

## 2. Situation

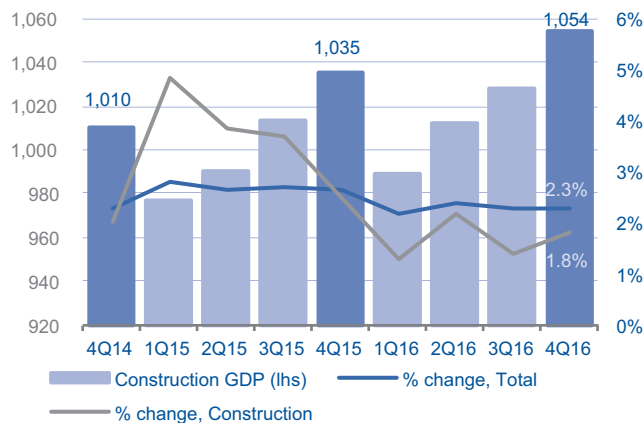
### 2.a Construction downstream

The downward side of the cycle is being delayed, but the sector is still pointing there

#### Construction increased by 1.8% in 2016

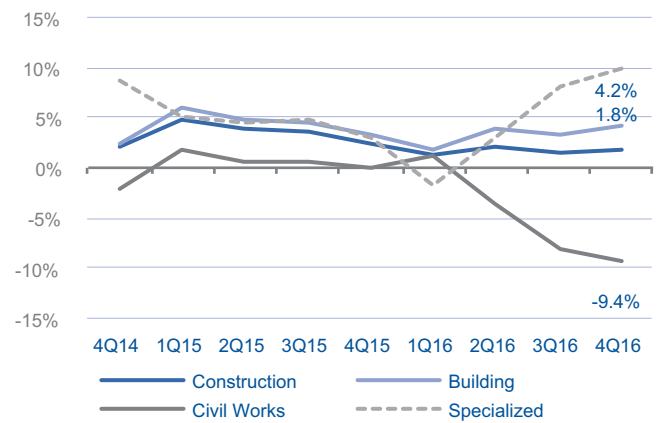
The construction sector ended the year with growth of 1.8%, slightly below the total economy. The start of the year pointed towards a slowdown that has been confirmed by the year-end figures. In the previous issue of **Mexico Real Estate Outlook** we pointed out that progress in the sector would slacken given civil engineering's inability to recover. Although building continues to increase its product, civil engineering is going down the opposite path. Part of the lower growth rate can be explained by an adjustment in the INEGI figures, which posted rates of 1.7% and 3.1% for the first two quarters of 2016. These figures were corrected down to 1.3% and 3.0% respectively, mainly in the building sub-sector. During the last two quarters of 2016, construction continued its positive trend, while