BBVA Research with data from the central bank, INEGI and ANTAD

The third most important segment within the consumer portfolio is personal loans (19.1%), which grew 7.1% between July and November 2014, which was below the level of 11.3% for 1H14. A major slowdown was seen relative to 2013, from an average growth rate of 23.7% in the first 11 months of 2013 to one of 9.4% in 2014, implying that the growth rate was trimmed by 14.3pp. Even so, personal loans were the second-biggest contributors to growth, closing November with a real annual rate of 3.9%, which equates to a contribution of 0.7pp. Finally, consumer durable loans remained in negative territory throughout the entire year, showing a real AGR of -1.8% from January to November. The drop in this rate is seems to be shrinking over time, though, as in November this was 0.9% compared to 2.4% down in October. Trends within this segment were driven by the average real rise of 33.3% annually (January to November) in personal property loans, which account for 0.7% of the consumer portfolio open, and the 3.3% fall in auto loans (9.0% of the consumer portfolio).

As with business and household credit, the performance of consumer credit is intimately linked to trends in the economy, especially domestic consumption and employment. From January to September 2014, the monthly indicator of private consumption in the domestic market published by INEGI offered an average growth reading of 1.9%, whereas in the comparable period in 2013 this showed a rate of 2.6% (Graph 2.a.13). Consumer credit moved in line with this, as for those same periods the growth rate came down from 11.5% to 4.3%. The same was true for ANTAD sales, with average growth down from 1.3% to 1.0% between 2013 and 2014. With respect to employment, up to 1Q14 there was a very close alignment between the number of IMSS-registered workers and the credit portfolio, but the correlation seems to have faded from then onwards (Graph 2.a.14). As is explained in detail in the ***Mexico Economic Outlook***, Fourth Quarter 2014, recent trends in employment are partly explained by the coming into effect of the job formalisation programme implemented by the Secretariat of Labour and Social Welfare since 2H13. Bigger formal employment growth does not, however, necessarily lead to an increase in available credit, for various reasons. One of these is that a proportion of the additional jobs which have been registered are not new, but are jobs that already existed and for which social benefits are being granted, meaning that the available income or creditworthiness of formalised workers does not necessarily rise, and so it could be that potential new customers for banks are not in fact being created. Moreover, these workers entering the formal economy are likely to have already taken out loans, and their level of creditworthiness does not allow them to borrow any further. On the other hand, as is examined in Box 1 of this ***Mexico Banking Outlook***, there is some evidence that the workers becoming formalised are doing so at an income level which is not significantly higher than the one they had in the informal market. This implies that, in spite of being formal workers, some of them might not have enough available income to qualify for loans or boost their borrowing power. For the rising trend in numbers of workers to feed through into higher rates of consumer credit growth, among other factors there would also have to be a visible upturn in workers' available income.

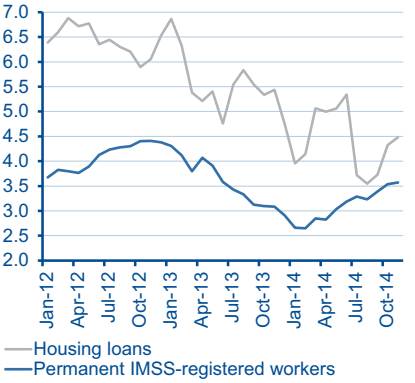
2.a.4 Mortgage lending

Similarly to the other banking credit segments, trends in housing loans were mixed in 2014, although from 3Q14 the downward path seems to have begun to turn around. Portfolio growth was practically the same between July and September (3.7% in real terms), but real annual rates picked up in October and November, marking 4.3% and 4.5% respectively (Graph 15).

As has been noted in previous ***Mexico Banking Outlook*** reports, mortgage lending behaviour is mainly governed by demand factors. Notable here is the close relationship with formal and stable job creation (in terms of the number of workers permanently registered with the IMSS) and consumer confidence. Relative to 1H14, employment rallied in 2H (July to November) and there was a smaller fall in consumer confidence. Employment growth in 1H14 averaged at 3.0%, and in 2H it climbed to 3.4%, while consumer confidence slipped back on average by 6.4% in 1H14, followed by a gentler fall of 1.6% between July and November. Although the mortgage portfolio's performance was weaker in 2H compared to 1H, the early signs of recovery in October and November could be associated with the better numbers for the indicators described (Graphs 2.a.15 and 2.a.16).

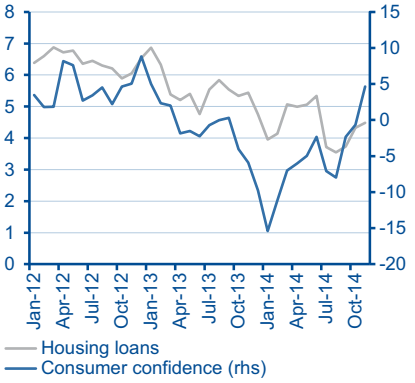
Graph 2.a.15

Mortgage lending (real annual growth rate) and number of workers permanently registered with the IMSS (annual growth rate), %



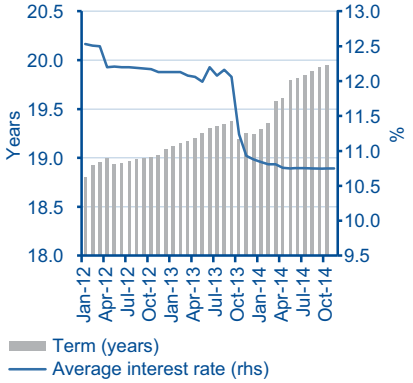
Graph 2.a.16

Mortgage lending (real annual growth rate) and Consumer Confidence Index (annual growth rate), %



Graph 2.a.17

Mortgages: peso-denominated fixed-interest loan rates (%) and term (years)



Source: BBVA Research with data from the central bank, INEGI and CNBV

There has been a steady improvement in lending terms for mortgage loans offered by the commercial banks, which has been manifested in lower interest rates charged and longer loan periods. According to information from the central bank, the average interest rate for fixed-rate, peso-denominated mortgage loans, was shaved by 1.1pp between 2013 and 2014, coming down from 11.9% to 10.8%. CNBV data also show that the average period for loans rose from 19.2 years to 19.7 (Graph 2.a.17). This turn of events has emerged in a context of macro-financial stability and keener competition among the major providers of this type of loan. These figures are evidence that, to the extent that the stable employment situation and consumer confidence look brighter and credit terms remain kind to households, the mortgage portfolio may continue to rally into 2015.

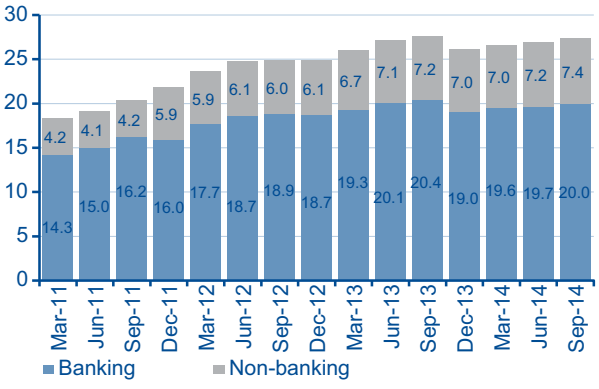
2.a.5 Recent trends in the financial burden on households

In past Mexico Banking Outlook reports we presented two approaches to gauge household borrowing levels. One of these uses information from intermediaries and various measures of income. Based on this methodology, we have included a new part in this section on the current situation, which describes and analyses recent trends in the financial burden upon households. According to our methodology, the financial burden or borrowing is a ratio between the debt servicing by households of consumer and mortgage loans and a key measure of income. Debt servicing embraces interest payments, fees and paying off the principal for such loans. The measure of income employed is the sum total of the wage bill of IMSS-registered workers[1] and overall remuneration received by civil servants.[2] This measure of income is one of the most suitable as the IMSS figures are released monthly and the remuneration of civil servants is published quarterly.

At the close of September 2014, the financial burden from consumer loans stood at 27.4%. This percentage of household income was thus spent on paying off credit cards, and personal and payroll loans (Graph 2.a.18). The bulk of this (20pp out of the full 27.4%) was for bank loans and the remaining 7.4% was accounted for by non-bank loans such as store cards and auto loans from unregulated SOFOMEs (multi-purpose financial companies), among others. On average the financial burden in the first three quarters of the year held at levels on a par with those over the same period in the previous year (27.0%), since borrowing against bank loans remained unchanged (19.9% compared to 19.8%), although non-bank loans did nudge upwards (from 7.1% to 7.2%).

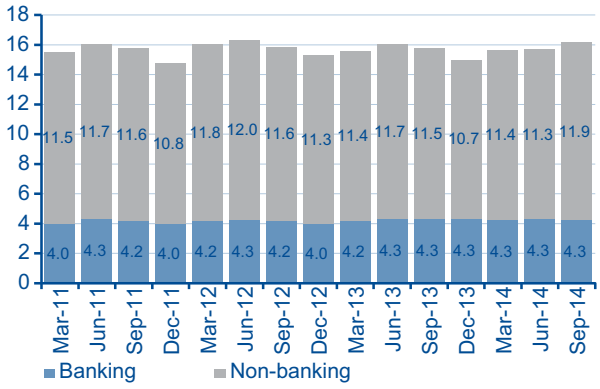
Graph 2.a.18

Household debt-servicing of consumer loans as a percentage of the wage bill, and civil servant remuneration (%)



Graph 2.a.19

Household debt-servicing of housing loans as a percentage of the wage bill, and civil servant remuneration (%)



Source: BBVA Research with data from the central bank, CNBV, BMV, INFONAVIT, FOVISSSTE, SHCP and INEGI.

With respect to housing loans, the financial burden as of 3Q14 represented 16.1% of household income. In this case most of the borrowing (11.9pp) is from the non-bank sector and the remaining 4.3% is from banks (Graph 2.a.19), which derives from the high share of mortgage financing accounted for by housing agencies (INFONAVIT and FOVISSSTE). As with consumer credit, the financial burden against mortgage loans held virtually stable over the first three quarters of 2014 (averaging 15.6%) compared to the same period in the previous year (15.8%). This was also as a result of a slight increase in borrowing against non-bank loans (from 11.3% to 11.5%), whereas bank borrowing remained unchanged (4.3%).

[1] Number of IMSS-covered permanent and temporary workers x daily average of the basic wage registered with the IMSS.
[2] The benefits received by civil servants in the federal government include ordinary remuneration (salary, social security payments, year-end bonus etc.) and extraordinary remuneration (incentives, pay for years in service, severance pay, etc.). The data is obtained from quarterly reports on the economic situation, public finances and government debt published by the Secretariat of Finance and Public Credit.

Conclusion

In the first 11 months of 2014, trends in lending to the private sector were mixed within its three major segments, with a bigger slowdown in growth in 2H. This was tied in with the sluggish performance the economy has displayed since 2013. Consumer credit was the segment which grew at the gentlest pace, owing to slowdowns for all of its components. This was associated with weak domestic demand and scant progress in incomes, despite the rise in formal job numbers. The rate of corporate credit growth was linked to varied performances within the different economic sectors, with companies storing up more cash due to moderate expectations about the options available for investment and an increase in alternative sources of funding, especially from abroad. Both in this segment and in mortgage credit there are glimmers of growth in the offing in the closing months of the year, which could gather steam if the economic recovery takes hold. As regards consumer credit, there will have to be some robust expansion in the domestic market and a resurgence of household incomes if the pattern of dampening growth is to be reversed, because as things stand this segment's performance is consistent with the current economic landscape.

To close, recent developments for our financial burden indicator shows no signs of over-borrowing so far, although there is the possibility that certain low-income sections of the population are facing financial hardship, as is examined in the previous ***Mexico Banking Outlook*** report. Greater credit expansion looking ahead will thus largely depend on the better economic performance which is predicted for 2015 managing to boost income and the domestic market.

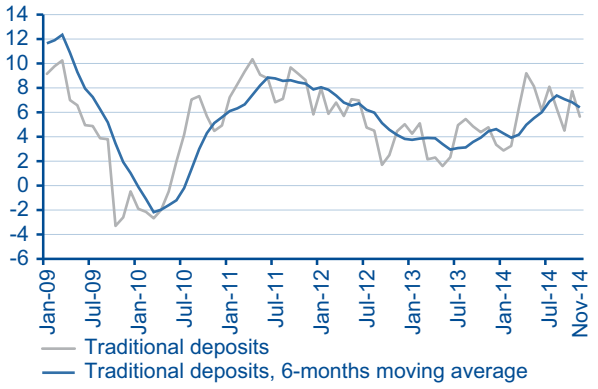
2.b Commercial banking deposits: a flagging pattern, led by term deposits

2.b.1 Traditional banking deposits

The real AAGR of traditional commercial banking deposits (both demand and term) from January to November 2014 was 6.2%, which was 2.4pp above the level for the comparable period in 2013. Over these 11 months a phase of notable recovery in 1Q14 consolidated between May and July, but was then followed by a spell of more modest rates, particularly in September and November. In this last month the real annual percentage variation for traditional banking deposits was 5.6%, 0.9pp above its counterpart in 2013 (Graph 2.b.1).

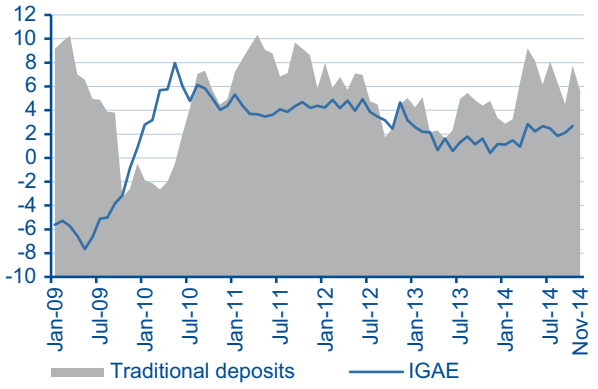
As with other financial variables, traditional commercial banking deposits are closely tied to the country's economic performance. Graph 2.b.2 shows that the weaker growth in traditional deposits in late 3Q14 and early 4Q14 to a large extent echoed the slowdown in economic activity in Q3, following the mild upturn seen in Q2. Even though the IGAE's April annual growth rate hit a high since December 2012 (2.9%)[1], in the next few months its growth rate slumped to a low of 1.9% in August. The IGAE growth rates as of September and October (2.1% and 2.7% respectively) could herald a brighter performance for deposits in 2015, although it should be recalled that the borrowing requirements of economic agents could cause the recovery to take time to crystallise.

Graph 2.b.1
Traditional commercial banking deposits (real annual growth rate, %)



Source: BBVA Research with central bank data

Graph 2.b.2
Traditional commercial banking deposits (real annual growth rate, %)



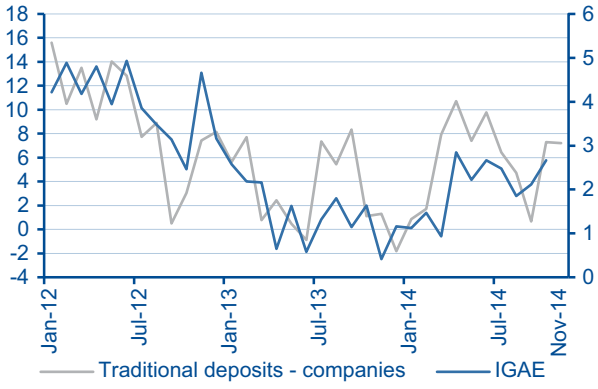
Source: BBVA Research with data from the central bank and INEGI

Graph 2.b.3 traces the progress of the annual percentage variation in the IGAE together with the real annual growth rate of traditional deposits from private enterprises. As can be seen, deposits by companies are closely linked to economic activity. In November 2014, the real annual percentage variation in business deposits was 7.2%, 5.9pp over the figure for November 2013, while in the first 11 months of the year the real AAGR for business deposits was 5.9%, 2.3pp more than for the same period a year earlier. As of November 2014, enterprises accounted for 36.9% of traditional banking deposits.

[1] Using seasonally adjusted series (sa).

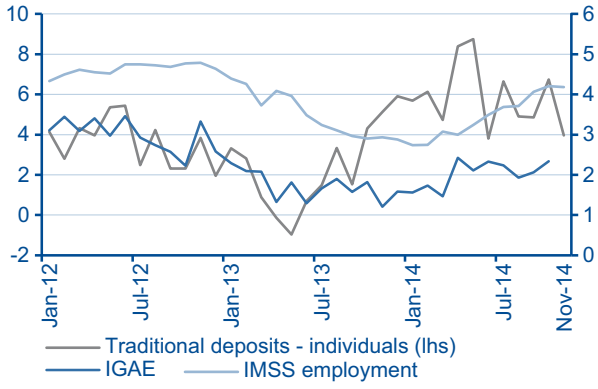
The real annual growth rate for traditional deposits from individuals was 4.0% in November 2014, 1.2pp below the like figure in 2013. Over the first 11 months of the year, the real AAGR for deposit-taking from individuals came to 5.9%, which was 3.8pp better than in the same period the year before. As of November 2014, the share from individuals out of overall traditional banking deposits was 42.9%. Graph 2.b.4 relates the real AGR of deposits from individuals to the IGAE's annual percentage variation and the growth rate in IMSS-covered worker numbers. As is evident, although there is a significant correlation among these three variables[2], traditional deposit growth exhibited greater variance than did the rates for the IGAE and the number of workers registered with the IMSS. As well as the connection between deposit-taking from individuals and both economic and employment growth, the variable can reasonably be expected to be responsive to shifts in household expectations (especially from 2H13), which might partly explain the variance witnessed in 2014.

Graph 2.b.3
Traditional commercial banking deposits (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI

Graph 2.b.4
Traditional commercial banking deposits (individuals, real annual growth rate, %)



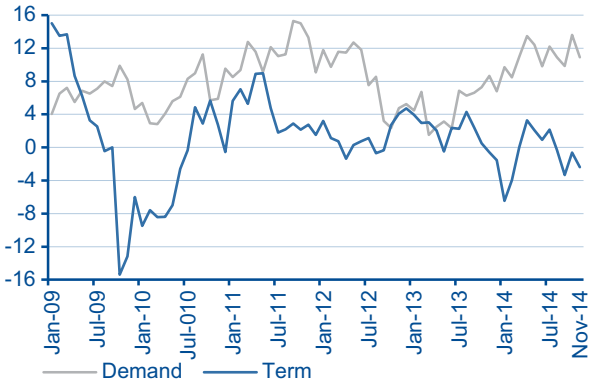
Source: BBVA Research with data from the central bank, INEGI and IMSS

2.b.2 Traditional commercial banking deposits: performance by components

The more timid growth in traditional banking deposits from July 2014 was led by a slowdown in term deposits, which began midway through the year and sagged to a real annual percentage variation of -2.4% in November. The real AAGR for the balance of term deposits in the first 11 months of 2014 showed -0.8%, 2.8pp below the comparable figure in 2013 (Graph 2.b.5). The decline in the growth rate for term deposits in H2 could be a partial outcome of the accelerated execution of investment plans by companies, as revealed by the upswing in the Gross Fixed Investment Indicator, which in September gave an annual growth reading of 4.5% (June 1.9%, July 2.9%, August 4.8%). Moreover, in June 2014 the central bank lowered its reference rate from 3.5% to 3.0%, which had a knock-on effect for interest rates offered on term investment products, thereby reducing their appeal.[3] The slowdown in term deposits in 2H14 prompted a fall in their share of the overall balance of deposits and, whereas in June term deposits represented 39.2% of this total, by November this had gone down to 36.6%.

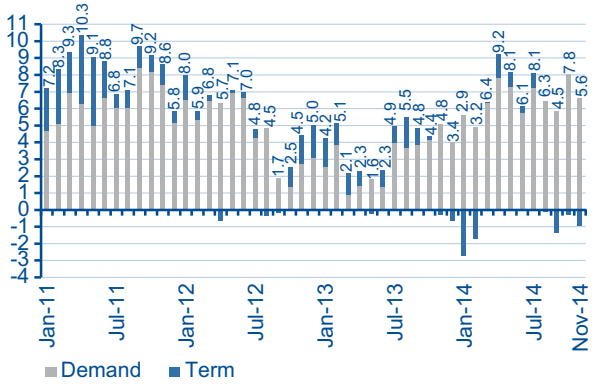
[2] For example, the correlation coefficient between the real AGR of traditional banking deposits and the IGAE's AGR in the first 10 months of 2014 was 0.36. The correlation coefficient between the real AGR for traditional banking deposit-taking from individuals and the IGAE's AGR was -0.32.
[3] For example, the weighted gross interest rate for 90-day fixed term bank deposits averaged 3.3% in 1H14, while for July to November 2014 the average was 3.0%.

Graph 2.b.5
Demand and term bank deposits
(real annual growth rates, %)



Source: BBVA Research with central bank data

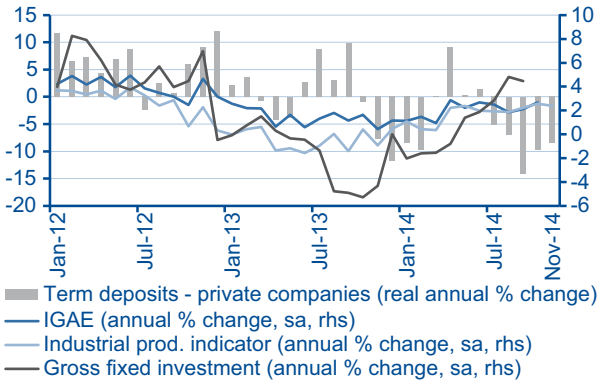
Graph 2.b.6
Traditional deposits: contribution to growth by
demand and term deposits (percentage points)



Source: BBVA Research with central bank data

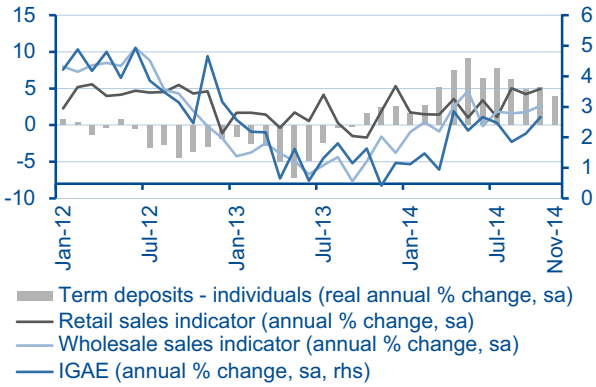
From April 2014, there was a substantial drop in the share of deposits from private companies in the growth rate for bank term deposits, from 2.8pp in April to -2.6pp in November (Graph 2.b.6). Conversely, deposit-taking from financial intermediaries has gained ground, and it contributed 0.01pp to the same growth rate in November 2014 (this takes on a certain significance if we compare it with the figure of -4.2pp seen in January 2014). Both private companies and financial intermediaries each represent 29.1% of bank term deposits taken, although the largest component in this category is individuals, who account for 44.5% of the total figure. This segment's contribution to growth has dipped slightly since midway through the year (3.2pp in July vs. 1.7pp in November). The non-financial public sector represents 0.8% of term deposits, and its contribution to growth in November 2014 was -0.2pp.

Graph 2.b.7
Term deposits from private companies
and macro indicators
(real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

Graph 2.b.8
Term deposits from individuals
and macro indicators
(real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

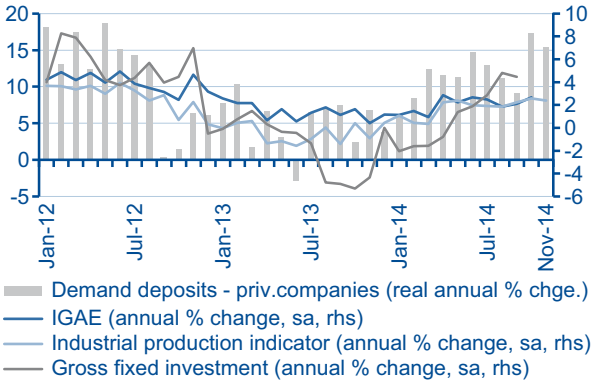
Graph 2.b.7 charts the progress of the real growth rate for term deposits by private companies, along with the annual percentage variation of the IGAE, the industrial production indicator and the indicator for gross fixed investment. As is apparent, the loss of steam in the growth of term deposits from companies is coupled with a pick-up in their investment rate. On the other hand, the relationship between term deposits from companies and the IGAE is positive, while the same is true for the industrial production indicator. Greater economic growth means bigger revenues for

companies, and thus the likelihood of more funds being directed towards financial intermediaries. Graph 2.b.8 illustrates movements in the growth rate of term deposits from individuals, together with the annual percentage variation in the IGAE, as well as the wholesale and retail sales indicators. The sales indicators are significant because they offer a sign of trends in household consumption over this time. There is evidently also a positive correlation between term deposits from individuals and how the economy performs, albeit with a lag of some months.

Sight deposits were down in June and September 2014, although overall they have kept up double-digit growth rates. In November the real AGR for demand deposits was 10.9%, 2.3pp above its counterpart in 2013, whereas the real AAGR for the demand deposit balance in the first 11 months of the year was 11.1%, 6pp ahead of the like figure in 2013 (Graph 15). As of November 2014, the demand deposit balance was 63.4% of overall traditional banking deposits.

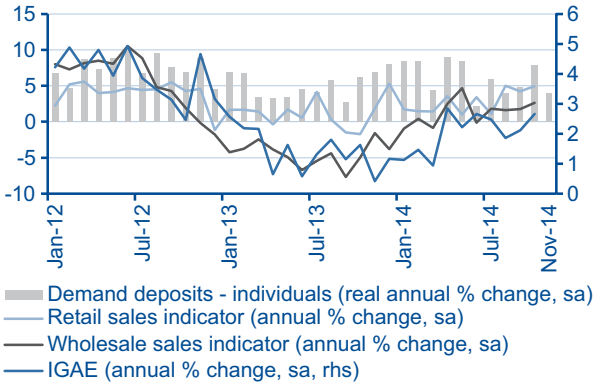
Of all the demand deposit components, it was deposits from private companies and financial intermediaries which grew the most over the first 11 months of 2014. In November 2014 the contribution by private company deposits to the percentage variation in demand deposit-taking was 6.2pp (vs. the reading of 2.5pp for January). The portion accounted for by financial intermediaries was 1.0pp (vs. the January figure of 0.2pp). Private companies represent 41.5% of demand deposits, while financial intermediaries speak for 3.2%. On the other hand, non-financial public sector deposits account for 13.5% and 41.9% came from individuals. The latter component lost ground, since it contributed 1.8pp to the November demand deposit growth rate (vs. 3.9pp in January), whereas deposits from the non-financial public sector gathered pace over the year, posting a share of this rate for November 2014 of 2.4pp. It is worth pointing out that this sector managed to produce double-digit growth rates throughout the entire year, and from January to November the real AAGR for non-financial public sector deposits was 20.0% (vs. 4.0% for the first 11 months in 2013).

Graph 2.b.9
Demand deposits from private companies and macro indicators (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

Graph 2.b.10
Demand deposits from individuals and macro indicators (real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

Graph 2.b.9 shows the trends in the growth rate of demand deposits from private companies, together with the annual percentage variation in the IGAE, the industrial production indicator, and gross fixed investment. It can be noted that the growth rate of company demand deposits seems to track the pace of economic activity. Unlike company term deposits, demand deposits do not shadow gross fixed investment closely. Graph 2.b.10 charts movements in the growth rate of demand deposits from individuals alongside the annual percentage variation in the IGAE, and the wholesale and retail sales indicators. Although the growth rate for deposits by individuals correlates positively with the IGAE's performance, the link is more tenuous than it is for term deposits. Even so, it does appear more simultaneous.[4]

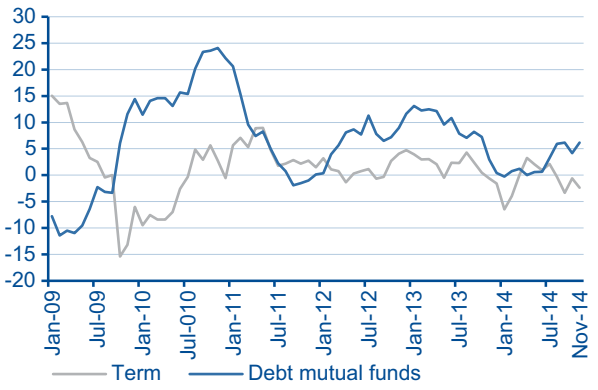
[4] Due to the very nature of short term savings products, the balance of sight deposits is more likely to adjust more swiftly to variations in the economy than that of term deposits.

Looking at the contribution of each component to the growth rate of traditional banking deposits, the share of demand deposits in November 2014 was 6.6pp, which explained 116.7% of the growth rate of traditional banking deposits (Graph 2.b.6). On the other hand, the contribution of term deposits was -0.9pp, accounting for -16.7% of growth. In the first 11 months of the year, the contribution made by demand deposits averaged 6.5pp, 3.6pp above the corresponding level in 2013, whereas term deposit-taking averaged -0.3pp, 1.2pp below the like figure in 2013. Despite the slowdown in term deposit-taking in the final quarters of 2014, an upturn could become apparent in 1H15 as the brighter performance by the economy is confirmed. Here we should make the point that the economy's performance in 2015 will hinge on stronger domestic demand and signs of a recovery in private and public investment.

2.b.3 Debt funds and term bank deposits

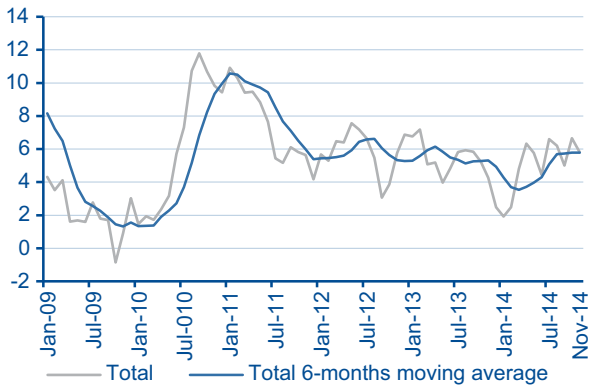
From May 2014, the balance of securities holdings managed by Debt Funds (FIDs) began to show greater vigour, reaching a real AGR of 6.2% in November, compared to 3.0% for November 2013 (representing a 3.2pp rise), while the real AAGR for July to November was 5.2% (vs. 0.5% for the first six months of the year). Despite this pick-up in the growth rate for the balance held by FIDs in 2H14, it has still not managed to regain the dynamism which it displayed in 2013, partly because of the rallying of government short- and long-term interest rates in recent months. As is mentioned in the ***Mexico Economic Outlook***, Fourth Quarter 2014, the country's interest rate movements are likely to be closely tied to US interest rates. A scenario of a steady rise in long-term interest rates in both countries therefore remains the most probable way that events will unfold, assuming that the Federal Reserve embarks on its series of hikes in the coming year. Rising interest rates thus represent a downside risk to growth in the balance under FID management in 2015.

Graph 2.b.11
Term bank deposits and debt funds (real annual growth rate, %)



Source: BBVA Research with central bank data

Graph 2.b.12
Total funds attracted: sight and term deposits + debt funds (real annual growth rate, %)



Source: BBVA Research with central bank data

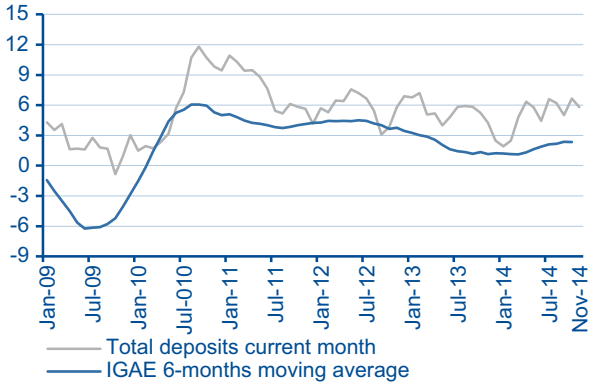
Graph 2.b.11 shows the course taken by the growth rate for term banking deposits and the balance of securities held by debt funds. We can see that since mid-2014 growth in the balance held by FIDs again exhibits a negative correlation with term deposit-taking. It is thus likely that the increase in funds attracted by FIDs may be exerting a negative effect on the sum total of funds invested in saving through traditional bank term deposit products. As we said in our December 2013 ***Mexico Banking Outlook***, funds attracted by FIDs and bank term deposits show an inverse relationship over periods which might indicate a certain degree of substitution between both forms of investment.

2.b.4 Total funds attracted: overall traditional deposits (demand + term) plus FIDs

To gain an overall picture of the trends in funds attracted, irrespective of the level of substitution there might be among this category's various components (demand deposits, term deposits and the balance of securities holdings managed by the FIDs), we examine their performance taken together. This variable throws up information on the sum total of those assets of companies and individuals which have been channelled into the financial system through the various savings and investment alternatives it presents (demand/term/FIDs).

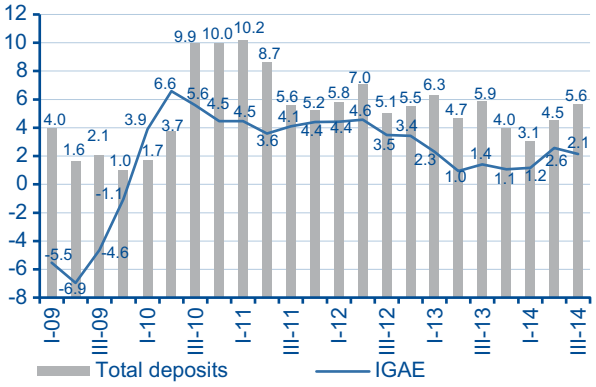
The overall performance of funds attracted was good in 2014, reversing the sliding trend it had begun to show in the final two months of 2013. The real AGR for total funds attracted was 5.8% in November 2014, which was 1.5pp up on that month a year before, while for the first 11 months of 2014 the real AAGR experienced by total funds attracted was 5.1%, which was 0.4pp lower than the equivalent figure in 2013. Between January and November 2014, growth rose at a rate of 3.9pp, although it did not tick up in all periods, as June and September notably displayed mild falls. Even though the pace of growth in overall funds attracted eased up from September, its performance looking ahead will depend, among other things, on a stronger showing from the economy and the implementation of spending and investment programmes which have fallen behind (Graph 2.b.12).

Graph 2.b.13
Total funds attracted and the IGAE
(Real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

Graph 2.b.14
Total funds attracted and the IGAE
(Real average annual growth rate, QoQ %)



Source: BBVA Research with data from the central bank and INEGI.

Graphs 2.b.13 and 2.b.14 illustrate the correlation between the path taken by total funds attracted and the annual percentage variation in the IGAE. As with its components, overall funds attracted are also closely related to the progress of the economy. The more the economy grows, the greater is the flow of income into households and companies, hence the more substantial total volume of funds which can be channelled into the financial system via demand deposits, term deposits and/or through the FIDs. Graph 2.b.15 sketches how total funds attracted rate closely shadows the growth path of the IGAE after some months' delay.

In November 2014 demand deposits represented 44.6% of overall funds attracted, whereas the share of term deposits was 25.8%. In the same months the FIDs accounted for 29.6%. Of the three components of total funds attracted, only demand deposits showed an increase in their share of the overall figure in the first 11 months of the year, gaining 1.3pp. Term deposits came down by 1.3pp, while funds attracted by the FIDs slipped by 0.1pp.

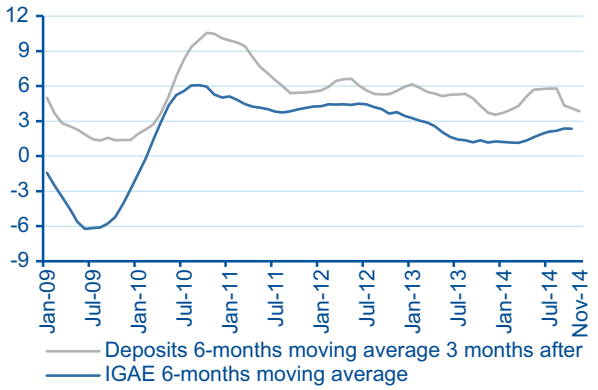
2.b.5 Total funds attracted: contribution to growth by component

The first 11 months of 2014 saw demand deposits take a greater share in the growth rate of overall funds attracted, an improved percentage point contribution of the balance for securities holdings under FID management and a lower proportion of term deposits. From January to November 2014, the average contribution of demand deposit-taking was 4.5pp of the growth rate for term deposit-taking, meaning that this was 2.4pp up on readings for the same period in 2013. In the first 11 months of the year the average contribution by funds attracted by FIDs was 0.8pp, which

was 2pp down on the average over the same time in 2013. Finally, term deposits showed an average contribution of -0.2pp, which represented a fall of 0.8pp from the average seen in 2013 (Graph 2.b.16).

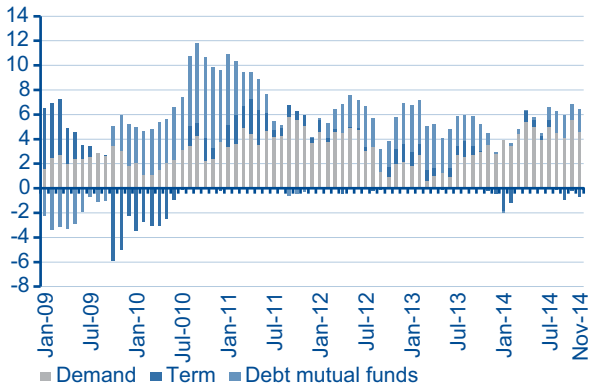
In November 2014, the contribution of demand deposit-taking to the real AGR of total funds attracted was 4.6pp, 1.1pp above the figure for the same month in 2013. Term deposits contributed -0.7pp, 0.5pp below the level for the previous November, and funds attracted by FIDs showed a share of 1.8pp, which was 0.9pp better than in November 2013. These figures point to a strengthening of the short-term traditional channels for funds attracted, as well as the alternative channels, such as FIDs, whereas they also betray a weakening in the traditional term component.

Graph 2.b.15
Total funds attracted and the IGAE (Real annual growth rate, %)



Source: BBVA Research with data from the central bank and INEGI.

Graph 2.b.16
Total funds attracted: contribution to growth by components (percentage points)



Source: BBVA Research with data from the central bank

Conclusion

2H14 was marked by a fall in the growth rate of traditional deposit-taking (demand + term). This contrasted with the upturn by the indicator in the middle of the year, when it recorded rates of close to eight per cent. The lower rates for traditional deposit-taking are in the main due to the drop in term deposit growth, which began to dampen from midway through the year. We think that this variable will start to show more signs of life as an improvement in economic growth materialises over 2015, and interest rate rises make them more appealing investment options. Growth of this kind will depend on domestic demand picking up, heavier private investment, more public investment projects, and continued growth acceleration in the United States. As stated in ***Mexico Economic Outlook***, Fourth Quarter 2013, certain risks still predominate which could have an impact on the fortunes of the economy in 2014, such as how the US economy performs (perhaps not robustly enough), falling international prices for Mexican mix oil and the effect of this on the public finances, and events regarding lawlessness and the crime rate in Mexico.

Despite the slowdown in traditional banking deposits in the latter months of 2014, growth in total funds attracted (comprising traditional banking deposits and funds channelled through FIDs) ticked up towards late 2014, galvanised by better performances from demand deposits and funds attracted by FIDs. Unlike what we saw in the last few months of 2013 and going into 2014, funds attracted by FIDs have picked up, although this is still short of the levels of 1H13 (partly due to the improved interest rates on government assets which have been observed in recent months, which brings down the price of these assets and therefore their value). The growth in the balance of security holdings under FID management might have helped to bring down the growth rate for term deposits in 2H14. Both instruments offer savings alternatives with different time horizons, and from this standpoint they might be perceived by the public as interchangeable. Given the close correlation between the components of total funds attracted and the growth of the economy, any improvement in these indicators will hinge on domestic demand firming up and the consolidation of both public and private investment. If progress by these variables is poor in the coming months, total funds attracted will not be able to make any headway.

3. Special Topics

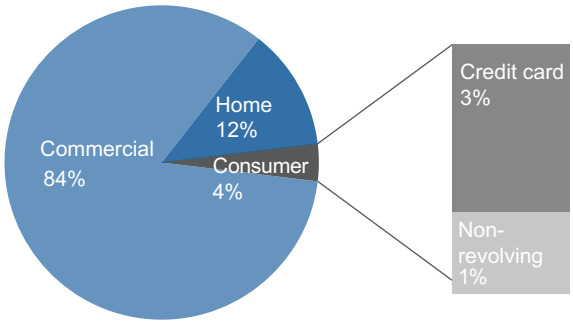
3.a Habits in bank credit card usage over time

3.a.1 Introduction

Within consumer credit, one of the most widely-used forms is the credit card (CC), due, among other factors, to the flexibility which it provides compared to other lending products: interest is paid only on the sum of money disbursed; once the credit facility has been approved, it can be used whenever needed; it is readily available; and it can be used to buy a broad range of products and services (it is not conditional upon the acquisition of one specific item of goods).

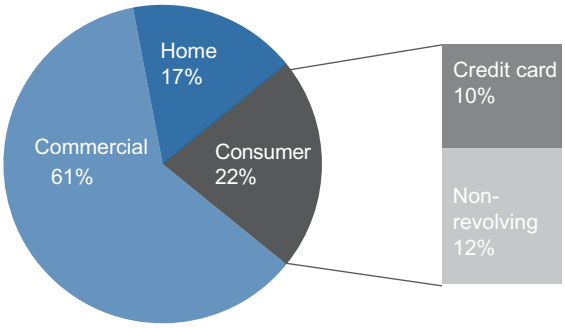
In Mexico, credit card usage has been one of the main factors that has driven development of the consumer credit segment,[1] which has steadily increased its share in the commercial banking portfolio. In December 2000 the consumer credit balance for full-service commercial banking in consolidated form was MXN36bn in nominal terms, equalling 4% of the total (Graph 3.a.1), whereas in October 2014 it was MXN671bn, or 22% of the current portfolio (Graph 3.a.2).

Graph 3.a.1
Total current credit distribution at December 2000
Current Portfolio Balance: 943 billion pesos



Source: BBVA Research with data from the CNBV

Graph 3.a.2
Total current credit distribution at October 2014
Current Portfolio Balance: 3,094 billion pesos



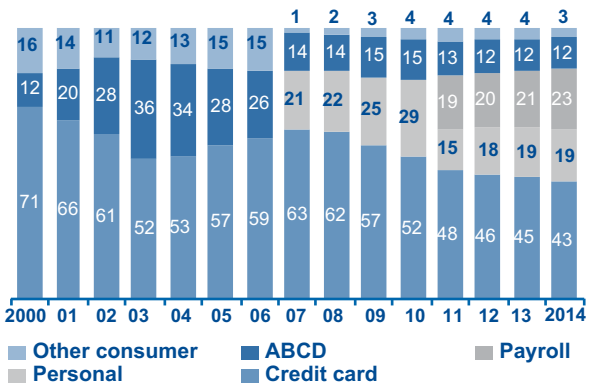
Source: BBVA Research with data from the CNBV

The share of the balance of arranged card credit in the banking system's open portfolio climbed from 3% in December 2000 (MXN26bn) to 10% in October 2014 (MXN291bn).

The share of card credit has changed over time, as its use has become more widespread and other consumer credit alternatives have entered the market. Until December 2010, the balance of the credit arranged via credit cards was over half of open consumer credit and, although this share has gradually fallen away in recent years, credit using this means is still the largest component within this portfolio (Graph 3.a.3). The dynamics of consumer credit growth are thus largely a reflection of the trends observed in the credit card market (Graph 3.a.4).

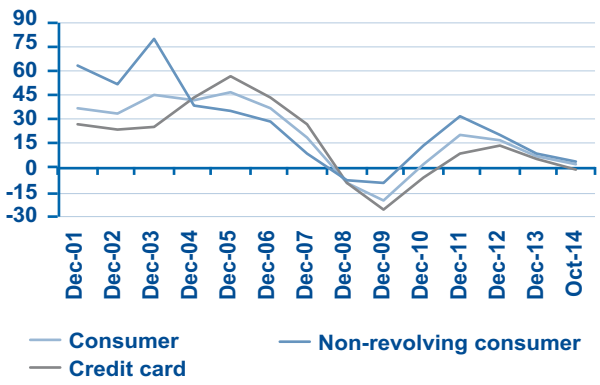
[1] In the CNBV's statistics consumer credit encompasses: a) credit cards and b) non-revolving consumption (personal and payroll loans, acquisitions of consumer durables (ABCD in Spanish), capitalisable lease transactions and other consumer loans).

Graph 3.a.3
Consumer credit distribution
(% of current portfolio)



Source: BBVA Research with data from the CNBV

Graph 3.a.4
Real AGR of current consumer credit (%)

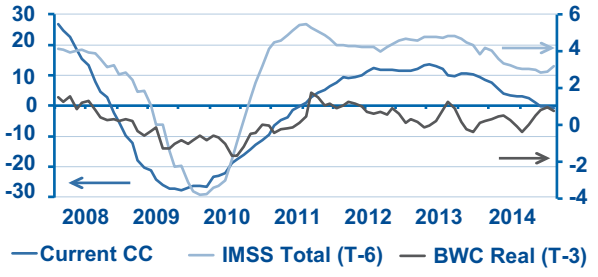


Source: BBVA Research with data from the CNBV

In both cases (total consumer credit and card credit) the mechanics of growth are greatly influenced by the performance (after a lag) of major economic variables, such as: employment, economic activity, consumer confidence and income indicators, such as the reference base salary for IMSS-affiliated workers (Graphs 3.a.5 and 3.a.6).[2] The decline in the pace of growth for this type of credit from 2013 echoes the weakness in these variables and tells us that initially there will have to be a sustained invigoration of economic activity and employment, and then after some months a bolder performance can be expected from the consumer credit portfolio in general and card credit in particular. Something of the same kind, though on a larger scale, occurred during the downswing that Mexico went through in 2009.

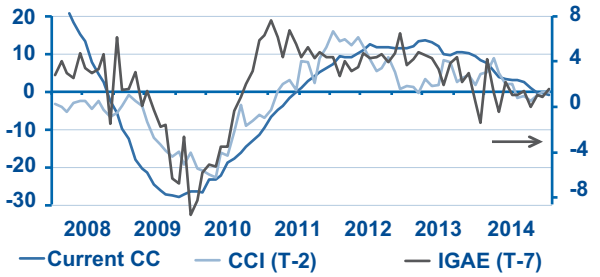
Growth rates for the current card credit and selected economic variables (%)

Graph 3.a.5



Correlation coefficient	
Variable, lag	**Current CC**
IMSS Total (T-6)	0.84428
Base Wage of Contribution real (BWC, T-3)	0.78433

Graph 3.a.6



Correlation coefficient	
Variable, lag	**Current CC**
Global economic activity indicator (IGAE, T-7)	0.67122
Consumer Confidence Index (CCI, T-12)	0.75574

Source: BBVA Research with data from the central bank and INEGI

Besides the balances for this credit portfolio, there are other variables associated with credit card usage which also provide information on adjustments in the drawdown on lines of credit over time. For example, patterns identified in how credit cards are used might not only relate to how economic activity performs, but also to greater familiarity or awareness of the product and its associated costs, which could have gradually conditioned changing habits and usage among card-holders.

[2] For an in-depth analysis of the determinants of aggregate consumption, see: "Factors shaping private consumption in Mexico", ***Mexico Economic Outlook***, December 2014.

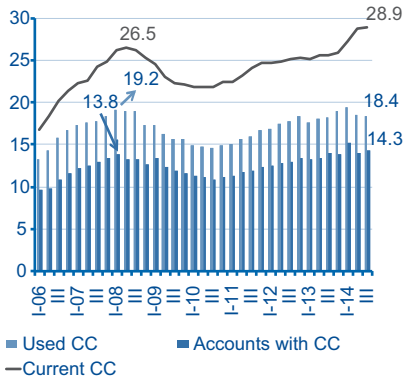
Given the importance that this credit product might have as a means to cover family finances, by helping households smooth out their consumption patterns, and its link to how economic activity performs, studying patterns in how cards are used matters in maintaining the healthy development of this credit segment.

3.a.2 Credit card availability and transaction rates

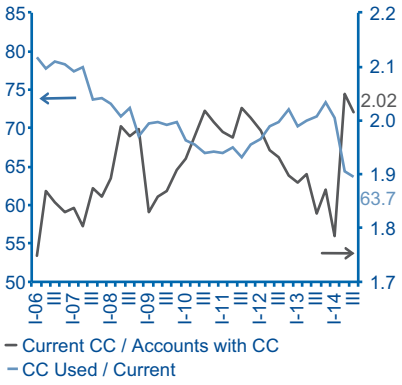
3.a.2.1 Number of credit cards: issued and utilised, and card transactions

According to quarterly information from the central bank for the entire banking system, in 3Q14 the number of issued credit cards hit a historical high, eclipsing even the level seen in 1H08. At the close of September 2014, a total of 28.9 million issued credit cards were reported,[3] 2.4 million more than in June 2008 (a 9% increase), while the number of accounts with cards was 14.3 million in September 2014, which was 2% more than the comparable of 13.3 million in March 2008. This growth in credit card numbers is not, however, mirrored in the same proportion by cards in use, as the 18.4 million cards reported in September 2014 were 4% down on the figure of 19.2 million for March 2008 (Graph 3.a.7).

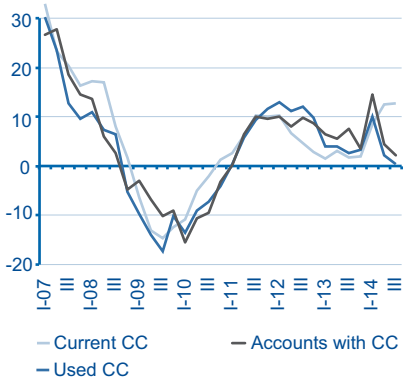
Graph 3.a.7
Number of credit cards: utilised and issued, and accounts with CC (million cards)



Graph 3.a.8
Ratio of utilised to current CCs, and issued CCs to accounts with CCs



Graph 3.a.9
Annual growth rate of card numbers (%)



Source: BBVA Research with data from the central bank

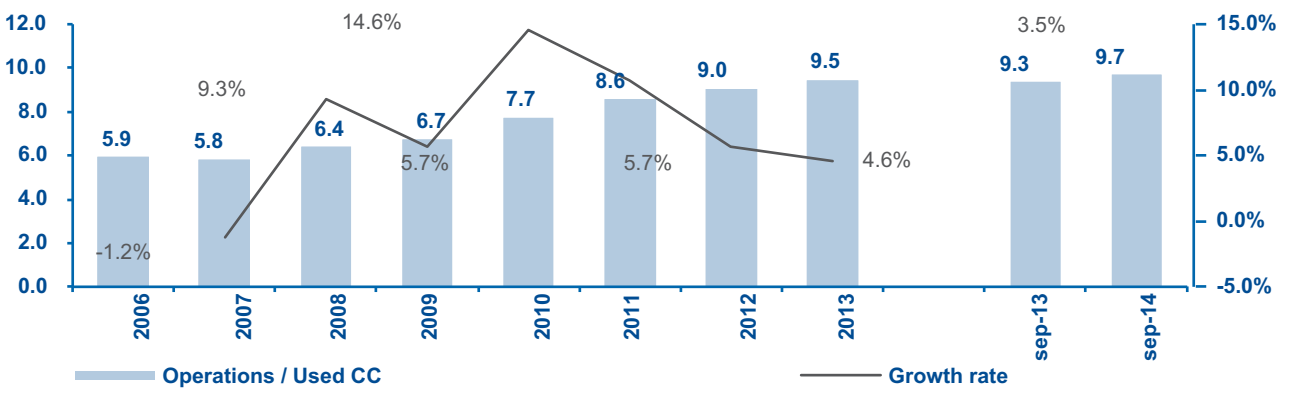
The proportions between these statistics also illustrate the differences in their growth rates: the ratio of utilised to issued CCs was 63.7% in September 2014, the lowest on record since 2006, when information to calculate this indicator first became available. This was despite the fact that the ratio of issued CCs to accounts with credit card has risen in 2014, reaching a level of 2.02 cards per account in September 2014 (Graph 3.a.8).

What this suggests is that, even though there has been an increase in the availability of credit or greater access to it through cards (as is evidenced by the higher number of issued cards), this does not necessarily translate into more extensive use among the set of customers who have the availability of a credit card, meaning that the data indicates that the number of credit cards in use is rising at a slower rate. In particular the drop in the growth rate in 2014 probably reflects the lack of vigour of domestic consumption, among other aspects (Graph 3.a.9).

On the other hand, some statistics relating to credit card transactions indicate that, among those who use this product, the usage rate has ticked upwards. Thus, between December 2006 and December 2013 the average number of transactions per credit card utilised has snowballed by around 60%, jumping from 5.9 to 9.5 (Graph 3.a.10).

[3] Activated by customers, including holder and additional cards

Graph 3.a.10
Transactions per credit card in use
(Cumulative annual transaction flow among number of credit cards in use)

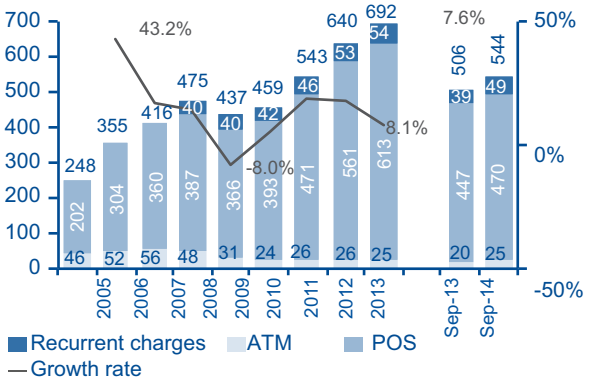


Source: BBVA Research with data from the central bank and INEGI

In outright terms, in 2005-13 the volume of credit card transactions has risen by 2.8 times, surging from 248 million a year in 2005 to 692 million in 2013. Except for 2009, there has been continuous growth in the number of credit card transactions in all the years on record, albeit at a slower pace in 2013 and the first three quarters of 2014 (Graph 3.a.11).

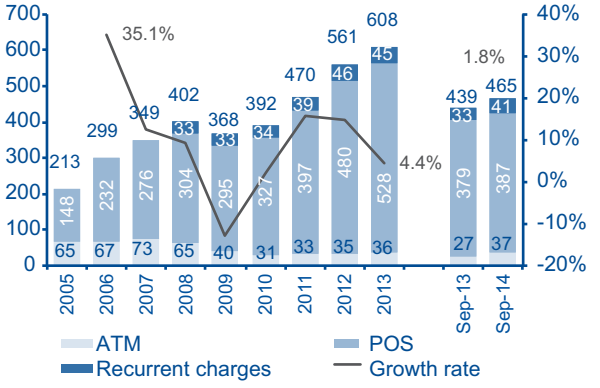
As with transaction numbers, the value of these has also climbed substantially. For example, in 2005-13 the annual cumulative flow almost tripled in nominal terms, rising from MXN213bn to MXN608bn. The growth rate for the value of credit card transactions is tracking the course taken by volume, although at a lower level in real terms, because in 3Q14 the total showed a real growth rate of barely 1.8% a year (Graph 3.a.12).

Graph 3.a.11
CC transaction volume
(million, AGR)



Source: BBVA Research with central bank data

Graph 3.a.12
CC transaction value
(cumulative flows in current MXN bn, real AGR)



Source: BBVA Research with central bank data

3.a.2.2 Ways of drawing down lines of credit

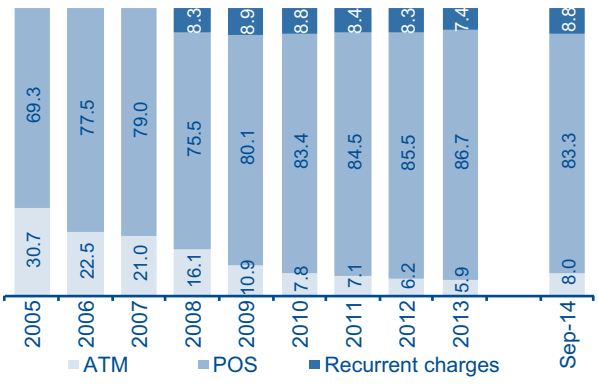
The statistics on credit card movements also enable identification of the main ways to draw down the credit arranged by means of such transactions. In particular, the most usual means of making draw-downs are POS terminals. In September 2014 POS terminals accounted for 83.3% of the total transaction value, 13.9pp above the share recorded in

December 2005 (Graph 3.a.13). In the case of ATMs, their slice of the total value has come down notably, from 30.7% in 2005 to 8% in September 2014.

Lastly, the proportion of transactions via repeat charging to the credit card (standing orders) held practically stable in 2008-12 (8.5% on average), showing a slight upturn at the close of 3Q14 when the value of these transactions represented 8.8% of the total. (Graph 3.a.13).

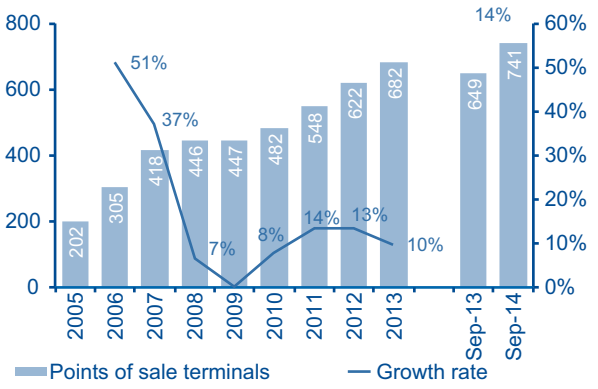
The rise in the share of POS terminal transactions can be explained by the spreading network of participating businesses, which means that this means of payment can become more widely seen, as is witnessed by the greater number of POS terminals available (Graph 3.a.14).

Graph 3.a.13
Value distribution of credit card transactions (%)



Source: BBVA Research with central bank data

Graph 3.a.14
POS terminals (thousand, AGR)



Source: BBVA Research with central bank data

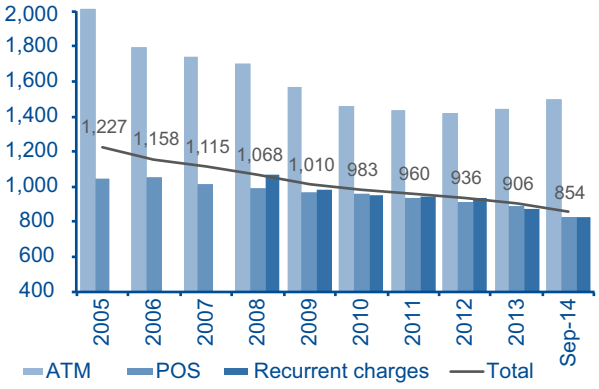
The facility of making repeat payments on credit cards has not led to any significant increase in their use. In the case of ATMs, the fall in their use as a way of drawing down a line of credit in 2005-13 could be due, on the one hand, to the cost associated with this means through paying commission for cash withdrawals and, on the other hand, the spreading of alternative networks for accessing the line of credit, such as POS terminals.

Moreover, since records of credit card transactions began, it can also be seen that the average transaction value has displayed a downward trend. Taking into account the whole universe of transactions (made with POS terminals, ATMs and repeat charges) it emerges that this amount has shrunk in real terms, from 1,227 pesos in 2005 to 854 pesos in September 2014, which equates to a real fall of 30.4% over this time (graph 3.a.15).

This shift towards a larger number of transactions, though for a smaller real amount, could be indicative of both greater familiarity of card-holders with how they are used, given that this means is used for lower-value transactions, and also the proliferation of small-scale providers of goods and services who accept cards. Other factors which could be influential in this behaviour might be the squeeze on the purchasing power of card-holders (who would carry them to make smaller-ticket purchases), or making more prudent use of their credit lines.

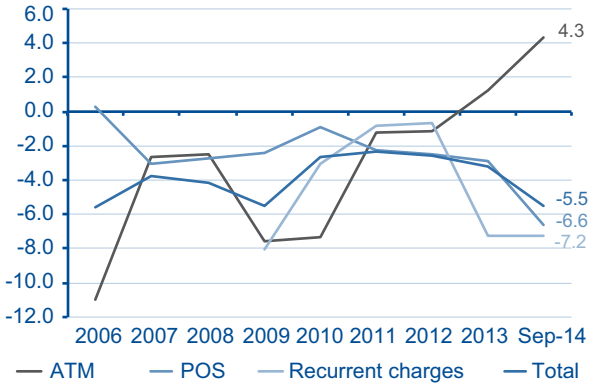
What is striking, though, is that whereas the average transaction value via POS terminals and repeat charges has exhibited this declining trend, the average amount in ATM transactions has risen in real terms from 2012 (Graph 3.a.16). In spite of the cost associated with credit draw-downs using this means, this increase in the average real value could be proof of cardholders' greater need for liquidity, which they cannot come by using other channels.

Graph 3.a.15
Distribution of the average CC transaction value (MXN as of September 2014)



Source: BBVA Research with central bank data

Graph 3.a.16
Real AGR of the average value (%)



Source: BBVA Research with central bank data

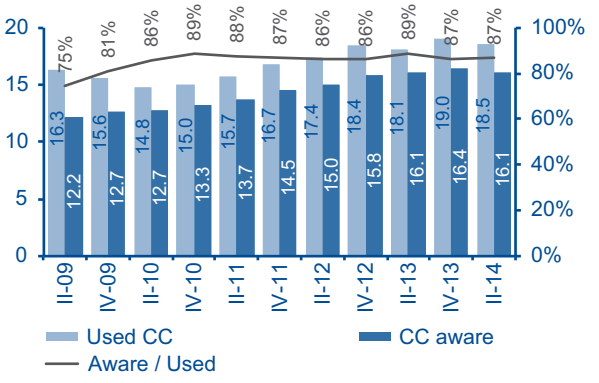
3.a.3 Patterns in credit card usage

In addition to the quarterly data on credit card transactions, the central bank releases bi-monthly information on credit cards belonging to individuals who are up-to-date with their payments,[4] which represent a significant sub-set of credit cards used.

3.a.3.1 Number of credit cards with up-to-date associated payments

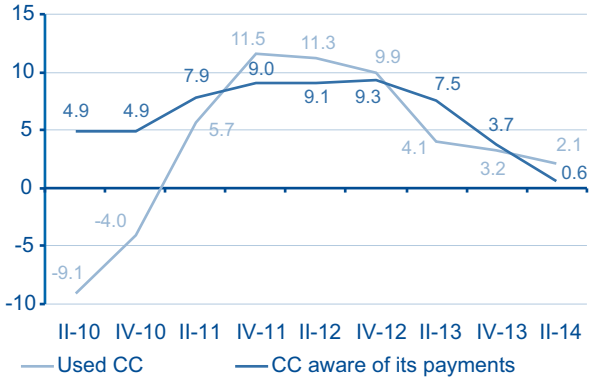
From December 2009 to June 2014, the number of credit cards with up-to-date payments rose by 27%, from 12.7 million to 16.1 million. In June 2014, these represented 87% of all credit cards in use, which is considerably larger than the proportion in June 2009, which was 75% (Graph 3.a.17).

Graph 3.a.17
Credit cards in use and those up-to-date with associated payments (million, %)



Source: BBVA Research with central bank data

Graph 3.a.18
AGR of credit cards in use and up-to-date with associated payments (%)



Source: BBVA Research with central bank data

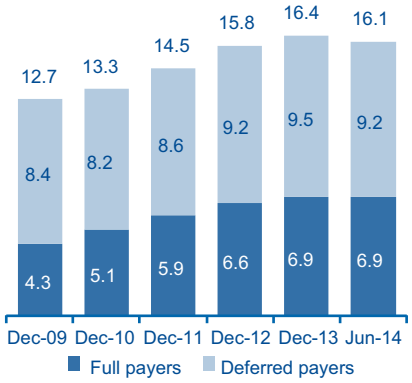
As with credit cards in use, the growth rate for those that are up-to-date with associated payments has been visibly decreasing since late 2012, although it remains positive (Graph 3.a.18). This slowdown could again be a sign of the shrinking available income of card-holders, which affects their ability to meet payment deadlines against their credit facility.

[4] The statistics refer to aggregate information for the system, banking intermediaries, and other regulated intermediaries associated with a bank that issue credit cards to individuals, where these are up-to-date with their payments and use their credit cards during the month reported.

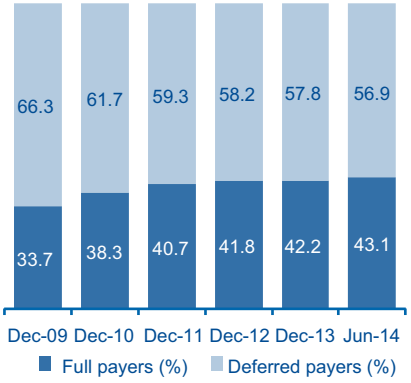
The statistics on credit cards up-to-date with their associated payments make it possible to discern certain patterns of usage by card-holders, as well as the degree of promptness in paying. Specifically, the data distinguishes between customers who pay their full credit card balance every month (full-payers) from those who do not (deferred-payers).

What stands out is that the proportion of full-payers among customers has gained in relative size. With regard to the number of credit cards, those belonging to full-payers rose from 4.3 million in December 2009 to 6.9 million in June 2014, a rise of 62%, which is a significantly greater rate than the increase for deferred-payer customers of only 9% over the same time (Graph 3.a.19). This growth rate meant that the proportion of credit cards belonging to full-payers out of the whole pool of customers rose from 33.7% in December 2009 to 43.1% in June 2014 (Graph 3.a.20).

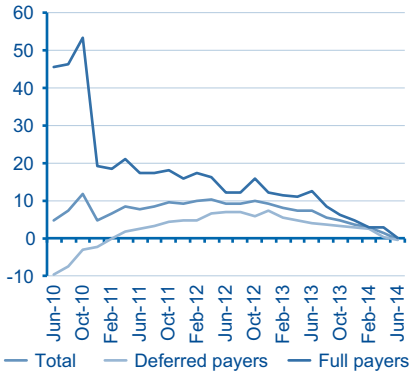
Graph 3.a.19
CCs up-to-date with associated payments (million cards)



Graph 3.a.20
Full payers and deferred payers (% of overall customers)



Graph 3.a.21
AGR of number of cards (%)



Source: BBVA Research with central bank data

Mimicking the downward trend in other indicators of the card numbers, from 2Q13 the growth rate in the number of credit cards belonging to full-payers among customers shows a decrease, which is more pronounced than that for deferred-payers. Once again, this might also indicate that card-holders have less available income to settle their monthly payments in full (Graph 3.a.21).

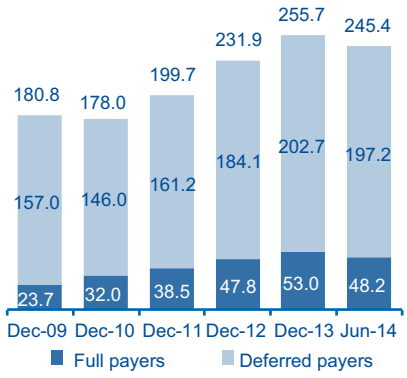
3.a.3.2 Balance for credit cards up-to-date with associated payments

The nominal balance of credit linked to the cards of full-payers has more than doubled in the past five years, from MXN23.7bn in December 2009 to MXN48.2bn in June 2014, which gives a real growth rate of 72% (Graph 3.a.22).

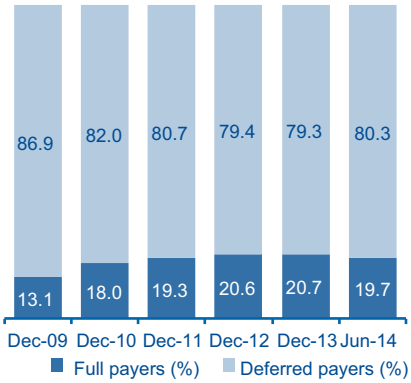
As a share of the overall balance for CCs up-to-date with their payments, in June 2014 the balance for full-payers stood at 19.7%, a fraction below the December 2013 high of 20.7% (Graph 3.a.23). The real AGR of balances has come down since October 2013, doing so more sharply in the case of full-payers (Graph 3.a.24).

Another interesting aspect which sheds light on how credit cards are used is the distribution of balances by type of interest rate accrued. In June 2014, 53.8% of the balance for credit cards up-to-date with their payments was linked to non-promotion purchases, with 18.7% of this accruing a preferential rate and a further 26.6% being interest-free, either because the credit facility was acquired as part of interest-free month promotions or because the customer was a full-payer. In comparison with December 2010, the non-promotion balance has lost out on share to the interest-free segment (Graph 3.a.25)

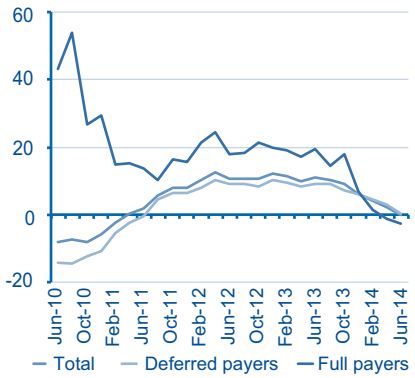
Graph 3.a.22
Balance for CCs up-to-date with associated payments (current MXNbn)



Graph 3.a.23
Customers: full-payers and deferred-payers (% of overall balance)



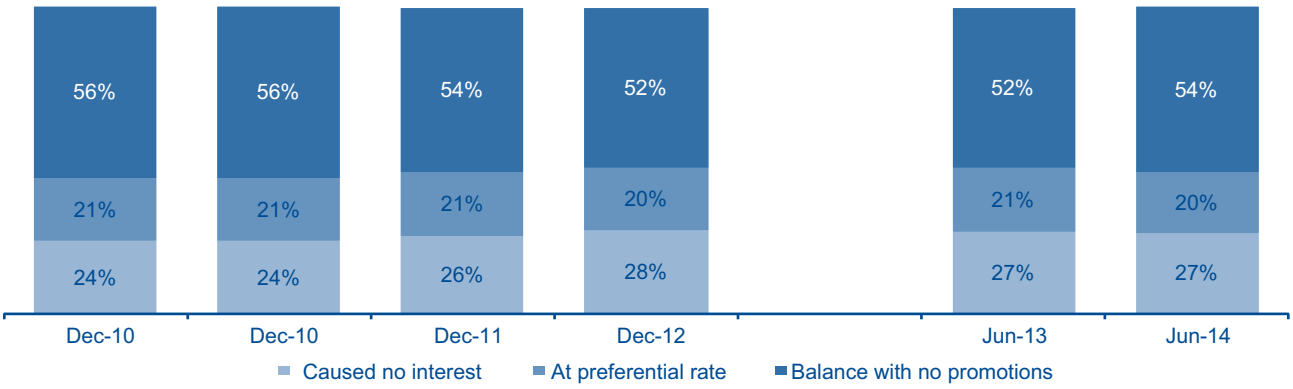
Graph 3.a.24
Real AGR of the balance (%)



Source: BBVA Research with central bank data

The interest-free credit balance includes credit granted via promotions over interest-free months. The amount associated with this financing format increased its share of the overall balance, from 10.2% in December 2009 (MXN18.4bn) to a peak of 17.3% in December 2012 (MXN40.1bn). From then onwards, the portion of credit granted over interest-free months dipped gently, and in June 2014 it accounted for 16.7% of the total balance (Graph 3.a.26).

Graph 3.a.25
Share of the balance by type of interest rate accrued (%)

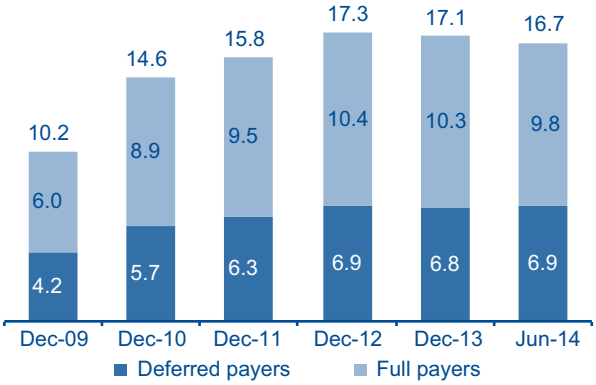


Source: BBVA Research with central bank data

It is noticeable that the lion's share of customers using this alternative line of credit are the full-payers, who on average account for 60% of the balance for interest-free months. As with other credit card indicators, since early 2013 the real AGR for the interest-free months balance has slowed down dramatically, for both full-payers and deferred-payers (Graph 3.a.27).

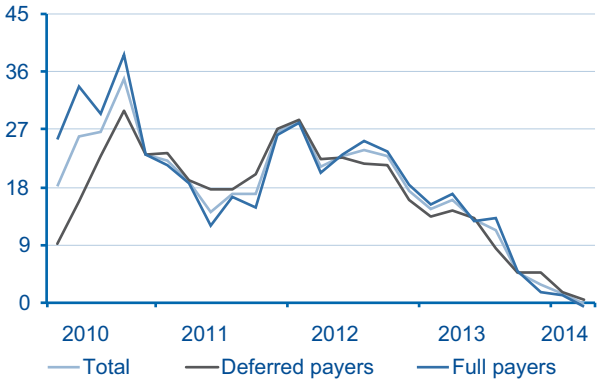
The distribution for balances up-to-date with their payments thus reveals that card-holders are moving across to the cheaper financing options segment, which has happened via increased buying at a preferential rate and over interest-free months. The rise seen in the percentage of full-payers among customers in recent years indicates that more and more card-holders are using credit cards due to the extra benefits they offer as a means of payment, irrespective of their qualities as a financing alternative. Lastly, it should be borne in mind that the downward trend in growth rates for all balances measured, even where the facility provided does not accrue interest, is also indicative of the flatness of economic activity and domestic consumption since 2013.

Graph 3.a.26
Credit provided over interest-free months promotions (% of overall balance)



Source: BBVA Research with central bank data

Graph 3.a.27
Real AGR of credit provided over interest-free months (%)



Source: BBVA Research with central bank data

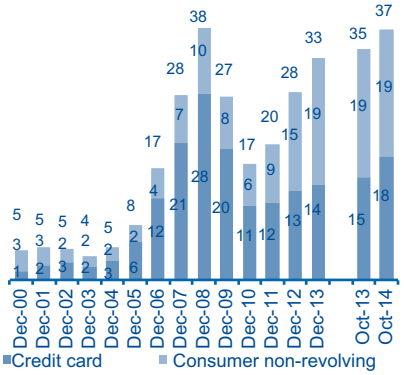
3.a.4 Past-due portfolio and default rate

According to the central bank and CNBV data analysed in the previous section, since 2013 there has been a drop in the absolute values and growth rates of both the number of cards and the balance up-to-date with payments (Graphs 3.a.19, 3.a.21, 3.a.22 and 3.a.24). These developments, which could be linked to the slowdown in economic activity and the squeezing of available income, have also had an effect on credit card portfolio quality indicators.

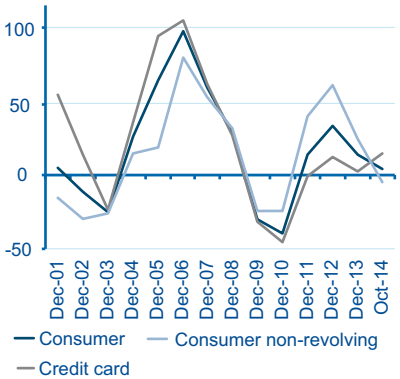
The balance of the consumer credit past-due portfolio[5], for example, has risen since 2011, and as at October 2014 offered a reading of MXN37bn, equal to a 3.7% real increase over the balance for the same month in 2013 (Graph 3.a.28). In specific terms, the share of past-due credit card lending within the entire past-due portfolio climbed from 45% to 49% between October 2013 and October 2014. Unlike non-revolving credit, its growth rate shows an upturn from 2013 (Graph 3.a.29).

If, on the other hand, we consider the adjusted default rate (IMORA)[6] for credit cards published by the CNBV, we can also detect a rise over this same period from 14.9% to 16.7%. This figure is above the IMORA reading for consumer credit taken in its entirety, which marked 13.4% in October 2013 and 14.5% in October 2014 (Graph 3.a.30).

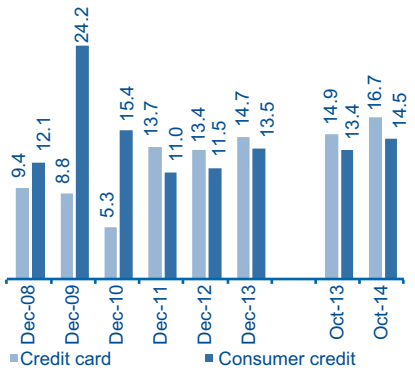
Graph 3.a.28
Past-due consumer credit portfolio (current MXN bn)



Graph 3.a.29
Real AGR of past-due portfolio (%)



Graph 3.a.30
Adjusted default rate[6], %



Source: BBVA Research with data from the central bank and the CNBV

[5] Lending which has not been paid on the terms originally agreed.
[6] Adjusted IMOR = (Past Due + (Part-releases and Write-offs, cumulative flows, 12M)) / (Total Portfolio + (Part-releases and Write-offs, cumulative flows, 12M)).

The trends observed in both the performing portfolio and the past-due portfolio thus betray an underlying deterioration in card-holders' ability to pay. This in turn suggests a need to monitor for a potential increase in the risk attaching to this portfolio.

3.a.5 Conclusions

Credit cards have become one of the key formal credit alternatives. In recent years, credit via this product has been the driver behind overall consumer credit and, as with the other components in this portfolio, its performance is closely tied to economic activity levels and particularly to people's incomes. This is apparent in the slowdown in the growth rate of balances seen since 2013.

Although the number of current credit cards and credit card accounts have risen, the "credit cards in use" category has not grown at the same pace. Even though the number and value of transactions have both edged upwards, the average amount (taking all the draw-down channels on aggregate) has dwindled, and there has been a visible shift towards a higher number of transactions, though for a smaller sum in real terms. What emerges in 2014 is that the average sum withdrawn from ATMs is the only amount which offers a positive growth rate, which could be an indication of a greater need for liquidity on the part of card-holders, despite the cost associated with using a credit facility through this means.

Since 2013 the growth rate of the number of cards up-to-date with associated payments has declined. Even though there has been an increase in the share of full-payers among customers in the last five years, the palpable drop in the growth rate of the balance for this category of customer in 2014 could be influenced, among other things, by less available income to pay off the entire monthly sum due. Moreover, the increase in the proportion of balances at a preferential rate and over interest-free months shows greater use of lines of credit through the alternatives that are cheapest for customers.

Finally, the growing past-due portfolio and default rate could also represent a deterioration in card-holders' ability to pay, meaning that in the future a healthy expansion in the market will require stiffer origination and risk assessment processes to maintain portfolio quality standards.

Besides evidencing sluggishness in economic activity and income indicators, the transaction figures and credit card utilisation statistics might also be displaying certain signs of changing habits in credit card usage. This could be due to more prudent use by card-holders of their credit facilities and increased use of credit cards as a means of payment (with respect to their role as a source of borrowing), which might also indicate that customers are more aware of the advantages and alternative uses of credit cards.

Although a sustained recovery in economic activity, employment and available income will help towards healthy growth for this market, given the recent spike in the past-due portfolio and the increase in the range of alternative consumer financing options (non-revolving credit, which has drained the ability of families to pay), card credit is unlikely to regain the buoyancy shown in 2011 and 2012 any time soon.

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3.b. The informal economy in Mexico: Determining factors in the transition to formality and the viability of this process

According to the National Institute of Statistics and Geography (INEGI), in 2013 the informal economy generated 24.8% of GDP, while the remaining 75.2% was produced by the country's formal sector (INEGI 2014d). The contribution by the informal economy in Mexico is not only extensive in terms of what it produces, but also as regards the number of people employed within it. At the close of 2012 some 59.8% of the working population in Mexico was engaged in the informal sector, whereas the other 40.2% belonged to the formal economy, and as of 3Q14 these figures were 58.1% and 41.9% respectively.

Informal workers do not have any legal framework to support them, and it is this state of affairs that makes them less likely candidates for loans. For example, the loans granted by INFONAVIT and FOVISSSTE for buying subsidised housing and for co-financing arrangements (loans granted by a commercial bank in conjunction with INFONAVIT or FOVISSSTE to buy housing of any kind) operate on the assumption that workers are registered with the IMSS or ISSSTE, in other words that they are formally employed. Even if a worker does not have a subsidiary housing account with INFONAVIT or FOVISSSTE, they can apply for a mortgage loan from any financial institution, as long as they have their RFC (taxpayer ID number), among other requirements.

Formal status also means that individuals engaged in business activities and the companies of employers are more likely to receive business credit. In general, the regulated financial institutions are more willing to arrange loans for businesses and individuals that can produce the right documentation, such as proof of payment of taxes and audited financial statements, among others (CNBV-CEPAL 2012). In Mexico, a survey conducted by CNBV and CEPAL (2012) of 15 of Mexico's leading commercial banks, which together accounted for over 97.0% of the MIPYME (Micro-enterprise and SME) portfolio in 2012, showed that the banks are unlikely to grant credit to entrepreneurs, small and micro-business owners or MIPYMEs that are not properly incorporated and registered with the SAT (Tax Administration System). It goes without saying that registration with the SAT must be accompanied by up-to-date financial statements, standard accounting practices and tax opinions certified by a public accountant. 94.0% of the respondent banks (74.0% of the portfolio) replied that informal status has a "very considerable" or "considerable" bearing on the decision to grant credit (CNBV-CEPAL 2012). Moreover, the lack of transparency of informal activities makes it harder to screen would-be borrowers, which imposes restrictions on the sums of credit authorised and means higher funding costs (high interest rates or a higher collateral value requirement). The recent reform of article 27 of the Federation Tax Code, in effect since January 2014, stressed the importance of having formal status to gain access to financial services from banks, by making it a requirement that all businesses and individuals who have opened an account in which they receive deposits must apply for this to be entered on the RFC, the Federal Taxpayer's Register (Federation Tax Code, 2014).

The likelihood of receiving a consumer loan also increases if workers have been formalised. As is mentioned in the ***Mexico Banking Outlook*** note of July 2013, bank credit cards (CCs) are typically granted to people who have a stable source of income, while payroll loans are arranged for workers whose employment is in formal institutions, and these are paid through a deposit into a bank account known as a payroll account. The payroll account takes on special significance for people who have not previously been using financial services, as for them it represents a product which is a "foot in the door" into the banking system. Formal status thus does not just facilitate access to credit, but it also enables access to other financial services, such as deposit accounts, insurance and paying for connected services.

The link between informal status and access to financial services has been documented in empirical studies. Ardington & Leibbrandt (2004) examine the impact of formal employment on the utilisation of financial services, such as bank accounts and funeral insurance, using information from the Income and Expenditure Survey and the Labour Force Survey in South Africa. The authors find that the presence within the household/family of one member in formal employment is a major factor, even after controlling for income and other characteristics of households. Salaried employees are more likely to utilise financial services than the self-employed, and among such employees this

likelihood increases with the degree of formality of employment. The evidence found points to the importance of the work status of the primary income earner in the household when it comes to utilising financial services.

Gobbi & Zizza (2007) examine the role of the underground economy and financial deepening in Italy. Applying panel data techniques to local credit markets, the authors relate the bank credit-to-GDP ratio to the share of irregular workers within total employment, and find a strongly negative link between the two variables. Furthermore, when they evaluate whether the opening of bank branches is affected by the size of the informal economy, they find an inverse correlation which they interpret as a negative externality produced by the underground sector. Owing to information asymmetries and transaction costs, the reach of retail banking is limited.

The Mexican financial system will achieve a greater level of development, to the extent that economic agents can count on the backing of a suitable legal framework for the activities they engage in. This suggests that one of the chief reasons why Mexico has a low level of financial penetration is precisely its high incidence of informal employment. Irregular activity places limits on supply and demand for credit and disincentivises the utilisation of other banking services. For businesses, access to credit represents a greater chance of growth and enhancing productivity (OIT 2014); for households it means being able to withstand external shocks and the possibility of smoothing out consumption over time. In this note we look at the microeconomic factors which determine transitioning towards formal work from irregular employment, and we analyse the considerations associated with the likelihood of workers remaining in the formal economy after legalising their situation. We find that each person's prior socio-demographic attributes and work status matter here. The age of the worker, their educational level, their income level in the shadow economy, the type of unofficial work they have, the size of the population nucleus where they live, and the fact of being a man or a woman, are all factors which are strongly linked to the likelihood of moving over to the formal economy and staying in it. The findings suggest that people who have a higher educational level and pursue economic activities that bring in higher incomes are more likely to work in a formal situation. Public policies which endorse education and economic growth for the country will have a positive impact on the size of the formal economy, and thus on access to financial services.

In this study we also discover that non-observable qualities or traits people have, such as their degree of discipline or lawfulness, which make individuals more likely to transition into the formal market, have no effect on the likelihood of a worker remaining in formal employment once in the official economy. This finding suggests that it is other non-observable factors which impact upon the propensity to stay on in formal employment. Some of them could relate to certain aspects of the demand for labour, such as the preference companies have for short- or long-term contracts, various cost-cutting policies, and so on.

The data in this study is from the National Occupation and Employment Survey (ENOE), which is run quarterly by INEGI and gathers information on the entire population of working age in Mexico. The ENOE has the advantage of monitoring the same individuals over time, and so it makes it possible to track their employment status from one quarter to the next.

3b.1 How is informal status defined in Mexico?

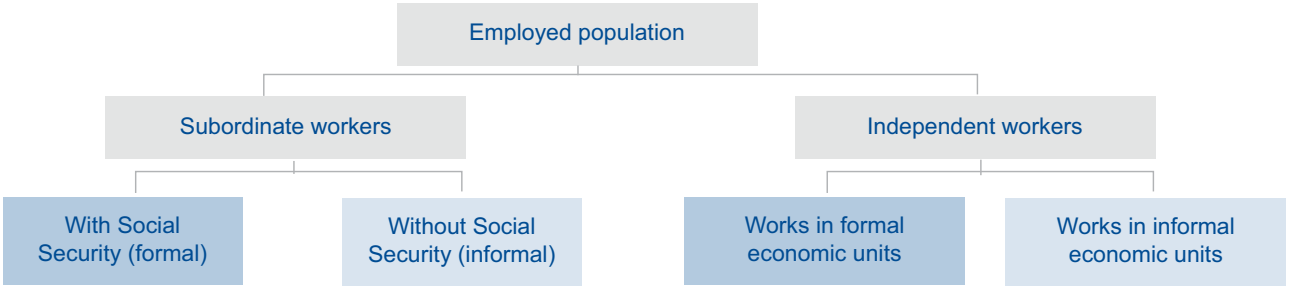
There are a lot of business activities which are commonly thought of as being within the shadow economy. Street vending is a clear-cut example. It comprises production units that are not set up as companies and where there is no well-defined difference between the business's accounts and those of the owner or household they belong to. Nevertheless, street vending is only one of the host of business activities which are part of the underground economy. In Mexico, INEGI (2014c) has laid down two basic criteria to define whether someone works in the informal economy: i) the type of production unit used to perform the work, and ii) the employment conditions the person has in their job.

The first criterion refers to the nature of the production unit the individual works in. A production unit which has no legal personality of its own and which lacks or only has rudimentary accounting procedures, and which therefore has no fundamental records (for tax and/or social security purposes), is a production unit that belongs to the underground economy. The second criterion relates to the existence or not of labour law guarantees for the employed person. If the individual has no healthcare benefit (which is the most elementary form of labour law protection), then they are engaged within the informal market.

The framework of this two-criteria approach establishes a reference point to determine whether each of the employment categories in Mexico falls within the formal or the informal sector. The production unit approach is used to define whether independent workers (i.e. employers or the self-employed) are informal or not. The employment conditions approach is taken into account to determine whether dependent workers belong to the informal economy or not. In other words, application of the criteria defining informal status depends on the kind of worker under consideration (independent workers or dependent workers). Diagram 3.b.1 shows how the two-criteria approach applies to the categories of work in Mexico. The dark blue boxes represent formal workers and the light blue ones indicate informal workers.

Diagram 3.b.1

Application of the two-criteria approach to the categories of work in Mexico



Source: BBVA Research

The classification of production units in Diagram 3.b.1 is general, and arranges all the kinds of existing production units in Mexico into two categories: formal and informal. More rigorously, INEGI (2014c) groups production units into four categories: i) those belonging to the informal sector; ii) those arising from paid domestic work; iii) companies, government and institutions, and iv) those engaged in the farming and livestock sector. Employed persons operating within these four types of production units may be formal or informal, except in the case of category i), where workers are exclusively informal. It should be pointed out that INEGI (2014c) reserves the term "informal sector" for non-farming and livestock production units which are not incorporated as a company and do not satisfy the basic records requirement which the regulatory framework demands of providers of goods and services. Categories ii) to iv) go beyond the informal sector and include old forms of work which have no cover at all (such as subsistence farming), and at the same time they feature new and modern forms of employment without access to social security (such as persons employed on a fee basis at formal companies) (INEGI 2014c).

The so-called Hussmanns matrix makes it possible to illustrate how the production unit categories and the worker type fit in with each other in Mexico (Table 3.b.1). The rows show the four types of production units which exist in the country, as mentioned previously. The columns give the different types of workers and their formal or informal status. The cells relating to the informal sector have been numbered 1 to 14. The cells for the informal sector have been numbered I to IX. Including both the formal and informal sector, we have a total of 23 numbered boxes or 23 possible work statuses.

Table 3.b.1
Hussmanns matrix

Production unit type	Classification according to employment situation and informal status								
	Dependent workers					Independent workers			
	Paid				Unpaid	Employers		Self-employed	
	Salaried staff		Receiving non-salaried earnings						
	Informal (A)	Formal (B)	Informal (C)	Formal (D)	Informal (E)	Informal (F)	Formal (G)	Informal (H)	Formal (I)
(1) Informal sector	1		2		3	4		5	
(2) Paid domestic work	6	I	7	II					
(3) Companies, government and institutions	8	III	9	IV	10		V		VI
(4) Farming & livestock	11	VII	12	VIII	13		IX	14	

Source: INEGI (2014c).

The Hussmanns matrix is very straightforward to read. Initially it splits out workers into the dependent and the independent workers (columns), and then it sorts the production units into those which belong to the informal sector (row 1), those arising from paid domestic work (row 2), those which are companies, government and institutions (row 3) and those which belong to the farming and livestock area (row 4). As we were saying at the beginning of this section, the production unit approach applies for independent workers, so an independent worker is formal if their production unit constitutes a formal company or institution. It is worth mentioning that INEGI (2014c) considers that employers in the farming and livestock sector have characteristics which are analogous to incorporated companies, which is why they are also part of the formal workers category. If the production unit of an employer or self-employed person belongs to the informal sector, however, their employment status will be informal as well. Self-employed workers within the sphere of farming and livestock represent production units as vulnerable as those in the informal sector, and therefore they fall within the informal workers grouping (INEGI 2014c).

For the other columns in the Hussmanns matrix (dependent workers), the criterion which determines whether or not they belong to the informal sector is not whether they work in any particular production unit, but instead whether or not they can exercise employment rights. For example, all domestic workers are informal to the extent that they do not enjoy social security coverage (cells 6 and 7). It should be noted that the grey cells represent impossible concepts, so for example there cannot be people whose activities and pay derive from domestic service and where they perform them as masters or mistresses of the residence or employers, just as there cannot be formal employers or self-employed workers in charge of production units within the informal sector. The Hussmanns matrix illustrates very well that the informal economy (in its widest possible sense) covers the set of economic activities performed by individuals who cannot call upon the legal or institutional framework to protect them, as they would be entitled to do were they integrated within the formal economy (INEGI 2014c).

3.b.2 Who are the people in formal and informal employment in Mexico?

According to the ENOE survey (INEGI 2014a),[1] there are 52.5 million people in Mexico who are either in or looking for work and they constitute the labour force, or economically active population (EAP). Those neither in nor looking for work comprise the economically inactive population (EIP), and they total 37.0 million persons.[2] Of the EAP total, those who are in employment make up the working population, who number 49.7 million persons (94.8% of the EAP), while those who are out of work and looking for it represent the unemployed population, who amount to 2.8 million persons (5.2% of the EAP). Out of the EIP total, those who are not looking for work, yet are interested in doing so and do not cite any impediment to working, constitute the available population, totalling 6.0 million persons (16.2% of the EIP). Those who have no interest in working, or state that there is some impediment to them doing so, comprise the una-

[1] Results from the 3Q14 ENOE survey.
[2] Those in the EAP are engaged in activities which, although outside the ambit of market transactions, are crucial to the functioning of households and society in general, such as those who look after household chores, or take care of children, the sick and the elderly (INEGI 2007).
[3] The sum of the parts does not add up the total owing to rounding of numbers.

vailable population, who number 31.0 million persons (83.8% of the EIP).[3] It is important to mention that these figures only include those aged 14 or over, as the Federal Labour Law determines that this is the minimum legal employment age. Table 3.b.2 shows the distribution of the population aged 14 or over in the categories we have described.

Table 3.b.2
Distribution of the population aged 14 or over

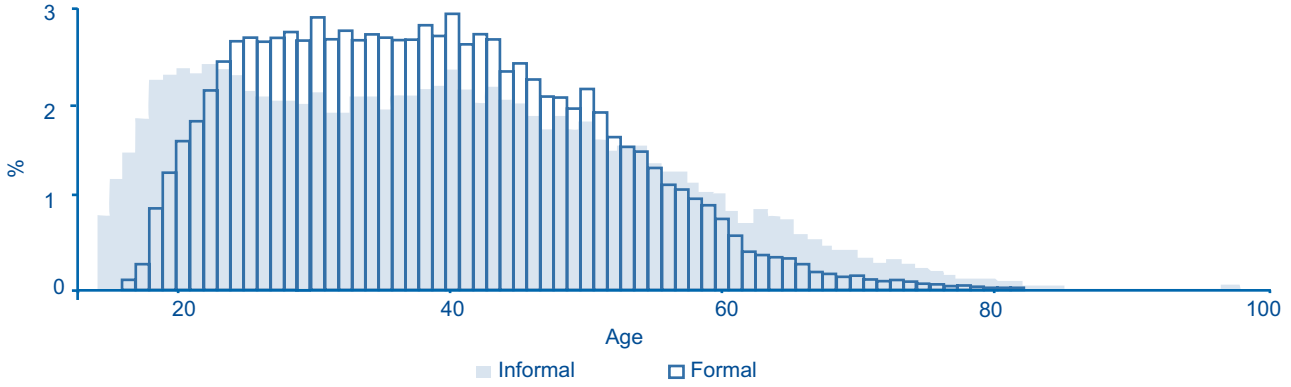
Population aged 14 or over	Number of persons	% EAP and EIP
Economically active population (EAP)	52,448,710	100.0%
Working population	49,702,475	94.8%
Unemployed population	2,746,235	5.2%
Economically inactive population (EIP)	36,985,227	100.0%
Available population	5,989,121	16.2%
Unavailable population	30,996,106	83.8%

Source: BBVA Research with data from the 3Q14 ENOE

What kind of people work in the formal and informal economies? According to the ENOE (INEGI 2014a), out of every 10 people in work, six are in informal and four are in formal employment. Of every 10 people in informal work, four live in the country's largest population centres (with 100,000 or more inhabitants), one lives in a place with 15,000-100,000 inhabitants, two live in populations of 2,500-15,000 inhabitants, and three live in areas with less than 2,500 inhabitants. For formal workers, the comparable distribution is seven, two, one and one, respectively. An informal worker is also more likely to be a man than a woman (62.2% vs. 37.8%), as is the case for the formal market (62.7% vs. 37.3%).

On average, an informal worker's age is 39.1, while for those in formal employment this is 38.6. For informal workers, 42.4% are aged from 25 to 44, 28.8% from 45 to 64, and 22.0% from 14 to 24, whereas for the formal market the distribution is 55.4%, 28.7% and 13.5% respectively. Graph 3.b.1 gives the age distribution of the informal and formal working populations.

Graph 3.b.1
Age distribution of the informal and formal working populations

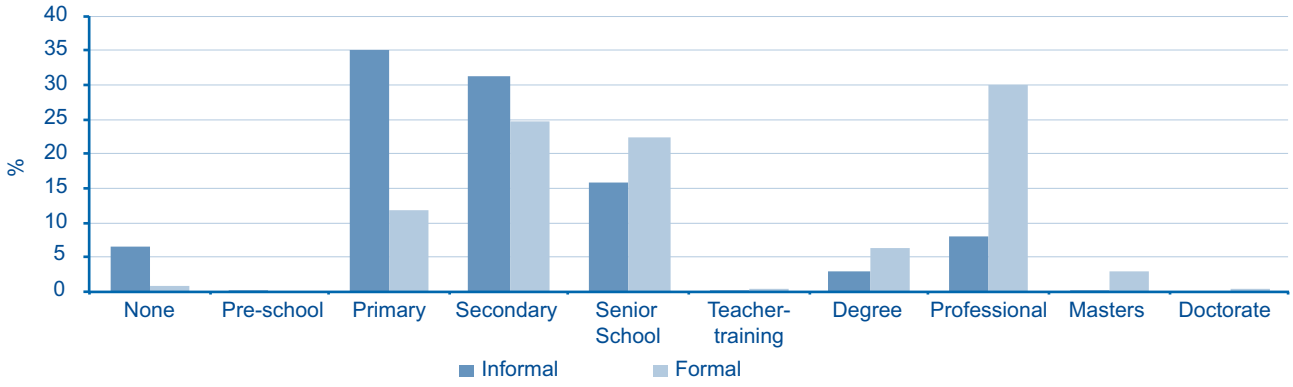


Source: BBVA Research with data from the 3Q14 ENOE

94.2% of informal workers are literate, whereas for formal workers this is 99.4%. The most common marital status among informal workers is "married" (42.0%), followed by "single" at 30.5% and "unmarried partnership" at 18.3%. These are also the most commonly-found statuses among formal workers, although the percentages are different, at 50.8%, 27.0% and 14.2% respectively.

6.5% of informal workers have no recognised education, with the figure being 0.8% for the formal market. An informal worker is more likely to only be educated up to primary or secondary level than somebody in formal employment (66.3% vs 36.5%). 30.0% of formal workers have professional qualifications, whereas among informal workers this is only 8.1% (Graph 3.b.2).

Graph 3.b.2
Formal and informal working population distribution by educational level



Source: BBVA Research with data from the 3Q14 ENOE

An informal worker earns MXN3,658 a month on average, compared with MXN7,183 for a formal worker. For informal workers, 22% earn less than one minimum wage a month and only 2% earn over five minimum wages, while in the formal sector only 2% earn less than one minimum wage and 13% earn more than five.

Table 3.b.3
Profile of formal and informal workers

Categorical variable	Informal (%) Total: 28,872,603	Formal (%) Total: 20,829,872	Categorical variable	Informal (%) Total: 28,872,603	Formal (%) Total: 20,829,872
Size of population centre (inhabitants)			**Educational level**		
Under 2,500	29.5	9.1	None	6.5	0.8
2,500-14,999	16.6	10.2	Pre-school	0.1	0.0
15,000-99,999	14.9	15.2	Primary	35.0	11.8
100,000 and over	39.0	65.6	Secondary (middle school)	31.3	24.7
			Senior school (pre-vocational or pre-university)	15.8	22.4
Gender			Teacher-training	0.1	0.5
Male	62.2	62.7	Degree	2.9	6.3
Female	37.8	37.3	Professional	8.1	30.0
			Masters	0.3	2.9
Age			Doctorate	0.0	0.5
14-24	22.0	13.5	Respondent unsure	0.1	0.0
25-44	42.4	55.4	Average (years receiving education)	8.5	11.4
45-64	28.8	28.7			
65 and over	6.7	2.4	**Income**		
Not given	0.1	0.0	Up to 1 minimum wage (MW)	21.7	2.2
Average (years)	39.1	38.6	> 1 to 2 MW	27.2	18.5
			> 2 to 3 MW	18.4	26.9
Literate			> 3 to 5 MW	8.5	22.9
Yes	94.2	99.4	> 5 MW	2.2	13.0
No	5.8	0.6	Does not receive income	14.0	0.1
			Not given	8.1	16.4
Marital status			Average (MXN)	$3,658	$7,183
Unmarried partnership	18.3	14.2			
Separated	4.4	4.0			
Divorced	1.3	2.3			
Widowed	3.4	1.7			
Married	42.0	50.8			
Single	30.5	27.0			

Source: BBVA Research with data from the 3Q14 ENOE

Table 3.b.3 shows all the figures which have been described in this section. The rows give the different categorical variables which together make up the profile of workers: the size of the population centre where they live, gender, age, literacy, marital status, educational level and income bracket. The columns divide the formal from the informal workers, while each cell shows the percentage of formal or informal workers falling within the specific category. For example, 39.0% of informal workers live in populations of 100,000 inhabitants or more.

Let us now consider the employment categories given in the Hussmanns matrix (Table 3.b.1). The 23 numbered boxes in the matrix represent all the employment types in Mexico. The data from the ENOE (INEGI 2014a) shows that, among workers in the informal sector, those who are self-employed (box 5 of the matrix) represent the most common employment category (24.4%). They are followed in second place by dependent workers who are in formal production units (companies, government or other institutions) yet lack social security coverage (18.4%, box 8). The third most common type is dependent workers employed in informal production units (13.0%, box 1).

What are the main categories in the formal employment sector? According to the ENOE (INEGI 2014a), salaried workers in formal production units and who have social security cover are the most common (84.7%, box III). Second are self-employed workers who have formal production units (6.5%, box VI), and third are employers with formal production units (4.7%, box V).

Table 3.b.4 gives the distribution of formal and informal workers in the various employment categories within the Hussmanns matrix. Each box shows the percentage of formal or informal workers (as appropriate) who fit the cell category. Light blue is for informal job-types and dark blue for formal ones, and the light blue and dark blue boxes each total 100%.[4] For the sake of greater clarity, the last row offers the base for calculation of the percentages for each column. For example 13.0% of informal workers are salaried staff in informal sector production units (in other words 13.0% of the 28.8 million informal workers in Mexico belong to this category).

Table 3.b.4
Distribution of formal and informal workers by employment type

Production unit type	Distribution according to employment situation and informal status								
	Dependent workers					Independent workers			
	Paid				Unpaid	Employers		Self-employed	
	Salaried staff		Receiving non-salaried earnings						
	Informal (A)	Formal (B)	Informal (C)	Formal (D)	Informal (E)	Informal (F)	Formal (G)	Informal (H)	Formal (I)
(1) Informal sector	13.0%		2.7%		3.9%	2.8%		24.4%	
(2) Paid domestic work	7.7%	0.3%	0.1%	0.0%					
(3) Companies, government and institutions	18.4%	84.7%	2.8%	0.9%	2.3%		4.7%		6.5%
(4) Farming & livestock	7.7%	1.5%	0.4%	0.1%	4.1%		1.5%	9.7%	
Base (million persons)	28.8 M	20.8 M	28.8 M	20.8 M	28.8 M	28.8 M	20.8 M	28.8 M	20.8 M

Source: BBVA Research with data from the 3Q14 ENOE

[4] To be precise, the figures in the dark blue cells total 100.2% owing to rounding.

3.b.3 Determining factors in the transition to formality in Mexico and the viability of this process

This section examines the micro-economic factors which determine the transition to formality in Mexico, using ENOE data from 3Q13 to 3Q14.[5] We identify the individuals who transitioned to formality in the study period, and analyse the viability of the change in terms of their continuation within the formal sector. The findings suggest that both the socio-demographic characteristics and prior employment status of each person are significant in explaining whether or not they transitioned to formality and their continuation in such a situation. Furthermore, our estimates indicate that staying on in the formal sector having entered it is an aspect separate from the individual's non-observable traits associated with the propensity to formalise, such as degree of discipline and lawfulness.

3.b.3.1 Description of the sample and results

The ENOE is a survey of households which has a target population of all those of working age.[6] It is made quarterly and its results are representative on a nationwide level.[7] The survey includes two sets of questions, one to collate the socio-demographic characteristics of the members of the household, and one to record their employment situation and job. The residences chosen to take part in the ENOE are visited five times in five successive quarters. For every quarter the sample of homes is divided into five panels, where one fifth of the sample relates to homes which will be visited for the first time (the incoming panel) and the rest of the sample is for homes that are being visited for the second, third, fourth and fifth time (20% of the sample for each group). When the fifth visit is carried out, that same 20% of homes leaves the sample (outgoing panel) and is replaced by an equal number in the following quarter (incoming panel).

This study uses information for the most recent set of people that concluded the series of five interviews. This means taking into consideration those individuals of working age who live in households, who were interviewed for the first time in 3Q13 and for the last time in 3Q14.[8] Within this set of people only those are examined who reported that they had an informal job on the first visit. A dichotomous variable was generated equal to one if the individual transitioned to the formal sector in any of the subsequent four quarters and zero if not (y1). The transition to the formal sector was modelled econometrically, using a binomial probit and a multinomial probit which included as explanatory variables the individual's socio-demographic characteristics (such as age, educational level, gender and income) and the type of informal job they were in at the time of the first visit, which we shall term "prior employment status". For the binomial probit model, we generate dichotomous variables which represent the 14 types of informal employment in Mexico (boxes 1 to 14 of the Hussmanns matrix in Table 3.b.1). For the multinomial probit model we group those categories into five sets which represent the five types of informal workers in the country (columns A, C, E, F and H in the Hussmanns matrix in Table 3.b.1): i) salaried dependent workers (status_A); ii) dependent workers who receive non-salaried earnings (status_C); iii) unpaid dependent workers (status_E); iv) employers (status_F); and v) self-employed workers (status_H).[9] In the binomial probit model the dependent variable is y1, while in the multinomial probit the dependent variable (y2) takes the following values: zero if the worker continued in an informal situation; one if the individual transitioned to formality as a salaried worker (column B of the Hussmanns matrix in Table 3.b.1), 2 if they transitioned to formality as a dependent worker with non-salaried earnings (column D of the matrix), 3 if they transitioned to formality as an employer (column G of the matrix), 4 if they transitioned to formality as a self-employed worker (column I of the matrix), 5 if they transitioned to the unemployed workers segment, 6 if they transitioned to the available EIP, and 7 if they transitioned to the unavailable EIP. The eight categories or values which y2 takes together account for all the possible future activities which an informal worker can engage in.

Table 3.b.5 describes the explanatory variables used. Gender, age, marital status, educational level, income, prior job type and the size of the population centre where they reside are attributes that are typically associated with the current employment status of individuals (Demirgüç-Kunt, Klapper & Panos 2009, Maloney 1999). Also included is a dichotomous variable equal to one, if any member of the household works in the formal sector, or otherwise zero, to identify the effect which social capital can have on a change of employment status (Demirgüç-Kunt, Klapper & Panos 2009).

[5] Last quarter for which public information is available.
[6] As has already been mentioned in section 3.b.2, the minimum working age is 14.
[7] The survey is also representative of the 32 federal states, 32 self-represented cities and three sizes of population centre (INEGI 2007).
[8] In one home/housing unit there might be one or more households/families. The ENOE's primary sampling unit is the home.
[9] Having dependent and independent variables with few categories is a condition for using a multinomial probit model, otherwise the data is so scattered among the different category combinations that there is not enough information to make estimates.

Table 3.b.5
Names and definitions of the explanatory variables (probit and mprobit)

Name of variable	Definition	Name of variable	Definition	Name of variable	Definition
locality_1	Dichotomous variable (DV) = 1 if the respondent lives in a population centre of 100,000 or more inhabitants	income_IV	DV = 1 if their monthly income is more than three and up to five minimum wages	status_10*	DV = 1 if their prior employment status was unpaid worker at a formal company or institution
locality_2	DV = 1 if they live in a population centre of 15 to 99,999 inhabitants	income_V	DV = 1 if their monthly income is over five minimum wages	status_11*	DV = 1 if their prior employment status was salaried worker in the farming and livestock sector without social security coverage
locality_3	DV = 1 if they live in a population centre of 2,500 to 14,999 inhabitants	income_VI	DV = 1 if they do not receive income	status_12*	DV = 1 if their prior employment status was worker with non-salaried earnings in the farming and livestock sector without social security coverage
locality_4	DV = 1 if they live in a population centre of less than 2,500 inhabitants	status_1 *	DV = 1 if their prior status was wage-earner in the informal sector	status_13*	DV = 1 if their prior employment status was unpaid worker in the farming and livestock sector
gender	DV = 1 if they are female	status_2*	DV = 1 if their prior status was dependent worker with non-salaried earnings in the informal sector	status_14*	DV = 1 if their prior employment status was self-employed worker in the farming and livestock sector
age	Person's age in years	status_3*	DV = 1 if their prior status was unpaid worker in the informal sector	status_A**	DV = 1 if their prior employment status was dependent salaried worker in the informal sector
marital status	DV = 1 if the person is married or lives in an unmarried partnership	status_4*	DV = 1 if their prior status was employer in the informal sector	status_C**	DV = 1 if their prior employment status was dependent worker with non-salaried earnings in the informal sector
educational level	Years of receiving an education	status_5*	DV = 1 if their prior status was self-employed worker in the informal sector	status_E**	DV = 1 if their prior employment status was unpaid dependent worker in the informal sector
other_formal	DV = 1 if another member of the household works in the formal sector	status_6*	DV =1 if their prior status was salaried domestic worker without social security cover	status_F**	DV = 1 if their prior employment status was employer in the informal sector
income_I	DV = 1 if their monthly income is one minimum wage or less	status_7*	DV =1 if their prior status was domestic worker with non-salaried earnings without social security cover	status_H**	DV = 1 if their prior employment status was self-employed worker in the informal sector
income_II	DV = 1 if their monthly income is over one and up to two monthly wages	status_8*	DV = 1 if their prior employment status was salaried worker at a formal company or institution without social security coverage		
income_III	DV = 1 if their monthly income is over two and up to three minimum wages	status_9*	DV =1 if their prior employment status was worker with non-salaried earnings at a formal company or institution without social security coverage		

*Prior employment statuses used in the binomial probit model. The numbering relates to the cells in the Hussmanns matrix (Table 3.b.1).
**Prior employment statuses used in the multinomial probit model. The numbering relates to the columns in the Hussmanns matrix (Table 3.b.1).
Source: BBVA Research

Table 3.b.6 shows the results of the estimates. Columns 1 and 2 give the results for the binomial probit (with the dependent variable y1). In the first column, the "prior employment status" comprises 13 categories of informal employment (category 5, self-employed workers in the informal sector, is omitted, which is the most numerous). In the second column the "prior employment status" consists of the four broad categories of workers which we have created (status_A,

dependent salaried worker in the informal sector, is omitted, which is the most numerous). Columns 3 to 10 offer the results of the multinomial probit regarding the eight categories of dependent variable used (y2). For each regression the mean is given for the dependent variable. The table shows the average marginal effects and gives the robust z-statistic report in brackets.[10] When analysing the results it is important to bear in mind that the estimates should not be interpreted as causal, but rather as correlations which can in principle show that the socio-demographic characteristics and prior employment status of workers matter.

The first thing that stands out in columns 1 and 2 is that for most of the socio-demographic characteristics the marginal effect on the transition to formality is statistically different from zero. In other words the transition to formality is not independent of the individual's profile. The smaller the size of the population centre where the worker lives, the lower is the probability of them transitioning to the formal sector. Taking the results for column 1 as an example, a worker who lives in a locality with under 2,500 inhabitants has a chance 0.057 lower of transitioning to the formal sector compared to a worker who lives in a population centre of 100,000 inhabitants or more (base category). The results also indicate that gender, age and educational level matter: being female is associated with a probability 0.029 lower of transitioning to formality than being male, and a worker is more likely to transition to formality as their age and educational level go up. A person's social connections are also important, as if someone within the worker's household is employed within the formal sector, the worker is more likely to transition to formality compared to someone who does not have members of their family working in the formal sector. The results thus show that young workers and those less educated are more likely to remain in the informal sector than the others. It is important to mention that even though the average marginal effect of age squared is small, it is negative and significant, which indicates that the effect of age on the propensity to formalise one's situation is not linear. In other words, as a worker's age increases, so too does their propensity to formalise, but only up to a point, beyond which the probability of this starts to decrease.

The monthly income of an irregular worker also relates significantly to the probability of them transitioning to formality. Of all the informal workers it is least likely that a worker will transition to formality if they do not receive income or receive one minimum wage or less a month. The likelihood of a worker transitioning to the formal sector rises as their income level increases: earning more than two minimum wages and up to three is associated with a probability 0.023 higher of transitioning to formality compared to a worker who receives between one and two minimum wages (base category); earning between three and five minimum wages matches a probability 0.067 higher of transitioning to formality compared to the base category; and earning more than five minimum wages is linked to a probability 0.146 higher of transitioning to formality compared to the base category. The significant and positive coefficient for the level of informal income means that, for employers and self-employed workers, economic activity on a larger scale is associated with a greater propensity to formalise their situation. For dependent workers, this means that those will have a greater probability of formalising their situation who receive most income in their informal jobs. For example, within a set of identical street vendors, a person is more likely to formalise who receives more sales income; and within a group of identical informal salaried workers, a person is more likely to transition to formality who earns more.

Many of the marginal effects of the dichotomous variables representing prior employment status were statistically different from zero, indicating that the type of employment the informal worker is in relates to the probability ofhim transitioning to the formal sector. The results of column 1 suggest that out of all informal workers, those engaged as salaried staff at a formal company or institution have the greatest propensity to transition to formality; they are followed by self-employed workers in the farming and livestock sector,[11] unpaid workers at formal companies or institutions, and employers in the informal sector. The findings therefore suggest that informal salaried workers at formal companies or institutions are one step closer to transitioning to formality than the rest. On the other hand, those with the lowest propensity to transition to formality are salaried domestic workers. This lower propensity to formalise their situation might, among other factors, relate to the fact that many of them offer their services to those families which in principle do not represent production units.

Unlike the binomial probit, the multinomial model estimates the marginal effect which socio-demographic characteristics and prior employment status have on the probability that the worker: i) continues in an informal situation; ii) transitions to any of the four categories of formal work which we have created (statuses A, C, E, F, and H); iii) transitions to the unemployed workers segment; iv) transitions to the available EIP; and v) transitions to the unavailable EIP. The-

[10] The standard errors were grouped at the level of the household to correct for correlations among the individuals whom it comprises.
[11] It should be remembered that it is sufficient for a self-employed worker to become an employer for them to be part of the formal economy. As mentioned in section 1, a special criterion applies for independent workers in the farming and livestock sector to determine whether or not they belong to the formal sector.

se eight activity statuses are embraced by the dependent variable y2, as we have described previously. The results of the multinomial probit back up the findings for the binomial model, although the marginal effects vary in scale depending on the category which the dependent variable takes. Overall, i) the probability of transitioning to formal work is lower for females than for males; ii) the probability of transitioning to formal work increases with the worker's age and educational level;[12] and iii) the probability of transitioning to formal work is greater if another member of the household is also in formal work (columns 4 to 7 of Table 3.b.6). As regards the size of population centre, the results vary: for example, living in smaller localities (those with less than 2,500 inhabitants) is associated with a probability 0.064 lower of transitioning to formality as a salaried worker, whereas the same variable is linked to a probability 0.024 higher of transitioning to formality as an employer. One striking aspect is that being a female is associated with a probability 0.162 lower of remaining in an informal situation and one 0.216 higher of transitioning to the unavailable EIP, which suggests that there are a lot of females who do not transition to formality because they leave the EAP to join the unavailable EIP.

Table 3.b.6

Results (binomial and multinomial probit) – Average marginal effects

	Binomial probit		Multinomial probit							
Explanatory variables	1 if they transitioned to formality, 0 if not Mean: 0.219 (1)	1 if they transitioned to formality, 0 if not Mean: 0.219 (2)	Remained in the informal sector Mean: 0.419 (3)	Transitioned to formality as a salaried dependent worker Mean: 0.114 (4)	Transitioned to formality as a dependent worker with non-salaried earnings Mean: 0.003 (5)	Transitioned to formality as an employer Mean: 0.031 (6)	Transitioned to formality as a self-employed worker Mean: 0.043 (7)	Transitioned to the unemployed workers segment Mean: 0.058 (8)	Transitioned to the available EIP Mean: 0.059 (9)	Transitioned to the unavailable EIP Mean: 0.272 (10)
locality_2	-0.008	-0.008	0.008	-0.025**	0.000	0.005	0.016***	0.006	-0.009	-0.002
	(-0.584)	(-0.566)	(0.442)	(-2.359)	(0.073)	(0.826)	(2.580)	(0.768)	(-1.099)	(-0.126)
locality_3	-0.041***	-0.044***	0.038**	-0.034***	0.000	0.003	0.007	-0.004	-0.002	-0.008
	(-2.740)	(-2.877)	(2.069)	(-3.023)	(0.082)	(0.491)	(0.860)	(-0.469)	(-0.241)	(-0.509)
locality_4	-0.057***	-0.060***	0.061***	-0.064***	0.002	0.024***	-0.013*	-0.022***	-0.006	0.018
	(-3.917)	(-4.299)	(3.648)	(-6.052)	(1.247)	(4.006)	(-1.786)	(-2.779)	(-0.884)	(1.248)
gender	-0.029**	-0.046***	-0.162***	-0.016**	-0.003*	-0.026***	-0.002	-0.039***	0.032***	0.216***
	(-2.531)	(-4.277)	(-12.665)	(-2.175)	(-1.897)	(-5.534)	(-0.372)	(-6.384)	(5.574)	(21.322)
age	0.006***	0.005***	0.019***	0.004**	0.001***	0.001*	0.003***	0.001	-0.007***	-0.023***
	(3.766)	(2.813)	(8.845)	(2.557)	(2.984)	(1.865)	(3.689)	(1.020)	(-8.073)	(-13.260)
age2a	-0.000***	-0.000*	-0.000***	-0.000***	-0.000***	-0.000	-0.000**	-0.000*	0.000***	0.000***
	(-2.846)	(-1.741)	(-9.352)	(-2.880)	(-2.894)	(-0.854)	(-2.342)	(-1.751)	(8.540)	(13.656)
marital_status	-0.008	-0.004	-0.047***	0.006	-0.000	0.008*	-0.011*	-0.015**	-0.001	0.060***
	(-0.668)	(-0.339)	(-3.412)	(0.774)	(-0.070)	(1.662)	(-1.856)	(-2.360)	(-0.193)	(5.331)
educational level	0.014***	0.017***	-0.013***	0.008***	0.000	0.002***	0.004***	0.002*	-0.001	-0.002
	(10.169)	(12.595)	(-7.786)	(8.560)	(1.349)	(3.381)	(6.565)	(1.922)	(-1.024)	(-1.508)
other_formal	0.029**	0.040***	-0.074***	0.017**	0.003**	0.011**	-0.003	-0.009	0.011*	0.043***
	(2.543)	(3.555)	(-5.125)	(2.163)	(2.037)	(2.232)	(-0.458)	(-1.297)	(1.720)	(3.714)
income_I	-0.092***	-0.087***	-0.032*	-0.057***	-0.006**	0.008	-0.022***	0.017**	0.008	0.084***
	(-6.408)	(-6.121)	(-1.895)	(-5.161)	(-2.314)	(1.224)	(-3.129)	(2.245)	(1.126)	(6.326)
income_III	0.023*	0.021	0.014	0.008	0.001	0.013**	0.006	0.016**	-0.025***	-0.033**
	(1.705)	(1.545)	(0.796)	(0.848)	(0.521)	(2.355)	(0.880)	(1.974)	(-2.966)	(-2.096)
income_IV	0.067***	0.070***	0.020	0.051***	0.001	0.017**	0.014*	0.022**	-0.060***	-0.065***
	(3.846)	(4.030)	(0.872)	(4.115)	(0.384)	(2.398)	(1.813)	(2.342)	(-4.780)	(-3.247)
income_V	0.146***	0.156***	-0.056	0.059***	0.002	0.044***	0.033***	-0.047**	-0.011	-0.025
	(5.136)	(5.222)	(-1.344)	(2.721)	(0.895)	(4.571)	(3.062)	(-2.331)	(-0.440)	(-0.638)
income_VI	-0.092***	0.025	0.020	-0.011	0.004	0.030***	-0.088***	-0.021	-0.009	0.075***
	(-2.803)	(0.931)	(0.612)	(-0.356)	(1.274)	(3.438)	(-4.229)	(-1.080)	(-0.516)	(2.731)

[12] As has already been mentioned, the age effect on the propensity to transition to formality is positive up to a point, whereafter it begins to decrease.

Table 3.b.6 (continued)

Results (binomial and multinomial probit) – Average marginal effects

	Binomial probit		Multinomial probit							
Explanatory variables	1 if they transitioned to formality, 0 if not Mean: 0.219 (1)	1 if they transitioned to formality, 0 if not Mean: 0.219 (2)	Remained in the informal sector Mean: 0.419 (3)	Transitioned to formality as a salaried dependent worker Mean: 0.114 (4)	Transitioned to formality as a dependent worker with non-salaried earnings Mean: 0.003 (5)	Transitioned to formality as an employer Mean: 0.031 (6)	Transitioned to formality as a self-employed worker Mean: 0.043 (7)	Transitioned to the unemployed workers segment Mean: 0.058 (8)	Transitioned to the available EIP Mean: 0.059 (9)	Transitioned to the unavailable EIP Mean: 0.272 (10)
status_C		-0.052** (-2.068)	0.019 (0.610)	-0.049*** (-2.973)	0.005*** (2.957)	-0.022** (-2.333)	0.019 (1.608)	0.005 (0.397)	-0.009 (-0.577)	0.032 (1.200)
status_E		-0.013 (-0.508)	0.046 (1.407)	-0.150*** (-6.671)	-0.003 (-1.367)	0.060*** (7.612)	0.042*** (4.133)	-0.010 (-0.711)	-0.007 (-0.482)	0.023 (0.759)
status_F		-0.048*** (-3.961)	0.011 (0.768)	-0.125*** (-12.798)	-0.005*** (-2.687)	0.029*** (5.541)	0.053*** (9.482)	-0.021*** (-3.027)	-0.004 (-0.640)	0.062*** (5.362)
status_H		-0.179*** (-5.820)	-0.056 (-1.532)	-0.130*** (-4.257)	-0.007 (-1.562)	-0.016 (-1.621)	0.121*** (5.484)	-0.009 (-0.421)	0.021 (1.212)	0.076*** (2.581)
status_1	0.017 (0.988)									
status_2	0.010 (0.264)									
status_3	-0.004 (-0.092)									
status_4	0.057** (2.325)									
status_6	-0.052** (-2.221)									
status_8	0.152*** (10.724)									
status_9	0.027 (0.821)									
status_10	0.113*** (2.776)									
status_11	0.018 (0.775)									
status_12	0.100 (1.176)									
status_13	-0.064 (-1.332)									
status_14	0.135*** (5.209)	(0.931)	(0.612)	(-0.356)	(1.274)	(3.438)	(-4.229)	(-1.080)	(-0.516)	(2.731)
Obser.	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955	4,472,955
Transitions observed	979,810	979,810	1,872,269	511,004	14,491	138,502	192,567	260,943	266,115	1,217,064
Log-Likelihood	-2082406.3	-2142770.4	-6074110.5	-6074110.5	-6074110.5	-6074110.5	-6074110.5	-6074110.5	-6074110.5	-6074110.5
Wald X2	797.5***	613.68***	2640.57***	2640.57***	2640.57***	2640.57***	2640.57***	2640.57***	2640.57***	2640.57***
Pseudo R2	0.1144	0.0887								

Note: Z-statistic in brackets
*** p<0.01, ** p<0.05, * p<0.1
a The average marginal effect of age squared is -.0000557 for column (1), -.0000349 for column (2) and -.0002327 for columns (3) to (10).
Source: BBVA Research

The multinomial probit model also illustrates what type of formal employment a person who works in the informal sector is most likely to transition towards (columns 4 to 7 of Table 3.b.6). In general the probability of transitioning to a certain type of formal employment is greater if the individual was previously in a similar job in the informal sector. For example, the probability of transitioning to formality as a salaried worker is greatest for informal salaried workers,

while the probability of transitioning to formality as a dependent worker with non-salaried earnings is also greatest for informal dependent workers with non-salaried earnings, and the same applies to the probability of employers transitioning from the informal to the formal sector. The only exception is formal employment as a self-employed worker, as the probability of transitioning to this category is highest for unpaid informal workers.

3.b.3.2 Continuation in the formal sector

Thus far, we have examined the factors determining the transition to formality. We now go on to analyse what factors decide whether workers stay on in the formal sector for at least one year after they have made the move there. In doing so, we study a set of workers who had formalised their situation at the time of the second survey visit and we create a categorical variable (y4) which equals one if the person remained in the formal market for four successive quarters, or zero if not. Analysis of the data suggests that out of every 10 informal workers who transition to formality, only two remain there for at least one year.[13]

As we have seen, some of people's attributes which are associated with their propensity to be formal are observable, such as their gender, age and educational level, among others. There are, of course, other qualities associated with this propensity that are not observable, such as each person's degree of discipline and lawfulness, for instance. Given that such non-observable attributes are not the same among people who formalise their situation and those that do not, it is held that workers who transition to formality choose themselves. If the non-observable traits which give rise to self-selection correlate with the non-observable characteristics which account for the propensity to remain in a formal situation, then the analysis of the factors determining continuation in the formal sector should take into account all informal workers, not just those who have formalised. The informal workers who have formalised are likely to constitute a biased sample for study, because they are probably not representative of the characteristics of all the informal workers that matter in explaining continuation in formal employment after the transition has been made into the sector.[14] If the sample is biased, then probit with sample selection covering all informal workers is the right econometric model to employ[15]; if it is not biased, then it is appropriate to use a standard binomial probit model for the group of informal workers who have become formal.

The probit model with sample selection was considered, using a dichotomous variable (y_3) as a dependent variable in the selection equation which equals one if the informal worker had transitioned to formality at the time of the second visit; otherwise it is zero. The exclusion restriction is the income which the worker received in their informal job, assuming that this is a factor which produces significant variations in the selection variable (y_3) and that it does not affect y_4 directly.[16] The estimated value of ρ (rho) was found not to be statistically different from zero[17], indicating that there is no sample selection bias, so it is appropriate to conduct the analysis only using the information on the workers who formalised their situation. The rho statistic indicates the degree of correlation between those non-observable factors which impact on the propensity to transition to formality and those which have an effect on the propensity to remain in the formal sector. A rho value of zero means that there is no correlation between both sets of factors, suggesting that the individual attributes that prompt the self-selection of workers who formalise are not linked to the likelihood of staying on in the formal sector. It is therefore other non-observable micro-economic factors which could be affecting the probability of remaining in formal employment, such as the different employment contract strategies pursued by companies in terms of preferring either short- or long-term agreements, and their various cost-cutting policies.

Table 3.b.7 presents the results of the binomial probit model which uses y4 as a dependent variable and the individual's socio-demographic characteristics and prior employment status as explanatory variables. We find that the size of the population centre where the worker lives, and their age, marital status, educational level and income, as well as whether they have another member of the family/household working in the formal sector, are important in determining whether they will remain in the formal sector for at least one year. In particular, it is more likely to stay on in the formal sector who lives in a population centre of 100,000 inhabitants or more than a worker who lives in a smaller locality; a worker becomes more likely to continue in the formal sector as their age or educational level increases.

[13] The figures reported are based on the group of informal workers who had transitioned to formality at the time of the second visit in the ENOE, which was carried out in 4Q13.
[14] For further details on the terms "self-selection" and "sample selection bias" see Wooldridge (2010) and Greene (2011).
[15] In some contexts this is known as a non-linear Heckman model (probit or logit, for example). For further details on probit models with sample selection see Wooldridge (2010) and Greene (2011).
[16] It is assumed that the income which the worker receives for their activities in the informal economy is information which is internalised at the time of transitioning or not to formality.
[17] The value of the Wald test with H_0: ρ=0 equals 0.253.

Being married or in an unmarried partnership is linked to a probability 0.026 higher of remaining in the formal sector compared to those workers who have some other marital status[18]; and having another member of the household in a formal situation is associated with a lower likelihood of staying on in the formal sector than is the case for workers who do not have a social connection of this kind.

The coefficients of the dichotomous variables representing income levels were also statistically different from zero: people who received bigger incomes as informal workers have a greater propensity to continue in the formal sector. Workers who received between three and five minimum wages have a probability 0.040 higher of staying on in the formal sector compared to those who received between one and two (base category). And workers who received more than five minimum wages have a probability 0.046 higher of continuing in the formal sector compared to the base category. The results suggest that employers and self-employed workers who engage in economic activity on a larger scale are more likely to remain in a formal situation after they have entered the sector. The same is true for salaried workers who receive the biggest incomes in the informal sector.

Table 3.b.7

Results (binomial probit) – Average marginal effects

Explanatory variables	Binomial probit		
	1 if they have remained in the formal sector on visits 2 to 5, otherwise 0		
locality_2	-0.076*** (-43.052)	estatus_1	0.023*** (8.617)
locality_3	-0.112*** (-50.215)	estatus_2	0.167*** (40.136)
locality_4	-0.047*** (-23.265)	estatus_3	1.225 (0.036)
gender	-0.001 (-0.641)	estatus_4	-0.091*** (-25.824)
age	0.005*** (17.593)	estatus_6	-0.114*** (-28.592)
age2a	-0.000*** (-20.380)	estatus_8	0.124*** (70.991)
marital status	0.026*** (16.713)	estatus_9	0.055*** (16.809)
educational level	0.005*** (25.521)	estatus_10	1.186 (0.035)
other_formal	-0.012*** (-9.082)	estatus_11	0.035*** (9.182)
income_I	-0.021*** (-8.379)	estatus_13	1.364 (0.040)
income_III	-0.006*** (-3.682)	estatus_14	-0.009** (-2.366)
income_IV	0.040*** (21.737)		
income_V	0.046*** (17.185)		
income_VI	-1.283 (-0.038)		
Observations	390,418		
Transitions observed	80,299		
Log-Likelihood	-182422.31		
LR X2	31951.97		
Pseudo R2	0.0805		

Note: Z-statistic in brackets
*** p<0.01, ** p<0.05, * p<0.1
a The marginal effect of age squared is -.00006.
Source: BBVA Research

[18] The "other marital status" category includes those who are separated, widowed, divorced or single.

Prior employment status is also linked to the propensity to remain in the formal sector. Of all the informal workers who transitioned to formality, the people most likely to stay formal are those who worked as dependent workers with non-salaried earnings in the informal sector and as salaried workers in formal companies or institutions. On the other hand, the people who are least likely to remain in the formal sector are those who worked as salaried domestic workers and as employers in the informal sector.

3.b.4 Conclusions

The informal sector is where most people work among the employed population: of every ten working Mexicans, six do so in the informal market. The transition to formality is important in that a formal job provides better conditions for accessing financial services. Financial institutions are more willing to grant lending facilities to businesses and individuals who have the right documentation, and a broader range of other products is available for people employed in formal work.

In this study we find that the socio-demographic characteristics and employment status of informal workers are important in shaping their propensities to transition to formality and to stay formal. Generally, informal workers who live in the larger population centres are more likely to transition to formality and remain in that sector than those who live in smaller localities; the propensity to transition and to stay in an a formal job increases with the worker's age and educational level; and workers who have another member of their household at work in the formal sector have a greater likelihood of being formal, but a lower propensity to remain in the formal market for at least one year, if compared with people who do not have that kind of connection. At the same time, the probability of an individual transitioning to and staying in the formal market rises as the income which they receive as a worker within the informal economy increases. The suggestion is therefore that the scale of an informal worker's economic activity matters in determining the propensity to formalise and stay on in a formal job: the larger the scale of activities or the value which the worker adds to the economy, the greater will be their propensity to transition to the formal sector and stay there.

With respect to a worker's prior employment status, we find that of all the types of people in informal employment, those who are salaried workers in a formal company or institution have the greatest propensity to transition to formality. Conversely, those who have the lowest propensity to be formal are salaried domestic workers.

Our findings thus show that informal workers who are young, least educated, live in the smallest population centres, and who earn the lowest income are the most likely to continue in the informal segment. This underlines the need to design and promote public policy which is aimed at boosting the population's educational level and stimulating economic growth in all regions of Mexico. A larger base of formal jobs means greater access to financial services and financial inclusion in Mexico. Access to financial services allows people to smooth out their consumption over time by obtaining loans and paying them off over several years and saving up for future events, be they planned or unforeseen. For employers or self-employed workers it offers them the chance to take out a loan to execute profitable projects and pay it off later by using the revenue earned. Although many informal workers probably already benefit from products within the financial system, their employment status limits the type of services which banking institutions can offer them.

Finally, we find that the non-observable factors which are associated with the likelihood of an informal worker becoming formal have no correlation with the non-observable variables linked to the propensity to remain in formal employment after transitioning to it. These results indicate that an individual's law-abiding qualities and degree of discipline, which might be influential in their propensity to formalise, do not account for the time they remain in the formal sector after they have moved into it. Other non-observable micro-economic factors, such as the employment contract strategies of the various companies and their cost-cutting policies might be affecting the likelihood of workers staying on in a formal job after transitioning to it.[19]

[19] For example, some companies formalise their workers temporarily so that they can have access to certain benefits such as a mortgage loan, and once they have obtained this, they return them to an informal situation.

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Box 1: Employment mobility

This box examines the patterns in mobility among the 26 categories of activity in Mexico. The 26 categories take in the 23 boxes in the Hussmann's matrix (described in section 3.b of this note) plus three additional classifications: i) the unemployed (which we shall call category A), ii) the available EIP (category B), and iii) the unavailable EIP (category C). The analysis draws on the information on people aged 14 or over who took part in the 2Q14 and 3Q14 ENOE surveys, where only those who participated in both rounds were included.

According to the sample analysed, four out of every 10 people aged 14 or more changed their employment status between 2Q14 and 3Q14. The other six stayed on in their same employment categories. To illustrate mobility graphically for people in the 26 types of activity we used a transition matrix (Table B.1.1). The 26 rows in it indicate the employment status which each individual reported in 2Q14, whereas the 26 columns show the employment status which the same person reported in 3Q14. In each row the boxes provide the percentage distribution of people in the various employment statuses reported in 3Q14. For example, 33% of people working as salaried employees in the informal sector in 2Q14 remained in the same type of job in the next quarter (first box in row 1); 3% became dependent workers in the informal sector with non-salaried earnings (second box in row 1); 2% became unpaid workers in the informal sector (third box); 2% became employers in the informal sector (fourth box); 10% became self-employed workers in the informal sector (fifth box), and so on. In each row the highest percentages are given in dark blue, while the lowest are in light blue.

The transition matrix provides information on the employment types which show the lowest and the highest levels of mobility in Mexico. As can be seen, the employment category with the lowest mobility level in the quarters under review is salaried workers in formal companies or institutions who have social security cover (category III): according to the data in the sample analysed, 76% of these workers remained in the same employment category in the next quarter. They were followed by those in the unavailable EIP group (category C), of whom 68% did not change their employment status; and then the self-employed workers in the farming and livestock sector (category 14), of whom 59% did not change category. On the other hand, the employment statuses with the greatest mobility were paid domestic workers with non-salaried earnings and social security cover (category II),

Table B1.1

Transition matrix from 2Q14 to 3Q14 (percentage distribution)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	I	II	III	IV	V	VI	VII	VIII	IX	A	B	C	Total %	% share of each status in the analized sample
1	33	3	2	2	10	1	0	13	1	0	4	0	1	2	0	0	8	0	0	1	0	0	0	5	3	12	100	4.1
2	14	30	1	1	15	1	0	7	6	0	1	0	0	2	0	0	6	0	0	1	0	0	0	3	2	8	100	0.9
3	5	0	25	1	12	1	0	3	0	5	1	0	2	1	0	0	3	0	0	2	0	0	0	2	6	29	100	1.3
4	8	1	1	20	28	1	0	3	1	0	1	0	0	3	0	0	6	0	9	3	0	0	0	2	2	9	100	1.0
5	5	1	2	3	44	1	0	3	1	0	1	0	0	1	0	0	5	0	1	4	0	0	0	3	4	20	100	8.2
6	3	0	0	0	4	54	0	3	0	0	1	0	0	0	1	0	4	0	0	0	0	0	0	3	4	19	100	2.5
7	3	1	0	0	19	45	4	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	23	100	0.0
8	10	1	1	1	4	2	0	34	2	1	1	0	0	1	0	0	20	0	1	1	0	0	0	4	3	12	100	5.7
9	5	6	0	0	7	1	0	17	26	0	1	0	0	1	0	0	11	1	1	3	0	0	0	3	2	13	100	1.0
10	2	0	10	1	6	0	0	8	0	24	1	0	1	0	0	0	5	0	3	4	0	0	0	3	4	27	100	0.7
11	5	1	0	1	4	1	0	3	0	0	43	1	5	14	0	0	3	0	0	0	2	0	1	4	3	10	100	2.6
12	3	1	1	0	4	1	0	3	1	0	22	24	2	8	0	0	3	0	0	1	2	1	1	3	5	14	100	0.2
13	3	0	2	0	2	0	0	1	0	0	9	0	40	6	0	0	1	0	0	0	0	0	0	1	5	27	100	1.1
14	2	0	0	1	4	0	0	2	0	0	10	0	2	59	0	0	1	0	0	0	0	0	4	1	2	11	100	3.1
I	1	2	0	0	1	42	0	2	0	0	0	0	0	0	20	0	20	0	0	1	2	0	0	1	3	5	100	0.1
II	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100	0.0
III	2	0	0	0	2	1	0	5	1	0	0	0	0	0	0	0	76	0	1	1	0	0	0	2	2	6	100	19.7
IV	2	1	0	0	5	1	0	6	6	0	2	0	0	1	0	0	48	16	0	2	0	0	0	4	1	6	100	0.3
V	2	0	1	6	10	1	0	4	1	1	0	0	0	0	0	0	11	0	39	13	0	0	1	1	1	8	100	1.0
VI	3	1	1	2	22	0	0	6	1	2	0	0	0	1	0	0	8	0	9	28	0	0	0	2	2	12	100	1.6
VII	1	0	0	0	1	0	0	3	0	0	17	1	1	2	0	0	10	0	0	0	49	1	0	2	2	7	100	0.3
VIII	2	0	0	0	0	0	0	0	0	0	17	1	0	2	0	0	0	1	0	0	32	19	0	8	3	15	100	0.0
IX	2	0	0	1	3	0	0	1	0	0	9	0	1	41	0	0	2	0	1	1	0	0	23	1	2	11	100	0.5
A	7	1	1	1	7	2	0	9	1	0	2	0	0	1	0	0	17	0	0	1	0	0	0	21	8	19	100	2.7
B	2	0	1	0	5	2	0	3	1	1	1	0	1	1	0	0	4	0	0	0	0	0	0	4	18	55	100	6.8
C	2	0	1	0	4	1	0	2	0	1	1	0	1	1	0	0	4	0	0	0	0	0	0	2	11	68	100	34.6

Base: 77,220,578

Source: BBVA Research with data from the ENOE survey for 2Q14 and 3Q14.

domestic workers with non-salaried earnings and without social security cover (category 7) and dependent workers in formal companies or institutions with non-salaried earnings (category IV).[1]

The movement of individuals among the various employment statuses has many motives. The data from the National Micro-business Survey (ENAMIN) suggests, for example, that among females the most common reason to start up a business is "to supplement the family income", whereas for males the most usual reasons are "a bigger income than as a salaried worker" and "wanting to be independent". Other grounds include "not being able to find work as a salaried employee", "flexible hours" and "being made redundant or downsizing", which account for 15.1% and 4.2% of the total replies for males and females respectively (Peña, Ríos & Salazar 2012).[2] Other factors which might affect people's mobility among the different types of work include the implementation of job formalisation programmes and changes to employment and/or tax regulation. In Mexico the Secretariat of Labour and Social Welfare launched the so-called Job Formalisation Programme in 2H13, which promotes formalisation for salaried workers and voluntary registration for social cover under the Obligatory Scheme with the IMSS for self-employed workers, domestic workers, workers in the farming and livestock sector, and employers. On the other hand, the Fiscal Reform which came into force in January 2014 marked a significant regulatory change, which could have affected the preferences of workers and companies as regards formal or informal activities (and therefore changed the supply and/or demand of the various types of employment in the economy). In particular, the Fiscal Reform included a change in the personal income tax rate, which rose to 32% from an annual income of MXN750,000.01 and upwards; 34% from MXN1000,000.01; and 35% from MXN3,000,000.01 (article 152 of the 2013 Income Tax Act, or "LISR"). The Fiscal Reform also changed the tax allowance for individuals, which came down to four minimum wages (SMGs) or 10% of income (including untaxed earnings), whichever is the least (article 151 of the LISR). Both the increase in income tax and the reduction in the tax allowance constitute decreases in net income for a section of salaried workers in formal companies or institutions. Both changes could thus have had an impact on perceptions of the cost of formalising one's situation, even among people who are not among those targeted by the reform.

In the next section we study the trends for the set of workers who moved into formal salaried employment each quarter at formal companies or institutions in the private sector (i.e. we look at individuals who transitioned to category III of the Hussmann's matrix in Table 3.b.1, covered by the IMSS)[3], as they are part of the population segment directly affected by the Job Formalisation Programme and the Fiscal Reform. Our intention was to identify what types of work they were engaged in beforehand and, based on this assessment, to find out whether any change emerged in the flows of workers from the various employment types into formal salaried employment in the last five quarters for which there is available information (from 3Q13 to 3Q14). As is mentioned in section 3.b of this note, a formal situation provides a worker with the backing of a legal framework which favours access to financial services, especially credit. It should be said that this analysis is descriptive and is only intended to offer an initial idea of any changes in trends for flows of workers during the period examined.

Moving into formal salaried work at formal companies or institutions

Out of all the people who joined the grouping of salaried workers at formal companies or institutions who are covered by the IMSS in 3Q14, 24.0% belonged to the unavailable EIP in the previous quarter (category C), 22.6% were already working as salaried staff at a formal company or institution but did not have social security cover (category 8), 9.9% were unemployed (category A), 8.5% were already working as salaried staff at a formal company or institution and had social security provision from an institution other than the IMSS (category III)[4], and 8.3% were self-employed workers in the informal sector (category 5). Graph B.1.1 shows the percentage distribution of new salaried workers covered by the IMSS at formal companies or institutions according to the type of activity they were engaged in during the previous quarter. The last bar in the graph (in the lighter blue) is for the figures which we have described (3Q14). The first column gives the distribution for 3Q13, the second one for 4Q13, the third one for 1Q14, and the fourth one for 2Q14. For the sake

[1] It should be noted that these three categories together represent less than 1.0% of the whole sample examined.
[2] For further details on the motives for starting up a micro-business see *Los Micronegocios en México: razones para emprenderlos, expectativas, tamaño y financiamiento* (Peña, Ríos & Salazar 2012), available at http://www.cnbv.gob.mx
[3] Category III of the Hussmann's matrix includes salaried workers at formal companies or institutions in the private and public sectors. Within this, it includes those workers covered by the IMSS, the ISSSTE and other kinds of agencies that provide social security, such as the military and the Pemex hospitals, and state institutions such as the ISSEMYM (State of Mexico Social Security).
[4] Due to the fact that this set of workers had social security cover from non-IMSS institutions, they were already considered formal, even before joining the workers in the category III grouping who are with the IMSS. They thus already had a legal framework to back them up, which favoured access for them to financial services.

of comparison, the table with the values for each bar is given in the lower portion of Graph B.1.1.[5]

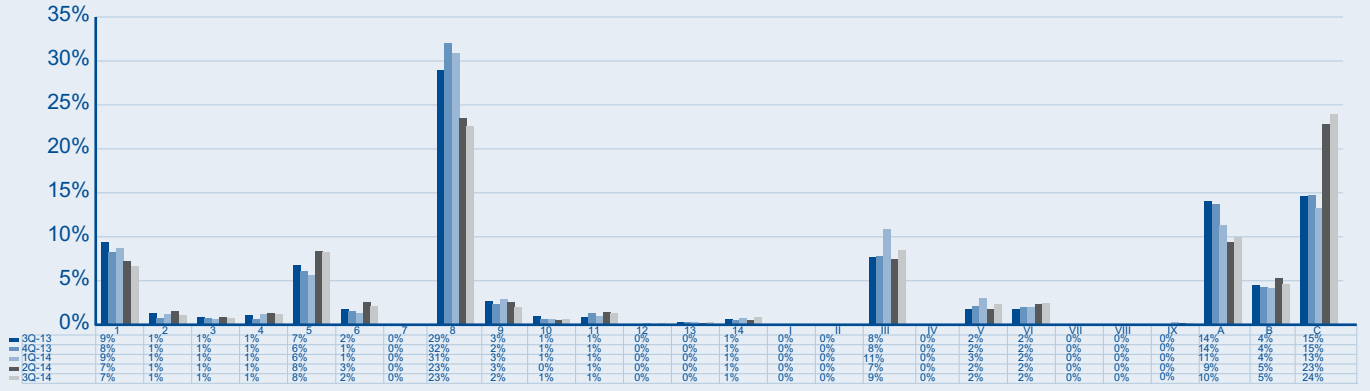
The most significant changes in trends in Graph B.1.1 show that: i) of the individuals who each quarter join the set of salaried workers covered by the IMSS (at formal companies or institutions) the percentage share of those who come from an informal salaried job at formal companies or institutions (category 8) dropped sharply from 2Q14 (from 30.9% in 1Q14 to 23.5% in 2Q14); ii) the percentage share of those who come from the unavailable EIP segment (category C) rose substantially from 2Q14 (from 13.3% in 1Q14 to 22.8% in 2Q14); and iii) the percentage share of those who come from the ranks of the unemployed (category A) fell back from 13.7% in 4Q13 to 11.3% in 1Q14. The findings therefore point to significant changes in the distribution of the new salaried workers covered by the IMSS (at formal companies and institutions) between 1Q14 and 2Q14.

It should be noted that although the share of informal salaried workers (in formal companies or institutions) within the universe of new workers covered by the IMSS came down sharply from 2Q14, the formalisation rate of this group of workers has risen with respect to the first quarter studied. In 3Q13, 13.3% of informal salaried workers at private companies or institutions in the sample analysed formalised via the IMSS; this figure subsequently climbed to 15.7%, 14,7%, 16.7% and 16.9% (for 4Q13, 1Q14, 2Q14 and 3Q14 respectively). In 3Q14 the AGR[6] of the number of salaried workers who formalised was 43.5%. These figures reveal that even though most salaried workers have formalised in outright terms, there are still other categories of activity (such as unavailable EIP) which have moved more rapidly in joining the group of formal salaried workers covered by the IMSS and who work in formal companies or institutions. The greater dynamism displayed by the rate of formalisation of informal salaried workers in recent quarters could be an initial glimmer of the effectiveness of the federal government's efforts to incentivise the formalisation of salaried staff who work in formal companies or institutions.

Despite the reduction in the percentage share of informal salaried workers in formal companies or institutions within the universe of newly-covered people, this grouping still accounts for over a fifth of them. Closer inspection of this set of workers shows that their average monthly income in the informal sector was MXN5,093 (with a median of MXN4,300), whereas in a formal situation their average income is MXN5,428 (with a median of MXN4,600), although the t-test suggests that the means are statistically equivalent.[7] Aside

Graph B1.1

Percentage distribution of new salaried staff covered by the IMSS by type of activity in the previous quarter



Source: BBVA Research with data from the ENOE for the 3Q13-3Q14 period.

[5] The base figures for calculating the percentages are: 1,801,923 in 3Q13, 1,943,307 in 4Q13, 1,939,653 in 1Q14, 3,234,690 in 2Q14 and 3,314,580 in 3Q14. Unlike the figures for new jobs published by the IMSS, the figures published by the ENOE come from data reported by the respondents themselves rather than administrative records. In addition to this, it should be stressed that the ENOE is recorded over a whole quarter, meaning that some people are surveyed in the first few weeks of the quarter and others in the last. In this aspect, the ENOE figures are similar to the number of new IMSS registrations (salaried workers at formal companies and institutions) over the quarter (although not all of those registered have stayed through to the end of the three-month period).

[6] Growth observed in 3Q14 relative to the same quarter the previous year (3Q13).

[7] The calculations were made using the set of workers who were in category 8 in 2Q14 and who transitioned in 3Q14 to category III with social security provided by the IMSS (748,331). The information used was that from the workers in question, who reported their income both in 2Q14 and 3Q14, which implied a reduction of the sample of these workers to a little over half of them (394,746). As is usual in employment surveys, a lot of respondents decided not to report the amount of their income (i.e. "income unspecified"). In spite of this, the coefficients of variation for the estimated averages indicate a figure of less than 5%.

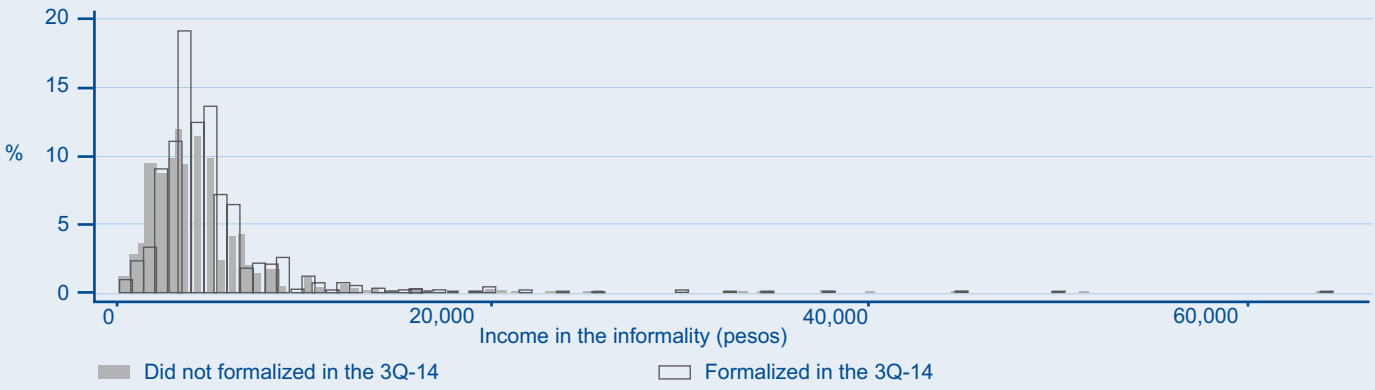
from purely monetary considerations, formalisation brings workers short-, medium- and long-term benefits. One of these is access to social security and another is the broad range of financial services that becomes available to them. As is described in section 3.b of this note, informal workers lack the support of a legal framework, and this situation makes them less likely to be deemed creditworthy. It should also be underlined that for informal salaried workers in formal companies or institutions the transition to formality is often not a choice. A company might decide at a given moment, for example, to register all of its informal employees with the IMSS, in which case the worker faces the dilemma of accepting transition or quitting their job.

Furthermore, as mentioned in section 3.b of this note, the likelihood of the individual transitioning to formality rises as the income they receive as a worker in the informal economy increases. It can be seen that the income which newly-covered people were earning when working in the informal sector was greater compared to that received by workers who did not formalise: on average, the monthly income of the new salaried workers was MXN5,089 when they were in irregular work (a median of MXN4,300)[8], whereas that of workers who did not formalise was MXN4,204 (with a median of MXN3,655).[9] Figure 2 gives the percentage income distribution in an informal situation for salaried workers (at formal companies or institutions) who formalised in 3Q14 and for those who did not. The results corroborate the findings described in section 3.b which contend that a larger scale of economic activity (or greater value added to the economy by the individual) is associated with a higher propensity to formalise. These estimates reveal an area of opportunity for the job formalisation programmes and other public policy regarding this issue, in the sense that incentives could be built in so as to boost the share of lower-income workers in the formalisation process.

The findings from this analysis highlight the importance of monitoring flows of workers over time to detect changes in the preferences of individuals or companies which might be affecting the supply and/or demand of different types of employment in the economy. Studies of this kind take on special significance in situations of changes in employment or fiscal regulation. In the case of Mexico, the results indicate a chan-

Graph B1.2

Percentage income distribution in the informal sector for salaried workers at formal companies or institutions who formalised in 3Q14 and for those who did not transition to formality



Note: Income in an informal situation is the amount which workers reported in 2Q14. The percentage distribution in grey includes workers who were in category 8 in 2Q14 and who were still in the same category in 3Q14. The distribution in white includes the workers who were in category 8 in 2Q14 and who transitioned in 3Q14 to category III with social security from the IMSS. The distribution in white also includes 250 observed cases with an income of MXN200,000 in an informal situation. These were left out of the figure to give a better illustration of the left side of the distribution.
Source: BBVA Research

[8] The calculations were made using the grouping of workers in category 8 in 2Q14 and who transitioned in 3Q14 to category III with social security provided by the IMSS.
[9] The calculations were made using the set of workers in category 8 in 2Q14 and who were still in the same category in 3Q14.

ge in the structure of the set of newly-affiliated people (with the IMSS) at formal companies or institutions from 1Q14 and 2Q14. Growth is also discernible in the formalisation rate of salaried workers at formal companies or institutions, which could represent an initial indication of the effectiveness of the Job Formalisation Programme. Nevertheless, the set of salaried workers without social security cover at formal institutions or companies (the main focus of attention of the programme) only represents 18.4%[10] of the total pool of informal workers in the economy. This shows the importance of designing further-reaching public policies. The findings in the study that are set out in section 3.b of this note point to the need to come up with and advance policies aimed at boosting the population's educational level and fomenting economic growth in all of the country's regions, so as to generate a broader base of formal workers in Mexico in the medium to long term. A larger formal workforce means greater access to financial services. Policies such as the Job Formalisation Programme (focussing on tracking hiring procedures and cutting the associated transaction costs) are necessary but not sufficient for producing a sustained increase in the formalisation rate of Mexico's workers.

[10] The calculations were made with the 3Q14 ENOE data.

3.c. International branchless banking experience

The term "branchless banking" was put forward by the Consultative Group to Assist the Poor (CGAP) and refers to the whole set of "new channels which allow financial institutions and other commercial agents to offer financial services away from the traditional banking infrastructure" (Lyman et al., 2006). In the last decade, two models of branchless banking have come to the fore internationally: correspondent banking and mobile accounts. This has spawned a whole host of studies, surveys and data which document and analyse the development of branchless banking. Based on this information, this article outlines the experience of six countries — Brazil, Colombia, Peru, The Philippines, South Africa and Kenya — as pioneers of these models and compares them with Mexico from three standpoints: i) its emergence, ii) regulatory framework, and iii) dominant trends.

This article also highlights some of the key points noted from each of the three standpoints mentioned. In particular, the different contexts are described in which the branchless banking models have emerged, as well as the three distinct types of account providers: banks, financial institutions and telcos. An explanation is also offered of how the regulatory framework has emerged in certain countries after the appearance of the business models and how it has been adapted to the existing market. Finally, the pattern of accessing and using branchless banking is analysed in each country, and evidence is put forward that in certain cases branchless banking is not necessarily covering banking needs, but is instead being used as a transactional tool. As is discussed in the conclusions, each of these matters has implications for public policy, business and future lines of research.

3.c.1 Definitions

Certain concepts are defined to provide a better understanding of the branchless banking models in this article. To begin with there are agents or correspondents, which are business establishments, such as groceries, department stores, post offices, pharmacies, lottery outlets, among others, that offer banking services on behalf of a bank. The correspondents work in a way comparable to a service counter between the financial institution and the customer, but the transactions are carried out through debits and credits in the respective accounts which the customer and the correspondent have with the principal bank or institution. Among the countries reviewed, regulation varies with respect to exactly which business premises can be correspondents and what services they can offer.

Then there are mobile payments, which are a sub-set of the transactions that can be carried out electronically, though in this case a person pays through their mobile phone or tablet. There is a wide range of examples of mobile payments: from buying cinema tickets and other products and services, to acquiring applications, ring-tones for mobile phones or tablets, or even making air-time transfers. From mobile payments has evolved the concept of a mobile account whereby, in countries such as Kenya, the Philippines, South Africa and even Mexico, mobile phone companies have, either on their own or in conjunction with a banking institution, created a product of this kind which allows customers to hold money in an account and make payments charged to it via mobile phones or cards similar to a debit card (pre-paid cards).

In the models analysed, three types of mobile accounts can be distinguished. In the first, the banks offer a mobile account tied to a bank account and the telcos only offer the mobile phone network interface. The banks can in turn set up agreements with correspondent managers and technology service providers, where the former build up and manage the correspondent network and the latter set up and run the payments platform. Mexico and South Africa are examples of this model. In the second account type, telcos are involved all along the value chain, meaning that they offer mobile accounts and payment services, and manage the correspondent network and the technology platform. This model operates in Kenya and the Philippines. In the third account type, regulation allows specialized companies to offer mobile accounts and issue electronic money without the need to have a bank account. This is a new model that exists in Colombia, Brazil and Peru.

The money stored in mobile accounts is known as electronic money. This concept seems to trace its origins back to the increased use of mobile phone air-time and pre-paid cards (Porteus, 2006). In the year 2000, the European Union for the first time published a definition of electronic money, the basic elements of which have been adopted by several countries, including those looked at in this article. According to this definition, electronic money is a cash

equivalent which represents an obligation on the issuer, is stored on an electronic device and is accepted as a means of payment by institutions or persons other than the issuer.[1] In countries such as Colombia and Mexico, electronic money is treated like a deposit, can earn interest and is covered by deposit insurance.[2] In the other countries examined, e-money is not considered to be a deposit and is not covered by insurance (even though they do have other back-up mechanisms, such as a trust-type scheme in the cases of Peru and Brazil) and it can be sent by institutions other than banks, but it cannot be used as banking business to provide credit.

The correspondents also play an important part in access to and usage of mobile accounts, as they operate as points of exchange of e-money into cash and vice-versa. To summarise, it works as follows: people go to a correspondent and deposit physical cash in a mobile account which is in their name or in someone else's name and it is converted into virtual money with which the holder of the mobile account can make transactions via pre-paid cards or the mobile phone, which are charged to the balance of money deposited.

3.c.2 Brief history of the emergence of branchless banking in seven countries

Brazil is recognised as the worldwide pioneer of correspondents, having established a regulatory framework for them since 1973. Regulation there at the time only allowed banks to delegate the services of receiving and wiring payments, and the encashment of cheques, to their agents. Early this century the Brazilian authorities began to gradually make regulation more flexible to broaden the range of services offered, as they sought to distribute the benefits from government welfare programmes via the banks and extend access to financial services to all of the country's municipalities. To do this, in the year 2000 the government gave its blessing to a strategic alliance between the state-owned bank Caixa Econômica Federal (CEF) and the lottery outlets. The CEF thus became the first financial institution to have a presence over the entire territory and to be the principal distribution channel for social welfare programmes. CEF was followed by the country's biggest private bank, Bradesco. In 2001 this bank won a public bid promoted by the Brazilian Post Office, which allowed it exclusive access to the national post-office network. This gave rise to Banco Postal, a subsidiary of Bradesco. Other pioneering institutions within the Brazilian model of correspondents were the state-owned bank *Banco do Brasil*, via its subsidiary *Banco Popular and the private Lemon Bank*, which used intermediaries to expand their correspondent network (pharmacies, convenience stores, etc.) instead of setting up or acquiring their own network as CEF and Bradesco did.[3] In October 2013, Brazil's central bank issued guidelines for issuing e-money to complement the services provided within the correspondent network. With this new regulation the more prominent mobile phone operators have, in conjunction with financial institutions, begun to offer mobile account products. The company Teléfonica, together with MasterCard, was the first into the market, followed by Claro and Bradesco, Cielo and Banco do Brasil, and more recently CEF and MasterCard (Tellez-Merchan, 2013).

Peru was the second country in Latin America to implement the correspondent model. As with countries such as Guatemala, Chile and Colombia, in Peru the banks started to operate models resembling the correspondent template before a specific regulatory framework existed, with the intention of moving the less cost-effective low-value transactions out of the branches (Mas, 2008). In 2005 the country's largest bank, Banco de Crédito de Perú (BCP), approached the regulators about developing an overall regulatory framework that might provide guarantees for transactions it was already processing via correspondents. In December that year the circular was amended which regulates the opening, closing or transformation of bank branches and the concept of the *cajero corresponsal* (correspondent teller) was created.[4] In recent years, regulation in Peru has gone beyond correspondents by publishing a law in January 2013 to regulate e-money. As in Brazil's case, issuing electronic money is intended to complement transactions which are already processed via the correspondent network.

[1] Directive 2000/46/EC on Electronic Money. It was replaced by Directive 2009/110/EC, although the definition of electronic money did not change.
[2] In Mexico all deposit accounts are covered by insurance, pursuant to the Bank Savings Protection Act. Pre-paid cards which are issued by banks work in a similar way to a debit card and are associated with level 1 bank accounts, where the balance may not exceed the sum equal to 1,000 MXV (Mexican Units of Investment) pursuant to the "General Provisions referred to in article 115 of the Credit Institutions Act" of the Secretariat of Finance and Public Credit and to the central bank's Circular 3/2012. Through being associated with a banking deposit account, the pre-paid cards also represent an obligation on the issuing bank and thus they are also covered by deposit insurance.
[3] For further details on the emergence of correspondent banking in Brazil see Kumar et al. 2006.
[4] Circular No. B-2147-2005 of the Superintendency of Banking, Insurance and Pension Fund Administrators.

In Colombia, a regulation was passed in 2006 to allow the banks to use correspondents, although one of the major banks, Bancolombia, had already been working with commission agents some years before the regulation came into effect. Certain diagnoses were however carried out in the years after the regulation was brought in, and it emerged that the model was not attractive for either the banks or potential commission agents and, on top of this, opening simplified accounts (which was also covered in the new regulation) was not profitable for the banks. Evidence was also found that customers using correspondent services were either not from the ranks of the poorest in the country but were existing consumers of banking services (Alarcón & Mandrile, 2010 and CGAP, 2013). Given this situation, and the fact that the government was planning to expand its social agenda, Banco de Comercio Exterior, a Colombian development bank, set up a government programme known as Banca de las Oportunidades (BDO). Between 2007 and 2010, BDO designed and implemented a commercial banking subsidy scheme to extend banking outreach in a short time[5], and amendments were made to the regulation to usher in mobile accounts and e-money. Recently, in October 2014, a new regulation was issued which opens the door to the provision of financial services via electronic accounts outside the orbit of the banking institutions.

The Philippines, South Africa and Kenya are pioneers in developing mobile banking and electronic money. In the Philippines, two of the country's major mobile telephone operators, Globe Telecom and SMART, began to offer m-banking services from 2000. In 2005, the Philippines central bank authorised the launch of G-Cash and Smart Money, which are e-money products of Globe Telecom and SMART respectively. Four years later, a regulatory framework was provided for these products. In addition to these initiatives, in 2010 the central bank laid down rules for setting up micro-banking offices (MBOs), which operate in remote places where establishing a fully-fledged bank branch is not feasible and where their primary function is to open savings accounts using simplified file record requirements for the low-income bracket. In South Africa the banks Wizzit and MTN Banking were formed over 2004 and 2005 from the strategic alliances of two mobile phone operators with two banking institutions (Amalgamated Bank of South Africa), or ABSA, and Standard Bank respectively) to provide banking services for low-income earners via mobile phones. Meanwhile in 2004, the bank belonging to the postal service, Postbank, and the country's four largest banks introduced a low-cost, simplified file requirement account targeting the low-income segment. Other South African banks have developed their own branchless banking models. FNB, for example, has installed mini ATMs in retail shops, which offer withdrawals, balance requests and pre-paid purchases. South African financial regulation also allows e-money, but this can only be issued by regulated banks (CGAP, 2010a). In Kenya, the mobile banking model dates from 2007, when the government and one of the major telcos, Vodafone, joined forces to create the company Safaricom and to offer its customers M-Pesa, a mobile wallet for sending and receiving money in a way similar to recharging air-time. Other providers subsequently emerged which were authorised by the central bank. In 2010, regulations came into force which allowed financial institutions to offer services through correspondents, so one can find both bank agents as well as agents of the companies who offer mobile accounts.[6] In August 2014, the regulations were published for the national payments system, which for the first time lays down guidelines for providers of m-banking and e-money services.

The banks in Mexico have been using the figure of agents for some time, although the regulatory framework has been amended over time. In mid-1993 the banks were allowed to sub-contract establishments to act as commission agents and provide an array of services on behalf of the bank. In July 1993 the legislation was amended to deregulate the activities of commission agents: the requirement of authorisation to operate as such was removed, although the general obligations were established which are binding upon them in handling transactions (DOF, 1993; central bank, 1993). From then onwards, some banks began to operate correspondent networks via supermarket chains, department stores and the national telegraph office service, Telecomm. In February 2008, the idea of correspondents were again included in the Credit Institutions Act (LIC) and powers were given to the National Banking and Securities Commission (CNBV) to regulate and oversee them, while Mexico's central bank published initial regulations in 2009 on deposit accounts with simplified file requirements and mobile accounts. In 2011 further changes were made and a new scheme was set up for simplified file accounts, which made it even easier to open and use banking product

[5] For further details on subsidy schemes and the process implemented by the Colombian government to grant them, see CGAP (2013).
[6] Certain agents offer non-exclusive services, so they might be bank agents as well as agents of one or more mobile account companies. They are, however, a minority, and according to McCaffrey et al. (2013), only 4% of the agents operating in Kenya are non-exclusive.

accounts,[6a] whereby such simplified accounts could now be opened through correspondents and associated with mobile phones. Three business formats were established under the new regulations: two of these consist of phone companies providing only communications services and the banks operating the platform, either on their own or together with other companies; a third format is where the phone operators share the business model with the bank. Transactions are subject to banking regulation in all of these cases. Bancomer was the first to offer a product in 2011 using the first of these formats. In 2012 two more banks developed their business model in partnership with companies which provide payment platforms (the second type of format), which allows them to use any mobile phone operator. That same year, two other banks began to operate using the third format, forming a strategic alliance with one of Mexico's leading telcos and creating the company Transfer, which is intended to work with various banks to provide the administration for a mobile accounts platform.

3.c.3 Basic elements in branchless banking regulation

Institutions which offer branchless banking services

In some countries, not only the banks are permitted to provide branchless banking services. In Peru, Colombia and Brazil other non-banking financial companies, such as micro-finance houses and cooperatives, may set up correspondent networks, and the three countries have also established the concept of an electronic money-issuing institution. In Peru, only banks and other financial institutions are allowed to be issuers.[7] In Colombia, any legal person can be one, including postal and telecoms service operators.[8] In Brazil, only institutions which offer payment services are allowed to issue e-money, subject to prior authorisation from the central bank,[9] whereas in Kenya banks and other financial institutions can provide services through correspondents (banking agents) and issue e-money.[10] In Kenya, companies which offer mobile accounts can also have a correspondent network (mobile agents) but if they wish to offer electronic savings accounts these have to be associated with a bank. In South Africa, the banks are the only institutions which are allowed to accept deposits of funds from the public, and so only they can offer mobile accounts, have an agent network and issue electronic money. In the Philippines, regulation expressly prohibits banks from outsourcing any role relating to deposit transactions,[11] but the phenomenon of remittance agents exists, who can perform money transactions on behalf of other persons or institutions. Some of the m-banking providers have had to register their correspondents as remittance agents to be able to have a network which allows them to provide cash-in and cash-out transactions. As regards e-money and mobile accounts, the Philippines' regulation is more flexible, since it permits banks, financial institutions regulated by the central bank and telcos to offer these products.[12]

In Mexico, up until December 2013 only the banks were allowed to have a correspondent network, but thanks to the financial reform which became effective in January 2014 institutions from the popular savings and credit sector are permitted to have one. Mobile account services, however, are strictly limited to the banks, but regulation is flexible regarding the business models which the banks can have with telcos and third parties. As has already been said, these models can range from "purely banking agreements (which use phones only as a means to send information or for carrier services), to sharing business models where phone companies can manage the operations platform" (Alonso et al., 2013). Regulation in Mexico also covers setting up specialized or niche banks which can be allowed "to issue and place in circulation any means of payment determined by the central bank by complying with the technical and operational provisions established by the latter..." (LIC, 2014). This opens up the possibility of non-banking companies obtaining a banking licence to issue electronic money.

[6a] Simplified file accounts are deposit accounts which require less documentation and information to be opened in comparison with a traditional bank account. In 2011 the SHCP established three levels for simplified accounts according to identification details, the documents customers must provide, and the place where the account is opened. Each level has an upper limit on the amount which can be deposited and the balance to be held in the account.
[7] Law 29985 regulating the basic characteristics of electronic money as a means of financial inclusion.
[8] Law 1735 of 21 October 2014.
[9] Law 12865 of 9 October 2013.
[10] Regulation on the national payments system, the Kenyan central bank.
[11] Circular 268 of the Philippines central bank.
[12] CGAP (2010b) and Circular No. 471 of the Philippines central bank.

With respect to the business premises which can act as agents or correspondents, regulation varies from country to country, although in general they can be any lawfully incorporated legal person that has been in business for a certain period and has a good credit track record. The type of establishment can also vary according to the transactions carried out. In Brazil, for example, the most usual enterprises for paying for services are supermarkets (26% of all establishments which act as correspondents), pharmacies (25%), lottery outlets (22%) and post offices (14%). Another type of agent specialises in supplying loans, where these are mainly car dealerships (60%).[13] In Mexico, out of the 26,962 correspondent agents doing business as of 2014, 60% are convenience stores, 13% supermarkets, 10% pharmacies, 8% specialist shops[14], 6% Telecomm branches, and the remaining 3% other premises such as small retailers, petrol stations or federal government provisions stores.[15]

In certain countries the role exists of a correspondent administrator (CA), and these are hired by the bank to conclude agreements with and handle the administration of various agents for it. In Brazil there are CAs who provide the bank with either a complete administrative service (including the selection of agents and training of their employees) and technological integration of agents under their management, or just the technological integration service. In Colombia, the CAs are responsible for searching out potential correspondents and arranging everything they need to operate. In Mexico, regulation also provides for the role of a correspondent administrator which acts for and on behalf of the banks in signing correspondent agreements and running the network. There are currently some 32 CAs in Mexico, where the most significant is the store chain Oxxo, which manages 48% (13,036) of the close to 27,000 correspondent units in operation.[16]

Interoperability and transaction clearing

A key element in branchless banking is interoperability, as it has an impact on the efficiency of service, and ultimately on quality and pricing for customers. The CGAP (2011) proposes a useful approach to gain an insight into how interoperability in branchless banking works. According to this approach, interoperability works on three levels: 1) the interconnection platform, 2) agent exclusivity, and 3) interoperability at customer level. On the first level, the platforms are interoperable when they allow funds to be transferred from one account to another, regardless of financial service supplier. If the platform is not interoperable, customers can only send or receive payments to or from accounts at one and the same institution. To be interoperable, platforms can connect to each other directly or indirectly. In the first case, a banking institution's platform connects bilaterally with that of another. In the second case, another institution acts as an intermediary and acts as a clearing house for the transactions performed between the institutions involved. This institution can be owned by the mobile account providers or a third party. There can also be several intermediary platforms which connect to each other. On the second level, if the agents are not tied to one provider, consumers can carry out transactions at any correspondent establishment. Otherwise they can only perform money transactions at those establishments that have an agreement with the account provider. On the third level, if the service which customers use is interoperable, they can access their account from any phone, regardless of telephone company. Interoperability on this level also allows customers to access the accounts they might have with various banks.

In most of the countries looked at, regulation does not require interoperability, so the major mobile account players are not interoperable, which is why no special clearing system has been developed in such countries either. In Brazil and Kenya, exclusivity agreements with correspondents are observed too[17], which is not the case in the other countries examined. As the market gradually develops, though, it will become increasingly necessary for platforms to be interconnected and for clearing systems to be set up, which is already happening in these countries. In Brazil, the banking association has proposed that the interbank payments clearing house should be the one to clear mobile payments (CGAP, 2010c), while in Kenya M-Pesa's competitors and the regulators are also pushing for the creation of a clearing system (Mark, 2011). In Peru, the banking association has started up the "Peru Model". This is a platform for processing and settling mobile payments participated in by financial and telecoms institutions, which will allow interoperability on the three levels. It is expected to become effective in 2015.[18] Mexico seems to be an exception, as

[13] CGAP(2009) with data from Febraban in June 2008.
[14] Such as RadioShack, Blockbuster, Sanborns, etc.
[15] Source: BBVA Research calculations with CNBV data from October 2014.
[16] Information as of October 2014.
[17] In Brazil those institutions which do not have exclusive contracts with their correspondents clear their transactions through the Interbank Clearing System.
[18] For further details on the Peru model see Cámara & Tuesta (2014).

regulation explicitly specifies interoperability, and in late 2013 provisions were published that regulate the creation and functioning of clearing houses which specialise in mobile phone transfers.[19]

In the countries where correspondent interoperability exists, interbank transactions are cleared and settled in the low-value clearing houses, as these work through debit and credit settlement entries in the accounts of customers and correspondents. In Mexico, Cecoban, the Electronic Clearing House, operates the system for logging and clearing cheques, electronic fund transfers and standing orders and the central bank settles them in SIAC, the system which handles the current accounts which banks have at the central bank. The clearing of debit and credit card transactions is carried out by PROSA, and settlement is performed through a commercial bank.

Services provided by branchless banking

The range of services on offer varies according to the regulatory framework and the model used in each country. In most countries, basic banking services are provided via correspondents, including withdrawals, deposits into accounts held or those of others, and payments for services (Table 3.c.1), although in other countries the spectrum of services is broader. For example, in Brazil and Colombia it is possible to open simplified file requirement accounts, apply to open savings accounts, request loans or make draw-downs against pre-arranged loans. Other services permitted include, in the case of Brazil, making deposits and withdrawals in the case of mutual funds, international transfers, and requesting replacements for debit cards and cheque books. In Kenya, banking correspondents take cheque-book requests and banking correspondence for customers. In Mexico, the transactions available through correspondents are cash withdrawals and deposits, loan and services payments, balance enquiries, opening simplified file accounts, services associated with mobile accounts and electronic money, and others, such as cheque payments (provided they are drawn against the principal bank) and cash purchases of dollars (restricted in some regions).

Table 3.c.1
Comparison of services offered by correspondents

Service	Mexico	Brazil	Peru	Colombia	Kenya	South Africa	Philippines
Withdrawals	√	√	√	√	√	√	√
Payments into own or other deposit accounts	√	√	√	√	√	√	√
Payment of loans and services	√	√	√	√	√	√	√
Balance enquiries	√	√	√	√	√		
Opening accounts (simplified file requirement)	√	√		√			
Requests to open savings and term accounts		√		√	√	√	
Requests for loans and financing		√		√	√		
Drawdown against pre-arranged loans		√		√			
Mobile account services (cash-in/cash-out)	√	√	√	√	√		√
Others	√	√			√		

Sources: CNBV (2011 and 2010); CGAP (2010a); GSMA (2013)

[19] Circular 3/2013 issued by the central bank in Mexico

In South Africa, regulation for banking through correspondents has evolved via mobile banking. Even though banks are only permitted to use agents to take deposits, make payments or withdrawals, and take loan applications, there is flexibility as regards which business premises can be correspondents and the services they can offer, meaning that in practice each bank has developed its own model. For example, Wizzit uses post offices as well as the ABSA ATM network to take deposits, whereas customers of MTN Banking can make deposits in convenience stores with anyone the bank has an agreement with. Services can be provided via mobile accounts, such as transfers to accounts held and third parties, balance enquiries, electricity service payments and buying air-time (CGAP, 2010a). In the Philippines m-banking consumers can make payments, transfers and balance enquiries. Cash-in and cash-out transactions are handled through agents registered by the institutions which offer m-banking services and issue e-money. In Peru, Brazil and Colombia, electronic deposit accounts can be offered and mobile phones or pre-paid cards can be used as a means of payment, so customers do not need to have a bank account. With these accounts the transactions available are deposits, withdrawals, transfers, and payments for services and the correspondent network can be used. In none of the three cases are issuers allowed to offer loans using the funds they have received. In Colombia, regulation even allows accounts to be opened via mobile phone by keying in basic ID data. In Kenya, even though the m-banking and e-money model is one of the most advanced, the regulation for it is only very recent. Prior to bringing this in, the regulators used to authorise providers on a case-by-case basis. When the M-Pesa platform was launched, it was only possible to make certain payments for services, withdrawals and cash deposits through Postbank branches. One year later, taking receipt of international remittances was permitted, a pilot micro-insurance product for farmers was launched and transactions via agents were allowed. The number of market participants and the range of services on offer have increased over time, meaning that at present a mobile account can be used to pay school and university fees, open savings accounts and take out life insurance, make purchases or request and receive fixed sum loans (GSMA, 2013).

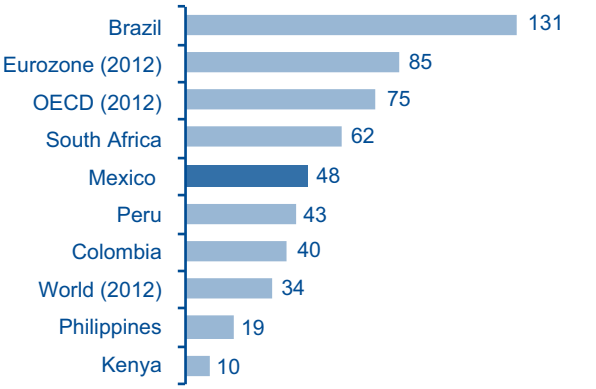
3.c.4 Key trends in branchless banking access and usage

Trends in access

To gauge the outreach of the branchless banking access points analysed in this piece, a brief international comparison is made in terms of other traditional channels, such as ATMs and bank branches. The demographic indicators per 100,000 adults given in graphs 3.c.1 and 3.c.2 show that Brazil has the most ATMs; even more than developed countries (OECD and eurozone). Brazil also has the largest number of branches among the countries under review, with just above the figure for the developed countries. After Brazil comes South Africa, with 62 ATMs per 100,000 adults, just below the developed countries. South Africa is one of the developing countries with the highest levels of access to and use of financial services. One example of this is that 75.0% of adults have a bank account (Finscope, 2014) vs. 41.4% in the low- and middle-income countries and 39.3% in Latin America (Global Findex, 2014). Moreover, 89.0% of people with a bank account use ATMs to make cash withdrawals, compared to 42.0% in the BRICS countries[20] and 49% in other developing countries (World Bank, 2013). Mexico is below Brazil and the developed countries for both indicators. Relative to Peru and Colombia, Mexico comes higher in ATM numbers and between the two in bank branch numbers. Kenya offers the lowest indicators, with seven ATMs and four branches per 100,000 adults. A study by CGAP (2010d) reveals that the low banking infrastructure penetration in Kenya is partly due to banks asking for very high minimum balances and charging hefty commissions, which hampers access and use among the lower income earners.[21]

[20] BRICs: Brazil, Russia, India and China.
[21] An example of this can be found in Johnson et al., (2012): in Kenya the commission for ATM withdrawals is equal to the price of a kilo of maize, which could feed three people at one sitting.

Graph 3.c.1
Number of ATMs per 100,000 adults, 2012

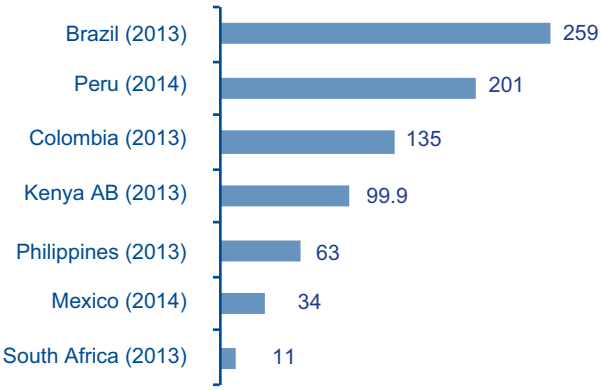


Graph 3.c.2
Number of bank branches per 100,000 adults, 2012

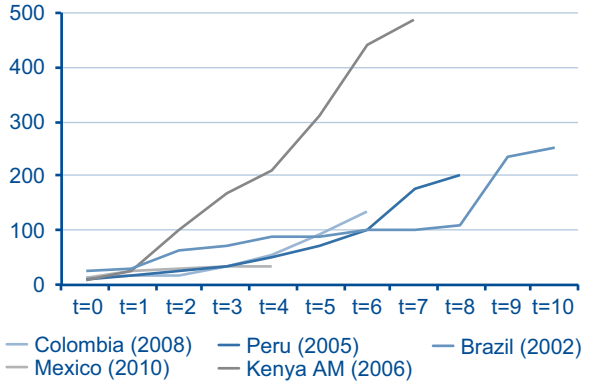
Sources: Eurozone, OECD and World: World Development Indicators, World Bank. Peru: Superintendency for Banking and Insurance. Colombia: Report on Financial Inclusion 2014, Banca de las Oportunidades. Brazil: Branch data from the central bank; ATM data from the Financial Access Survey, IMF. Other countries: Financial Access Survey, IMF

By way of contrast, in terms of agent or correspondent access points, Kenya exhibits the greatest penetration of mobile correspondents or agents (Graph 3.c.3), followed by Brazil and Peru. Since the branchless banking model was introduced, Kenya and Brazil have experienced exponential growth (Graph 3.c.4), and in the case of Brazil correspondents represent the predominant channel for financial services. According to Sanford & Cojocaru (2013), the growth of the correspondent model in Brazil derives from four factors: i) the government's need to distribute welfare benefits to millions of families, many of whom live in remote areas; ii) the introduction of regulatory measures which have served as a driver for correspondent banking[22]; iii) economic growth and poverty reduction, which has boosted demand from middle- and lower-class families, and iv) the introduction of the *Boleto Bancario* (banker's ticket) payments system in 2009.[23]

Graph 3.c.3
Number of agents per 100,000 adults



Graph 3.c.4
Number of agents per 100,000 adults over time*



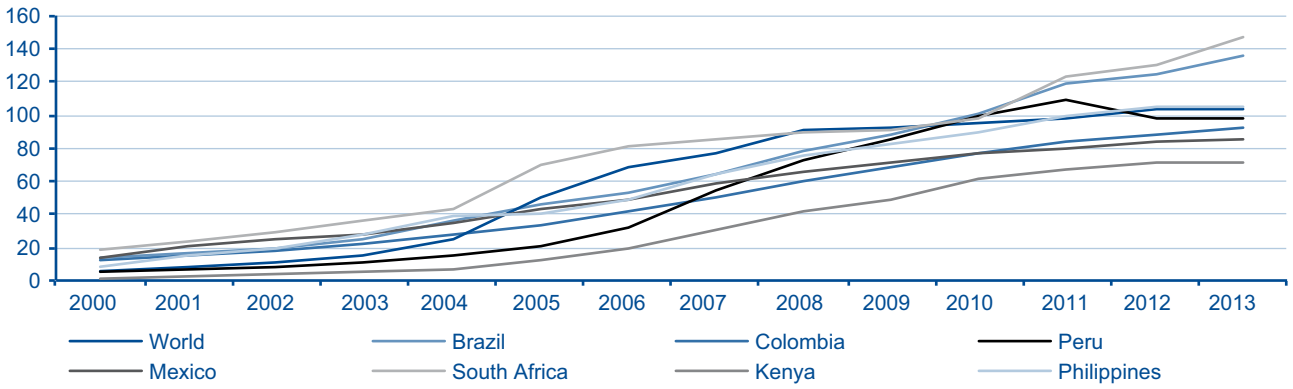
* t=0 represents the year correspondents were introduced in each country. This includes banking correspondents and those acting on behalf of companies offering mobile banking, as well as those provided by other, non-banking financial institutions, in those countries where regulation permits.
Sources: Kenya and the Philippines: central banks; Brazil: central bank and Kumar et al. (2006); South Africa: Financial Access Survey, IMF; Colombia: Report on Financial Inclusion, Banca de las Oportunidades; Mexico: CNBV.

[22] Among such measures, Sanford & Cojocaru (2013) mention the broadening of the range of company types allowed to act as correspondents, greater flexibility of transactions they are allowed to perform, and a relaxation of the need for central bank authorisation for each agreement concluded by the financial institutions acting as principal.
[23] The *Boleto Bancario* is a means used in Brazil to make payments to companies or people for their products or services. In its most common form, it is a standard document with a barcode which enables payment to companies or people at any bank branch, ATM, correspondent or via the internet.

In Colombia, the increase in correspondents is explained by the introduction of subsidiary programmes for banks by the BDO. In Kenya the mobile agents (MAs) have increased their numbers substantially, thanks to the model pioneered by M-Pesa. Banking agents (BAs) have also proliferated in spite of their recent deal. The Philippines is fifth-ranked in terms of correspondent access points, although in recent years it has evidenced significant growth, as over 2012 and 2013 the number of agents per 100,000 adults grew from 50 to 63, which indicates a 25.4% increase, primarily spurred on by a 29.6% rise in the number of e-money agents (central bank, 2013).[24] South Africa shows the least correspondent penetration, which could relate to the greater penetration and use of ATMs.

There is no doubt that the mobile phone has changed the way the world communicates, letting companies and individuals obtain information swiftly and cheaply. Academic literature has presented evidence of the economic and social benefits associated with the lower costs which the advent of mobile phones has brought about (Aker, 2008; Aker, 2009; Aker & Mbiti, 2010; Orotin, et al., 2014). In developing countries the introduction of this technology has had an even greater impact, as in rural, remote or relatively unreachable regions mobile phones have become the primary and exclusive infrastructure for communication. On a worldwide scale the technology has been swiftly embraced. Graph 3.c.5 shows that in 2000 there were 12 mobile phone subscriptions for every 100 inhabitants globally, yet by 2013 this had risen to 92.6, which meant an almost eightfold rise in the coverage rate in the previous 14 years. All the countries studied in this note currently show a population coverage level of over 70 subscriptions per 100 inhabitants, and in some cases, such as Brazil, Colombia, South Africa and the Philippines, this is in excess of 100, so their inhabitants average more than one mobile phone subscription. Kenya is the country where growth is the most rapid, jumping from 0.4 to 70.6 subscriptions for every 100 inhabitants between 2000 and 2013.

Graph 3.c.5
Number of mobile phone subscriptions per 100 inhabitants



Source: World Economic Indicators, World Bank

The brisk take-up of mobile phone technology has opened up the chance to access a broader range of services, including those of a financial hue. As shall be seen further on, the increase in access points for financial services and the greater mobile phone coverage rate seem to be tied in with more extensive use of such services, and this also tells us something about the potential that still remains for maturing these channels even further.

Trends in usage

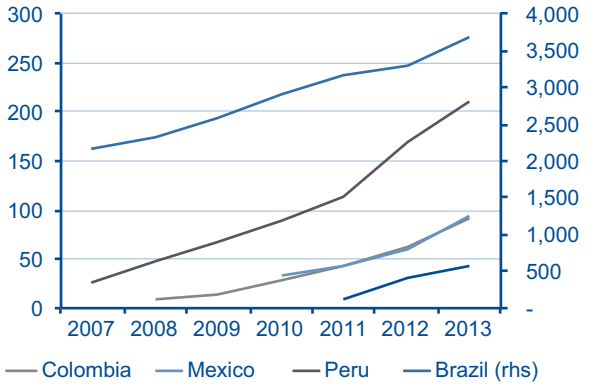
Correspondents of financial institutions

Although the available data is not always comparable in all countries, certain patterns are discernible. For example, Graph 3.c.6 charts trends in the number of transactions through correspondents between 2007 and 2013. In it we can note a certain dynamism in all countries, particularly in Brazil, which has consistently recorded higher transaction volume, with this reaching almost 3.7 billion in 2013. This is followed by Peru, with 212 million transactions that

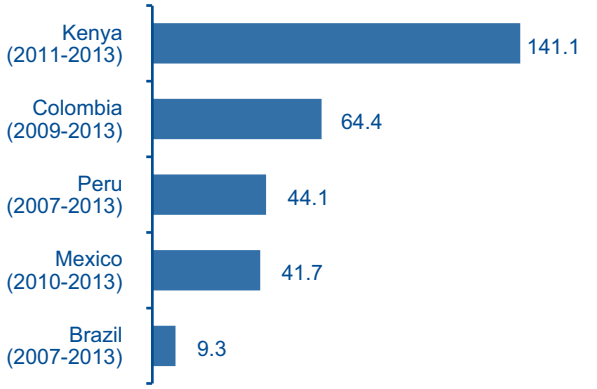
[24] Not shown in the graph.

year, Colombia and Mexico with similar levels to each other (91 and 93 million transactions respectively in 2013) and Kenya, which shows a lower volume of 42 million. In terms of AAGRs (Graph 3.c.7), Kenya is top-ranked, which could be associated with the fact that correspondent banking there has only been in operation for very few years relative to LatAm countries. Among the countries in that region, the biggest growth is observable in Colombia. This could also relate to the late start for the model there in comparison with Peru and Brazil, which show lower AAGRs, while transaction volume growth in Mexico is lower than in Peru and Colombia, but higher than in Brazil, where the model has been up and running for longer.

Graph 3.c.6
Number of transactions through correspondents over time (million)*



Graph 3.c.7
Average annual growth in the number of transactions via correspondents (%)

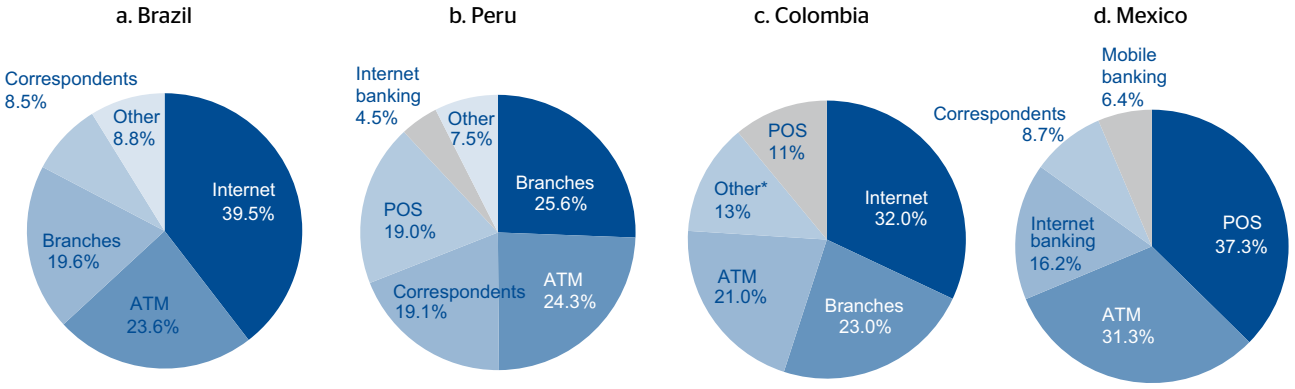


* Includes transactions of banking correspondents and other, non-banking financial institutions where regulation allows this. Does not include transactions via mobile account correspondents.
Sources: Brazil and Kenya: central banks; Colombia: Report on Financial Inclusion, BDO; Peru: Association of Banks of Peru; Mexico: CNBV

Although the increase in the use of correspondents has been considerable, this is still less than other channels. Graph 3.c.8 gives the distribution of the number of non-counter transactions over one year in four LatAm countries. In Brazil (panel a) transactions via correspondents in 2013 represented 8.5% of the overall figure, whereas other channels such as internet banking and ATMs showed greater use (39.5% and 23.6% of transactions respectively). In Peru (panel b) correspondents are used more than internet banking and other channels (19.1% vs 4.5% and 7.5% respectively) and they are used in percentages on a par with POS terminals (19.9%), though there is predominantly greater usage via branches and ATMs. In the case of Colombia (panel c) the information on transactions through correspondents is available in aggregate form in the "Others" category, which also includes m-banking transactions, and they account for 13% of overall transactions. This percentage is below usage for channels such as internet (32.0%), branches (23.0%) and ATMs (21.0%).[25] In Mexico (panel d), correspondents represent 8.7% of total transactions (a percentage similar to Brazil), just above mobile banking, whereas POS terminals and ATMs are the predominant channels for transaction volume (37.3% and 31.1% respectively).

[25] Another example of the scant use of correspondents in Colombia is provided by some of the figures from its most recent Report on Financial Inclusion, which reveals that as of December 2013 around 40% of agents did not register any kind of transaction, even in municipalities where there is only one branch (Banca de las Oportunidades, 2013).

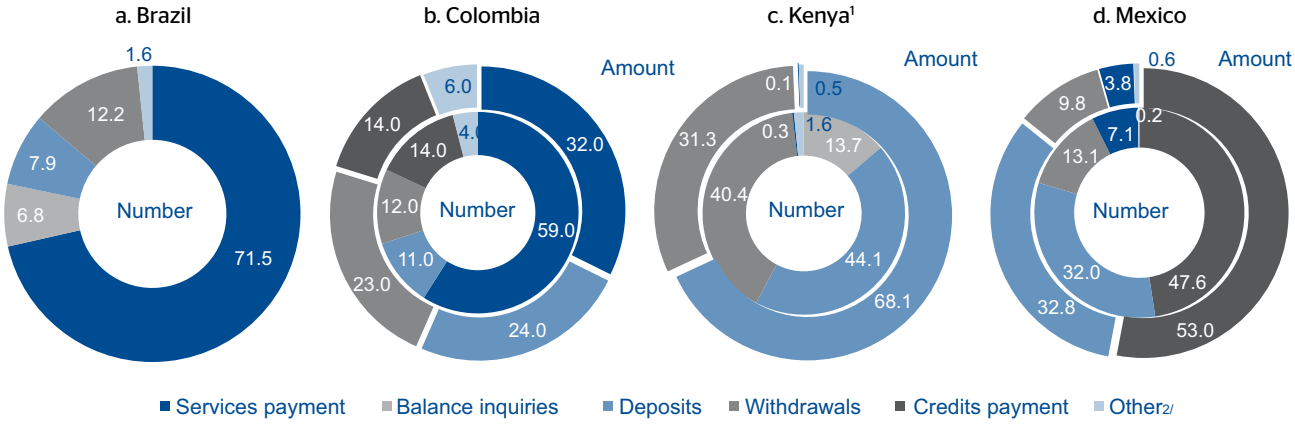
Graph 3.c.8
Distribution of the number of transactions by channel, 2013



Sources: Brazil: central bank. Peru: Association of Banks of Peru. Colombia: Banca de las Oportunidades, Colombia. Mexico: central bank and CNBV

A third pattern which can be distinguished from the available information is that in Latin America correspondents are mainly used to make payments for loans and services and, to a lesser extent, for deposits and withdrawals. Graph 3.c.9 shows the distribution of the number and value of transactions performed in 2013 in four countries. In the case of Brazil (panel a), 71.5% of transactions were payments, 12.2% withdrawals and 7.9% deposits. In Colombia (panel b), payments for services were 59.0% of the overall number of transactions and accounted for 32.0% of the value of them. In Mexico (panel d), 47.6% of transactions through correspondents and 53.0% of their value were payments for services. In Kenya (panel c), the situation is different, as only 0.3% of transactions and 0.1% of the value of these involved payments for services; the lion's share of transactions (68.1% of the number and 44.1% of the value) are deposits, followed by withdrawals (40.4% and 31.3% of the number and the value respectively). These facts could be linked to the intensive use made of mobile accounts to pay for services, while correspondents are used more for cash exchange (cash-in/cash-out) transactions.

Graph 3.c.9
Distribution of the number and sum for transactions via correspondents, 2013 (%)

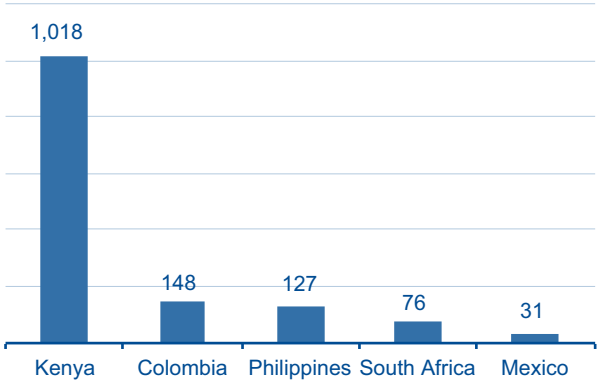


1/ Only includes transactions through banking agents Transactions through mobile agents are not taken into account.
2/ For Colombia this includes transfers of funds, sending and receiving money orders, applications to open savings accounts and loan requests. For Kenya this covers pay-outs of pensions and welfare benefits and fund transfers. Also included within number of transactions are receipts of applications to open accounts and for credit cards. For Mexico this includes payment of cheques, balance enquiries and opening accounts.
Sources: Brazil, central bank; Colombia, Report on Financial Inclusion, Banca de las Oportunidades; Mexico, CNBV.; Kenya, central bank

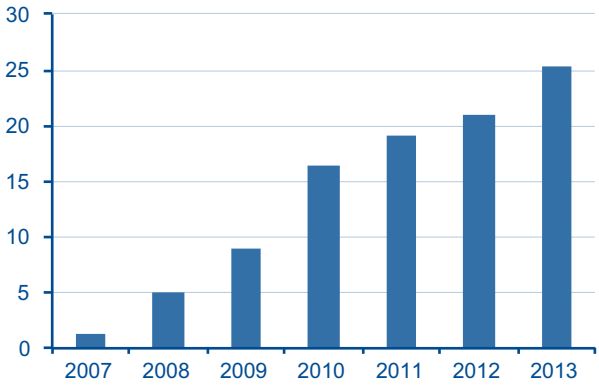
Mobile accounts and electronic money

In terms of developments in the use of mobile accounts and e-money, differing trends can be detected among the countries under review, although all of them display sizeable growth in recent years. Kenya leads the way in the number of accounts associated with mobile financial services, with practically one mobile account for every adult (Graph 3.c.10).[26] A long way behind, Kenya is followed by Colombia, the Philippines, South Africa and Mexico. Graphs 3.c.11 and 3.c.12 also show how Kenya is one of the countries which uses mobile accounts intensively. The M-Pesa model's introduction marked a change in paradigm, as it brought access to the financial system and payments to regions with little or no services of any kind, including banking. The rapid growth in the number of mobile accounts (Graph 3.c.11) led to around 74% of the population having one in 2013 (GSMA, 2013). While evidence has been found that this model has had a positive impact on low-income families (Haas et al., 2010; Mbiti & Weil, 2013), it also seems that its potential has not been fully tapped. For example, in some studies it has been found that most consumers only use their mobile account to make transfers, especially to send domestic remittances, whereas they still use informal savings and lending mechanisms (Johnson et al., 2012). It has also emerged that cash is generally the most widely used means of payment and that the time that e-money is kept in the mobile account is short, as transfers are quickly cashed (Stuart & Cohen, 2011). Among Kenyan businesses, usage of mobile accounts and e-money is rare. Formal businesses generally use them to receive money from certain clients, though only in a minority of cases as cash is more common, but they are not used to pay employees or suppliers (Mas & Ng'weno, 2012).

Graph 3.c.10
Number of accounts associated with mobile financial services per thousand inhabitants, 2013



Graph 3.c.11
Number of mobile accounts in Kenya (mn)



Source: Financial Access Survey, IMF

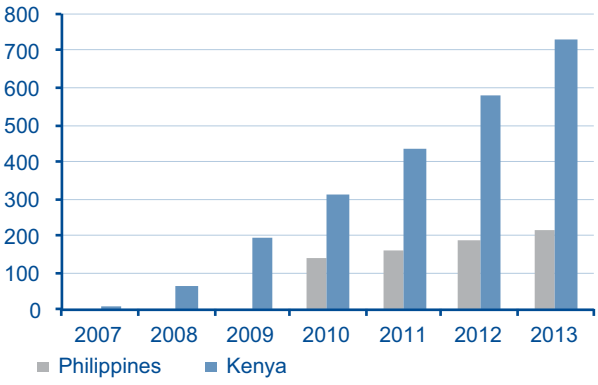
In Colombia, the number of electronic accounts has risen substantially in recent years: between 2010 and 2013 their AAGR was 23%, with 2.8 million accounts in 2010 and a little over 5 million in 2013. The largest burst of growth (45%) occurred from 2012 to 2013, which arose when beneficiaries of a government programme were introduced to a mobile banking product (Banca de las Oportunidades, 2013). As a result of this growth, Colombia has a larger number of accounts per 100,000 adults than the Philippines, South Africa and Mexico (Graph 3.c.10), although most Colombian banks which offer mobile accounts do this for existing customers. Furthermore, a study by the International Finance Corporation of demand for mobile financial systems, among adults from low-income brackets in Colombia's major cities, reveals that a mere 1% of survey respondents knew about mobile financial services (IFC, 2012). In Peru, mobile device business accounted for 0.1% of all banking transactions in 2012 and, as with Colombia, mobile accounts appear to be a channel to offer extra services to customers already using banks (López-Moctezuma et al., 2013).

[26] Although the information for Kenya comes from the same source as that for Mexico, it should be noted that they are not necessarily comparable since, as stated at the beginning, in Kenya the main provider of mobile accounts is a telco, whereas in Mexico only banks can offer this product.

In the Philippines, the growing proportion of international remittances in family income has partly contributed to an increased usage of e-money.[27] To provide a service for workers abroad, the company Smart developed a product which enables them to send remittances from outside the country to a mobile account in the Philippines.[28] The launch of this product was one of the factors behind the figure of 34% growth in electronic account numbers between 2011 and 2013, which reached 26.7 million accounts in 2013, of which 70% work via pre-paid cards and 30% are associated with a mobile phone (central bank, 2013). For the same reason, the number of e-money transactions has climbed notably (Graph 3.c.11).

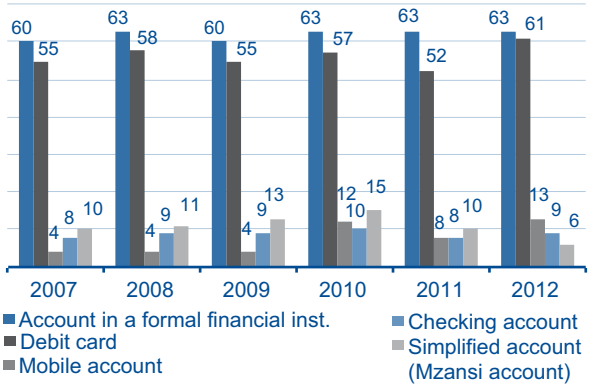
In South Africa the findings from the Finscope survey show a rise in the popularity of accounts linked to mobile devices. In 2007, 4% of adults claimed they used a mobile account, while in 2013 this figure had risen to 13%. Thanks to this, mobile accounts were the third most-used product in South Africa during 2013, behind debit card accounts (61%) and savings accounts (39%).[29] Even so, the widespread use of ATMs and debit cards predominates, where these are used for cash withdrawals.[30] The same survey also reveals that among those who use a mobile account, 54% do so for balance enquiries, 15% to pay for services and 12% to send and receive money.

Graph 3.c.12
Number of e-money transactions (mn)



Sources: central banks

Graph 3.c.13
% of the adult population using various financial products in South Africa



Source: Finscope, 2013

3.c.5 Conclusions

Whether using the correspondent or the mobile account model, in the seven countries studied branchless banking has grown apace. In these countries the banks, the financial institutions and even the mobile phone companies have adhered to these models to broaden the array of financial services beyond the branch system, with certain differences and aspects in common in terms of their emergence, regulatory frameworks and trends.

Among these points is, to start with, the fact that in the countries examined there are differences of whether the institutions which have developed the branchless banking market have been telcos (the Philippines and Kenya), banks (South Africa and Mexico), or other financial institutions (Brazil, Colombia and Peru), and the phenomenon that each

[27] Approximately eight million Filipino workers abroad send an annual sum of USD27bn, equal to 9.8% of the country's GDP (World Bank, 2013). As well as this, the Philippines is the world's third biggest recipient of remittances, accounting for some 4.7% of the total globally, behind India (71%) and China (60.2%) (BBVA Research, 2014).
[28] For further details on the features of this product, see GSMA (2009).
[29] Information not given in the graph.
[30] In the 2014 survey, 81% of adults reported that they use their bank account to withdraw money from the ATM.

model can have its strengths and weaknesses. In Kenya and the Philippines, for example, the model provided by the telcos has made it possible to extend access to regions with little or no banking infrastructure. The main weakness of this model is that telcos are not regulated in the same way as financial and banking institutions, which limits them to offering only transaction-based products and services. This model implies that the deposit-makers' savings could face greater risk as there is no prudential regulatory framework to protect them. Conversely, mobile accounts with financial institutions have the advantage that other products such as loans or insurance can be offered through them, and in the case of bank mobile accounts the benefits are greater still, as on the one hand they can be covered by deposit insurance, while on the other hand the range of products and services is wider given that savings accounts can be offered. An examination of the costs associated with each of these models might add flesh to these comparisons, which is something we hope to pursue in future ***Mexico Banking Outlook*** notes.

Second, it is noticeable that in several countries the technological infrastructure and the development of branchless banking models emerged before regulation, and that the latter has been tailored to the existing market. In Colombia and Peru, for example, the correspondent model came into being prior to a regulatory framework, which also happened in Kenya, South Africa and the Philippines with the mobile accounts model. In the countries where this has occurred, significant growth has been noted in access and usage regarding branchless banking services, although in some cases this growth has only been enjoyed by a single or very few institutions. This poses a challenge for public policy, which seeks to promote the maturing of these models within a context of competition and prudential regulation. Interconnectivity is also an important matter with respect to the development of branchless banking, as on the one hand regulation is expected to be oriented towards a higher degree of interconnection, since it provides access for more consumers, boosts usage of these channels, and incentivises competition. Yet on the other hand, in a fledgling market such as mobile banking, policy aimed at fomenting competition should be balanced against the goal of developing the market, which is achievable by means of incentives for those entering first. Giving free rein for all potential providers to interconnect from the start, and with no associated cost, might give rise to problems of the "agent-principal" kind and disincentivise investment. We therefore think that, as part of the process of implementing the ideal public policies to mature the market, it would be advisable to weigh up whether the right incentives have been chosen and if they are flexible enough to be changed if progress does not go to plan.

A third issue concerning this study is whether the models we have looked at have been *additive* or *transformational*. According to the definitions offered by Porteus (2006), additive models focus on customers with existing bank accounts, whereas transformational models deliberately seek to serve as a tool for financial inclusion. The positive growth trends displayed by access and usage in branchless banking which can be inferred from the available information indicate that all models have enjoyed a degree of success as alternative or transformational financial channels, as in some countries evidence has been found of a positive impact of the entry into the market of these channels on the unbanked population. Besides the studies already referred to in the note, we might mention that by Sanford & Cojocaru (2013) in Brazil, which suggests that the people who use correspondents the most are typically from the lower-income brackets, with a lower educational level, mainly women, and usually live in rural areas. There is therefore some degree of evidence that in Brazil correspondents represent a channel which facilitates access to services in financially excluded locations. In a study on Banco Postal, Bosch & Ansón (2008) identify a positive impact on the communities where Banco Postal opened an agency in 2002. For example, they find that in these municipalities there was an increase in new business start-ups and the formal economy relative to those municipalities where no BP agent opened for business. They also observe that in municipalities where a BP agency was opened branches and correspondent offices of other banks also opened, although these municipalities were more financially developed, as they already had a banking presence. These results provide evidence of the positive externality which can be brought about by banking correspondents and the positive impact they can have on local development. This could be because, in general, branchless banking enables transactions to be performed rapidly and reliably, both remotely and at little cost. McKay & Pickens (2010) compared the price of different branchless banking services in several countries, and they found the channel to be 38% cheaper than traditional banking and 54% lower than the cost of an informal financial channel.

Success has, however, been limited, as the information also suggests that branchless banking models still have not been matured to their full potential. In various countries, correspondents are used less than other channels and, as with m-banking, usage of them is chiefly to pay for services or make transfers. Moreover, in certain cases they have turned out to be an extra service for customers who already use banking, and not a tool to extend provision to the base of the pyramid. Put another way, the evidence shows that in certain cases these channels have not been the

panacea to boost banking usage and they are catering for transactional needs rather than saving and loan requirements really. Thus two of the challenges which both financial institutions and those responsible for public policy face in making the step from an/a additive to a transformational model are: i) promoting greater usage of these channels rather than traditional ones, and ii) incentivising purpose-designed savings and loan products specifically for branchless banking. Identifying whether the branchless banking models in Mexico have been additiveor transformational, and measuring the impact of these on consumers are lines of investigation which we would also like to address in future ***Mexico Banking Outlook*** notes.

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4. Statistical Appendix

Table 4.1

Financial savings: Balances in billions of November 2014 pesos

	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV 11	IV 12	IV 13	III 14	Struc % III 14
M4a	5,883	6,267	6,965	7,567	8,110	8,890	9,105	9,768	10,882	12,032	12,590	13,300	
- Bills and coins held by the public	409	445	480	535	569	614	644	688	737	784	815	794	
= Financial savings *	5,473	5,822	6,484	7,032	7,541	8,276	8,461	9,080	10,145	11,248	11,775	12,506	100.0
I. Depository institutions	2,345	2,471	2,649	2,654	2,892	3,238	3,256	3,409	3,612	3,809	3,951	4,042	32.3
Development banks	390	387	464	388	368	391	407	412	431	469	508	551	4.4
Resident commercial banks (demand + term)	1,890	2,010	2,104	2,172	2,403	2,716	2,703	2,837	3,002	3,153	3,259	3,294	26.3
Demand	976	1,013	1,139	1,240	1,361	1,406	1,472	1,612	1,759	1,851	1,977	2,058	16.5
Term	914	997	966	931	1,042	1,310	1,231	1,225	1,243	1,302	1,282	1,236	9.9
Foreign agencies of commercial banks	51	58	60	71	96	104	89	98	115	119	102	106	0.8
Savings & Loan Associations (S&L)	14	17	20	24	26	26	57	62	65	68	82	91	0.7
II. Securities issued by the public sector	2,337	2,417	2,846	3,350	3,560	3,658	3,829	4,246	5,018	5,906	6,231	6,839	54.7
Securities issued by the Federal Government	1,452	1,329	1,510	2,064	2,362	2,576	2,741	3,045	3,708	4,519	4,762	5,263	42.1
Brems	236	293	335	119	16	1	1	1	0	0	0	0	0.0
IPAB bonds	409	497	602	694	750	651	626	662	704	753	759	815	6.5
Other public securities	240	299	399	474	433	430	461	538	606	635	710	761	6.1
III. Securities issued by private companies	272	302	305	341	394	382	368	381	424	419	447	448	3.6
IV. SAR outside of Siefores	519	564	624	686	695	997	1,008	1,044	1,091	1,114	1,147	1,177	9.4
Financial savings = I + II + III + IV	5,473	5,755	6,424	7,032	7,541	8,276	8,461	9,080	10,145	11,248	11,775	12,506	100.0
Instruments included in financial savings													
Siefores	623	707	838	988	1,096	1,162	1,351	1,567	1,709	1,994	2,060	2,248	
Public sector securities held by foreigners	38	116	162	199	301	346	391	731	1,145	1,831	1,976	2,154	
Investment funds (only debt**)	480	484	619	805	927	837	957	1,169	1,171	1,307	1,312	1,436	
Investment funds (debt and equity***)	564	587	729	969	1,137	986	1,146	1,419	1,433	1,609	1,687	1,889	
Financial savings without SAR total***	4,331	4,483	4,961	5,358	5,750	6,117	6,102	6,469	7,345	8,140	8,568	9,081	
SAR Total (Siefores and non-Siefores)	1,142	1,271	1,463	1,674	1,791	2,159	2,359	2,611	2,800	3,108	3,207	3,425	
Real annual percentage change,%													
M4a	9.3	6.5	11.1	8.6	7.2	9.6	2.4	7.3	11.4	10.6	4.6	9.0	
- Bills and coins held by the public	8.3	8.6	8.0	11.4	6.4	7.9	4.9	6.9	7.0	6.4	3.9	12.8	
= Financial savings *	9.4	6.4	11.4	8.4	7.2	9.7	2.2	7.3	11.7	10.9	4.7	8.8	
I. Depository institutions	5.9	5.4	7.2	0.2	9.0	12.0	0.5	4.7	6.0	5.5	3.7	7.5	
Development banks	4.1	-0.7	19.8	-16.4	-5.1	6.4	4.1	1.1	4.6	9.0	8.3	12.1	
Resident commercial banks (demand + term)	7.5	6.3	4.7	3.2	10.6	13.1	-0.5	4.9	5.8	5.0	3.4	6.5	
Demand	9.1	3.8	12.4	8.9	9.7	3.4	4.7	9.5	9.1	5.3	6.8	11.8	
Term	5.9	9.0	-3.1	-3.5	11.9	25.7	-6.0	-0.5	1.5	4.7	-1.6	-1.6	
Foreign agencies of commercial banks	-28.4	13.4	4.4	18.3	34.7	9.0	-15.1	10.5	17.0	3.5	-14.3	9.4	
Savings & Loan Associations (S&L)	21.5	19.4	19.0	16.6	9.3	2.4	115.8	9.3	4.3	5.5	20.5	16.8	
II. Securities issued by the public sector	10.6	3.4	17.7	17.7	6.3	2.7	4.7	10.9	18.2	17.7	5.5	11.7	
Securities issued by the Federal Government	7.8	-8.5	13.6	36.7	14.4	9.0	6.4	11.1	21.8	21.9	5.4	14.4	
Brems	-9.2	24.2	14.3	-64.5	-86.9	-91.9	-3.1	-4.3	-100.0	0.0	0.0	0.0	
IPAB bonds	20.7	21.3	21.2	15.3	8.1	-13.2	-3.8	5.7	6.4	6.9	0.7	-3.1	
Other public securities	43.1	24.3	33.6	18.7	-8.7	-0.6	7.1	16.8	12.7	4.7	11.9	9.7	
III. Securities issued by private companies	27.9	10.7	1.2	11.7	15.4	-2.9	-3.7	3.6	11.2	-1.2	6.8	-4.6	
IV. SAR outside of Siefores	11.5	8.8	10.6	9.9	1.3	43.4	1.1	3.5	4.5	2.1	2.9	2.2	
Financial savings = I + II + III + IV	9.3	5.1	11.6	9.5	7.2	9.7	2.2	7.3	11.7	10.9	4.7	8.8	
Instruments included in financial savings													
Siefores	19.1	13.4	18.6	17.9	11.0	6.0	16.3	16.0	9.0	16.7	3.3	12.3	
Public sector securities held by foreigners	35.5	201.0	39.8	22.9	51.6	14.9	13.1	86.7	56.7	59.9	7.9	18.3	
Investment funds (only debt**)	2.8	0.9	27.8	30.1	15.2	-9.7	14.4	22.2	0.1	11.6	0.4	7.0	
Investment funds (debt and equity***)	7.8	4.1	24.2	32.9	17.3	-13.3	16.2	23.9	0.9	12.3	4.9	11.8	
Financial savings without SAR total***	7.8	3.5	10.7	8.0	7.3	6.4	-0.2	6.0	13.6	10.8	5.3	8.8	
SAR Total (Siefores and non-Siefores)	15.5	11.3	15.1	14.5	7.0	20.5	9.3	10.7	7.2	11.0	3.2	8.7	

Source: Banco de Mexico (broad monetary aggregates) and INEGI

Table 4.2

Credit and Financing to the Private Sector: Balances in billions of November 2014 pesos

	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV 11	IV 12	IV 13	III 14	Str % III 14
Total: All categories	1,716	1,879	2,066	2,470	2,886	3,005	2,900	3,025	3,329	3,548	3,724	3,816	100.0
Bank	988	1,083	1,239	1,570	1,946	2,070	1,961	2,034	2,280	2,444	2,586	2,634	69.0
Non-bank	728	797	827	900	940	935	939	991	1,050	1,104	1,138	1,182	31.0
Total consumer	192	271	396	542	656	613	495	494	589	679	724	745	19.5
Bank	184	260	386	532	645	601	481	480	573	663	708	725	19.0
Non-bank	52	63	72	80	67	63	64	66	66	72	84	80	2.1
Total housing	218	209	262	337	387	409	430	458	477	504	522	538	14.1
Bank	213	205	256	332	380	401	421	449	467	492	510	526	13.8
Non-bank	568	613	618	660	711	733	775	821	873	924	951	999	26.2
Total companies	703	674	651	762	971	1,136	1,139	1,205	1,369	1,450	1,575	1,612	42.2
Bank	590	618	597	706	921	1,068	1,058	1,106	1,239	1,289	1,368	1,383	36.2
Non-bank	107	121	138	159	162	139	100	104	110	108	103	103	2.7
Real annual percentage change, %													
Total: All categories	1.3	9.6	9.9	19.5	16.9	4.1	-3.5	4.3	10.0	6.6	5.0	2.8	
Bank	-3.1	9.6	14.4	26.7	24.0	6.4	-5.3	3.7	12.1	7.2	5.8	2.9	
Non-bank	7.9	9.5	3.8	8.7	4.5	-0.6	0.4	5.6	5.9	5.2	3.1	2.6	
Total consumer	34.4	41.0	46.1	36.9	21.1	-6.6	-19.2	-0.2	19.2	15.4	6.6	2.8	
Bank	39.7	41.4	48.3	37.9	21.2	-6.8	-19.9	-0.3	19.5	15.7	6.7	2.3	
Non-bank	-8.4	19.5	14.9	11.7	-16.7	-6.2	1.7	4.4	-0.1	8.3	17.1	5.4	
Total housing	-16.2	-4.0	25.1	28.9	14.6	5.7	5.2	6.5	4.2	5.6	3.6	3.2	
Bank	-16.1	-3.9	25.1	29.5	14.6	5.4	5.1	6.5	4.1	5.4	3.6	3.3	
Non-bank	10.7	7.8	0.8	6.8	7.8	3.1	5.7	5.9	6.4	5.8	2.9	2.2	
Total companies	-6.6	-4.2	-3.3	17.0	27.3	17.0	0.2	5.9	13.6	6.0	8.6	5.5	
Bank	-6.7	4.6	-3.4	18.4	30.5	15.9	-0.9	4.5	12.1	4.0	6.1	3.0	
Non-bank	2.9	13.0	13.3	15.8	1.7	-14.4	-27.7	3.4	6.0	-1.6	-4.3	4.7	
Percentage of GDP, %													
Total: All categories	30.5	30.1	30.3	29.4	32.5	38.1	36.2	35.3	38.3	39.3	43.2	44.5	
Bank	8.9	8.5	9.2	10.9	12.5	14.0	13.4	13.3	14.0	15.1	16.2	16.8	
Non-bank	21.7	21.6	21.1	18.5	20.0	24.1	22.8	22.0	24.3	24.2	27.0	27.7	
Total consumer	2.2	2.8	3.7	4.5	4.8	4.7	4.1	3.9	4.2	4.7	5.1	5.2	
Bank	1.5	2.0	2.8	3.6	4.1	4.0	3.2	3.0	3.4	3.9	4.2	4.3	
Non-bank	0.7	0.8	1.0	0.9	0.7	0.7	0.9	0.9	0.8	0.8	0.9	0.9	
Total housing	7.4	7.3	7.4	7.6	8.6	9.0	9.1	9.1	8.9	9.3	9.6	10.1	
Bank	1.7	1.5	1.8	2.2	2.4	2.6	2.8	2.8	2.7	2.9	3.0	3.1	
Non-bank	5.6	5.8	5.5	5.4	6.2	6.4	6.4	6.3	6.2	6.4	6.6	7.0	
Total companies	20.9	19.9	19.2	17.3	19.2	24.4	22.9	22.2	25.1	25.3	28.6	29.2	
Bank	5.6	5.0	4.6	5.1	6.0	7.4	7.4	7.4	7.9	8.3	9.1	9.3	
Non-bank	15.3	15.0	14.7	12.3	13.1	17.0	15.5	14.8	17.3	17.0	19.5	19.9	
Infrastructure and Number of Bank Cards - Units													
ATMs	17,758	20,416	22,900	25,687	29,333	29,640	33,648	35,942	36,427	40,194	40,811	41,965	
POS terminals	146,029	160,289	201,852	305,144	418,128	446,025	446,792	482,299	523,578	556,274	626,922	696,582	
Branches*	7,768	7,788	7,972	8,404	9,230	10,722	10,731	11,291	11,785	12,407	12,581	12,685	
Number of current cards at the end of the quarter (figures in millions)													
Credit	9.4	11.6	14.7	21.4	24.8	30.7	25.8	23.9	27.6	25.9	26.9	27.3	
Debit	32.2	31.8	36.1	51.7	51.9	47.0	52.3	61.7	73.8	85.4	100.2	107.6	

Continue on the following page

Credit and Financing to the Public Sector: Balances in billions of November 2014 pesos

	IV 03	IV 04	IV 05	IV 06	IV 07	IV 08	IV 09	IV 10	IV 11	IV 12	IV 13	III 14*	Str % III 14
Commercial bank credit	393	311	312	231	229	197	326	363	380	420	416	435	4.8
Federal government	288	127	79	43	40	28	39	50	40	14	31	35	0.4
States and Municipalities	40	79	87	75	86	109	168	220	236	294	294	289	3.2
Decentralized gov't agen.	66	105	146	114	104	60	119	93	104	111	91	111	1.2
Development bank credit	184	183	190	178	171	177	138	144	139	160	173	190	2.1
Federal government	94	95	109	91	109	112	56	61	28	35	34	46	0.5
States and Municipalities	16	37	35	37	37	32	48	55	87	107	127	131	1.5
Decentralized gov't agen.	74	52	46	50	26	32	33	28	24	19	13	13	0.1
Debt issued in the country	2,590	2,766	3,174	3,696	3,974	4,161	4,525	4,754	5,479	6,025	6,620	7,013	78.1
Federal government	1,497	1,547	1,690	2,173	2,395	2,531	2,876	2,957	3,215	3,508	3,868	4,303	47.9
States and Municipalities	22	30	30	50	60	65	67	69	74	76	89	95	1.1
Decentralized gov't agen.	24	71	147	183	174	161	174	213	267	275	356	399	4.4
IPAB	483	569	711	821	920	907	922	903	933	919	933	918	10.2
Banco de Mexico	364	347	374	238	242	313	300	425	804	1,059	1,188	1,112	12.4
FARAC	201	202	222	230	184	185	186	186	186	187	186	187	2.1
External financing	1,232	1,178	1,036	741	710	843	1,117	1,202	1,339	1,267	1,236	1,346	15.0
Credit and financing Total	**4,400**	**4,438**	**4,712**	**4,845**	**5,085**	**5,378**	**6,106**	**6,462**	**7,337**	**7,872**	**8,445**	**8,984**	**100.0**

Real annual percentage change in the balance, %

Commercial bank credit	-1.7	-21.0	0.4	-25.8	-0.8	-14.0	65.3	11.2	4.8	10.5	-0.8	5.9
Federal government	-11.7	-56.0	-37.4	-46.0	-7.2	-30.1	41.5	27.0	-20.2	-64.9	119.8	71.9
States and Municipalities	64.6	96.1	10.6	-14.4	15.4	26.6	54.0	31.0	7.4	24.5	0.1	-2.3
Decentralized gov't agen.	30.9	60.4	38.1	-21.8	-9.1	-41.6	96.5	-22.1	12.0	7.4	-18.4	17.6
Development bank credit	-18.7	-0.6	3.4	-6.3	-3.5	3.0	-22.1	4.5	-3.3	15.4	7.9	19.8
Federal government	-24.0	0.7	14.3	-16.2	19.2	3.5	-50.1	9.7	-54.3	22.9	-2.2	39.0
States and Municipalities	4.1	128.4	-4.4	4.9	1.2	-13.2	50.3	12.8	59.2	23.3	18.1	18.8
Decentralized gov't agen.	-15.3	-30.1	-11.4	8.7	-48.4	24.5	3.4	-16.4	-13.7	-22.2	-32.1	-14.6
Debt issued in the country	14.5	6.8	14.8	16.4	7.5	4.7	8.8	5.1	15.2	10.0	9.9	7.5
Federal government	15.9	3.3	9.3	28.6	10.2	5.7	13.7	2.8	8.7	9.1	10.2	11.3
States and Municipalities	147.6	37.7	0.8	65.7	18.1	8.5	3.6	2.9	8.0	2.8	16.9	8.4
Decentralized gov't agen.		200.6	107.1	24.8	-5.4	-7.3	8.1	22.5	25.1	3.0	29.5	24.1
IPAB	28.7	17.8	25.0	15.5	12.0	-1.4	1.6	-2.1	3.3	-1.4	1.5	-1.7
Banco de Mexico	-14.1	-4.7	7.9	-36.4	1.6	29.5	-4.2	42.0	88.9	31.8	12.2	-1.0
FARAC	23.3	0.7	9.6	3.8	-19.9	0.3	1.0	-0.1	-0.2	0.4	-0.2	0.0
External financing	13.2	-4.4	-12.0	-28.5	-4.1	18.7	32.5	7.6	11.4	-5.4	-2.5	10.1
Credit and financing Total	**10.6**	**0.9**	**6.2**	**2.8**	**4.9**	**5.8**	**13.5**	**5.8**	**13.5**	**7.3**	**7.3**	**8.1**

Credit and Financing: Percentage of GDP, %

Commercial bank credit	3.1	2.3	2.2	1.5	1.4	1.3	2.1	2.2	2.2	2.4	2.4	2.5
Federal government	2.3	0.9	0.6	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.2
States and Municipalities	0.3	0.6	0.6	0.5	0.5	0.7	1.1	1.4	1.4	1.7	1.7	1.7
Decentralized gov't agen.	0.5	0.8	1.0	0.8	0.6	0.4	0.8	0.6	0.6	0.6	0.5	0.6
Development bank credit	1.5	1.3	1.3	1.2	1.1	1.1	0.9	0.9	0.8	0.9	1.0	1.0
Federal government	0.8	0.7	0.8	0.6	0.7	0.7	0.4	0.4	0.2	0.2	0.2	0.2
States and Municipalities	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.6	0.7	0.7
Decentralized gov't agen.	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Debt issued in the country	20.7	20.3	22.3	24.5	24.8	26.9	29.3	29.3	31.5	34.5	38.1	40.0
Federal government	12.0	11.4	11.8	14.4	14.9	16.4	18.6	18.2	18.5	20.1	22.3	23.9
States and Municipalities	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
Decentralized gov't agen.	0.2	0.5	1.0	1.2	1.1	1.0	1.1	1.3	1.5	1.6	2.0	2.2
IPAB	3.9	4.2	5.0	5.4	5.7	5.9	6.0	5.6	5.4	5.3	5.4	5.5
Banco de Mexico	2.9	2.5	2.6	1.6	1.5	2.0	1.9	2.6	4.6	6.1	6.8	6.8
FARAC	1.6	1.5	1.6	1.5	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1
External financing	9.8	8.7	7.3	4.9	4.4	5.5	7.2	7.4	7.7	7.3	7.1	7.6
Credit and financing Total	**35.1**	**32.6**	**33.0**	**32.1**	**31.7**	**34.8**	**39.5**	**39.9**	**42.1**	**45.1**	**48.6**	**51.1**

* Preliminar data subject to revision
Source: Banco de México for Credit and Financing to the Private Sector data; CNBV for Credit and Financing to the Public Sector; and INEGI for GDP data

5. Main Reforms to the Commercial Bank Regulatory Framework

Table 5.1
Main Reforms to the Commercial Bank Regulatory Framework: Second Half 2014

Subject	Scope of the Reform	Publication in the OGF*
1. CONDUSEF - GENERAL PROVISIONS FOR THE ORGANISATION AND FUNCTIONING OF THE BUREAU OF FINANCIAL INSTITUTIONS	Operating rules for the Bureau of Financial Institutions envisaged in the Financial Reform. It establishes the information the bureau will include (characteristics of provided products and services, contract requirements, costs and benefits.; penalties; queries, claims and disputes; CONDUSEF recommendations; abusive clauses detected; significant information generated by competent authorities, etc.). The obligations of financial institutions are also given, including that of posting on the internet the information that the bureau has on record about them, along with the link to the Bureau site. The information will be updated quarterly.	9 July 2014
2.IPAB - GENERAL PROVISIONS ON JOINT ACCOUNTS WITH MORE THAN ONE HOLDER OR WITH CO-SIGNERS REFERRED TO IN ARTICLE 189, PART IV OF THE CREDIT INSTITUTIONS LAW	Reissuance of the rules which were previously based on the provisions of article 14 of the Bank Savings Protection Law, and now have legal foundation on article 189 of the Credit Institutions Law, due to the Financial Reform.	18 July 2014
3. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO CREDIT INSTITUTIONS	Extension of terms for credit institutions to comply with the provisions regulating e-banking via ATMs and POS terminals: they were given until 31 December 2014 (previously 30 June) to implement the provisions regarding POS terminals (encryption of sensitive information transmitted from the access device until its reception by the bank).	31 July 2014
4. CONDUSEF - GUIDELINES FOR PUBLICISING INFORMATION ON PENALTIES IMPOSED BY THE FINANCIAL SERVICES OMBUDSMAN	CONDUSEF's regime on the matter is laid down, in line with what the CNBV established on the same issue in April 2014 (penalties applied to individual cases under its supervision are to be published on the internet, giving the name of the offending party, the penalty imposed, a description of the offending act, the date when the penalty was applied and the status of the case).	9 September 2014
5. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO CREDIT INSTITUTIONS	Accounting standards for loan rated pursuant to the rules of 26 March 2014: loans within national development and project financing schemes; loans in cases of emergencies or natural disasters; as well as loans taken out to fund insolvency proceedings, authorised by the mediator or the receiver or, as well as, loans deemed essential to maintain the ordinary running of the business and provide the necessary liquidity throughout the insolvency procedure. (Arising from the Financial Reform).	24 September 2014
6. BANCO DE MÉXICO CIRCULAR 15/2014, CONCERNING CREDIT INSTITUTIONS AND THEFINANCIERA NACIONAL (GOVERNMENT LENDING AGENCY FOR THE RURAL SECTOR AND FISHERIES), ON THE AMENDMENTS TO CIRCULAR 3/2012 REGARDING ATM AGREEMENTS	Establishment of content requirements for the formal agreements whereby banks may permit the use of their ATM infrastructure to customers of other banks under preferential charges than those applicable to customers of third party banks. It requires banks to submit to Banco de México their contract clauses (including termination ones), along with applicable commission and rates.	3 October 2014
7. BANCO DE MÉXICO CIRCULAR 16/2014, CONCERNING CREDIT INSTITUTIONS AND REGULATED SOFOMES (NON-BANK BANKS), ON THE AMENDMENT OF CIRCULAR 22/2010 REGARDING COMMISSION CHARGES IN ATM AGREEMENTS	Amendments relating to the adjustments to Circular 3/2012 (15/2014) of 3 October 2014. It establishes the need of a contract in order to charge customers of other banks lower rates than those available to the general public, for the use of their ATMs. Provision is also made for the consumer protection wording which in certain cases must appear on ATM screens under the aforementioned scenario.	3 October 2014
8. CONDUSEF - GENERAL PROVISIONS APPLICABLE TO FINANCIAL INSTITUTIONS REGARDING DEBT COLLECTION FIRMS	Arising from the Financial Reform, obligations are laid down for financial institutions with respect to debt collection firms handling their loans. Information requirements are established in relation to such firms, along with financial institutions' responsibility in making sure that the firms pursue their activities subject to the standards established therein. In the case of loan assignments, institutions must make contractual provisions for assignees to observe these same principles (whereby no responsibility remains for the former after the portfolio has been assigned).	7 October 2014

Table 5.1 (cont.)

Main Reforms to the Commercial Bank Regulatory Framework: Second Half 2014

Subject	Scope of the Reform	Publication in the OGF*
9. BANCO DE MÉXICO CIRCULAR 18/2014, CONCERNING CLEARING HOUSES FOR CARD PAYMENTS, ON THE AMENDMENTS TO CIRCULAR 4/2014, REGARDING THIRD PARTY OUTSOURCING BY CLEARING HOUSES FOR CARD PAYMENTS	Adjustments to the rule published in March 2014 whereby card payment clearing houses can outsource the provision of services relating to their corporate purpose, subject to prior authorisation from Banco de México. Several adjustments are also made regarding the incorporation and operation of the clearing houses, chief of which are more detailed provisions on both data security and business continuity plans.	7 October 2014
10. CONDUSEF - GENERAL PROVISIONS ESTABLISHING THE INFORMATION TO BE PROVIDED TO THE FINANCIAL SERVICES OMBUDSMAN BY FINANCIAL INSTITUTIONS' SPECIALISED UNITS	Rules regulating the manner and terms in which specialised units (in charge of customer relations within each institution) must provide CONDUSEF with data on the persons in charge of them and of their regional managers, as well as their quarterly report and privacy notice. Derives from the amendment provided for in the Financial Reform, whereby financial institutions are now required to have representatives of their specialised units in each state and the Federal District.	20 October 2014
11. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO CREDIT INSTITUTIONS	Due to changes to the Bankruptcy Law within the Financial Reform, adjustments are made to the calculation of LGD within the commercial loan rating methodology in order to allow banks to make their best estimate until the borrower's reorganisation plan agreed with their creditors is adopted or they are declared bankrupt.	30 October 2014
12. CONDUSEF - GENERAL PROVISIONS ON TRANSPARENCY APPLICABLE TO CREDIT INSTITUTIONS AND SOFOMES	Arising from the Financial Reform. This is a set of rules that specifically targets banks and SOFOMES (non-bank banks) (previously there had been a general set of rules for all financial institutions). It introduces powers provided for in the Reform, such as those relating to abusive clauses and requirements for accounts used for channelling aid in the event of natural disasters.	30 October 2014
13. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO BROKERAGE FIRMS AND CREDIT INSTITUTIONS WITH REGARD TO INVESTMENT SERVICES	This resolution contains several adjustments arising from the application of the investment services regime by the CNBV. Most notably these include the following: i) the addition to the definition of conflict of interest of the case where investment advisory services are provided regarding the public offering of securities issued by the financial institution itself, or by issuers within its same financial group, business group or consortium, and which leads to clients holding over 20% of the issue. This does not apply when dealing with Sophisticated Investors to whom the institution is providing investment advisory services; ii) institutions must, at their clients' request, make available all the documentation supplied during the provision of any investment service; except in the cases of national or foreign institutional investors, foreign financial institutions, among others.	31 October 2014
14. CNBV - GENERAL PROVISIONS APPLICABLE TO SECURITIES TRANSACTIONS BY DIRECTORS, OFFICERS AND EMPLOYEES OF FINANCIAL INSTITUTIONS AND OTHER REGULATED ENTITIES	Update of the regime established in 2005, whereby it applies to new figures such as companies that manage systems that facilitate securities transactions, issuers of securities and investment advisers, as well as the fact that it extends its scope to apply to board members. Also, there is a review of the corporate governance of financial institutions and other regulated entities to avoid the improper use of confidential information relating to the inscription of securities in the National Securities Register, public offerings, the buying or selling of issuers' own shares, and transactions ordered by investing clients, while at the same time it becomes possible to classify as confidential any information which financial institutions and other regulated entities may decide, according to its particular characteristics.	4 November 2014
15. CONDUSEF - GENERAL PROVISIONS ON ABUSIVE CLAUSES IN ADHESION CONTRACTS	Rules arising from the Financial Reform whereby CONDUSEF establishes a list of "abusive clauses" which institutions will not be able to include in their contracts of adhesion, as well as the regime for its supervision and removal.	19 November 2014
16. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO CREDIT INSTITUTIONS	Amendments to regulate the credit process in factoring transactions, discounting and financing transactions where legal ownership of credit claims has been transferred to credit institutions.	8 December 2014

Table 5.1 (cont.)

Main Reforms to the Commercial Bank Regulatory Framework: Second Half 2014

Subject	Scope of the Reform	Publication in the OGF*
17. SHCP - GUIDELINES FOR ASSESSING THE PERFORMANCES OF COMMERCIAL BANKING	Rules relating to the Financial Reform requirement to evaluate the performance of commercial banks in order to verify that, in pursuing their stated corporate purpose and adhering to healthy banking practices, they: i) orient their activities towards supporting and promoting the development of the country's productive forces and fomenting the growth of the Mexican economy; ii) encourage saving in all sectors and regions of Mexico, and iii) channel savings appropriately with extensive regional coverage that is conducive to the decentralisation of the Mexican banking system. To this end, an annual assessment is established based on two components: the Bank Assessment Index, which will make an annual calculation based on indicators that allow the assessment of, among other things, the degree of intermediation, the infrastructure and the quality of services of each commercial bank, and the Strategic Questionnaire, which will rate each bank's business plans, programmes and activities.	31 December 2014
18. SHCP - GENERAL RULES FOR FINANCIAL GROUPS	Regulation deriving from the Financial Reform. It establishes the requirements for carrying out various corporate acts by controlling companies, and sets forth guidelines for sharing facilities and offering services jointly. It also provides for, among others, conflicts of interest among the members of a financial group, a net capital requirement for controlling companies, limits on the investments which controlling companies can carry out, and rules on the consolidated supervision of a financial group, by establishing the manner and terms in which parent companies have to provide information to the commission in charge of its supervision.	31 December 2014
19. CNBV - RESOLUTION AMENDING THE GENERAL PROVISIONS APPLICABLE TO CREDIT INSTITUTIONS	Changes to the banking rulebook stemming from the findings of the Basel Committee in the context of the capitalisation regulatory compliance assessment. Several adjustments are made to the methodology concerning capitalisation for the purpose of: i) aligning the current operational risk capital requirement with the international framework and incorporating the missing criteria for its calculation; ii) modifying the approach capital requirement calculations for counterparty risk (derivatives), incorporating potential future exposure and central counterparty exposure; iii) incorporating capital requirements for specific and general market risks present in the international standard and updating the market risk capital charges; iv) aligning the current capital requirements in the standard method for credit risk, for the securitisations framework and for specific market risk, and to include specific requirements for authorisation of credit risk internal models; v) improving the supervisory process through the establishment of a regulatory framework that enables setting capital requirements in addition to the established minimums via a capital adequacy assessment through supervisory scenarios, and vi) incorporating aspects concerning the disclosure of qualitative and quantitative risks which banks take on. Also, the terminology is standardised in line with the changes in Credit Institutions Law, under the 2014 Financial Reform, regarding capital requirements, making it consistent with international standards.	31 December 2014

* OGF: Official Gazette of the Federation

6. Special Topics Included in Previous Issues

First Half 2014

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Determining factors of financial inclusion in Mexico based on the ENIF 2012 survey

December 2013

Penetration of Credit in Mexico and Brazil: a comparison and brief description of some factors contributing to the difference

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Mexico Banking Outlook
January 2015

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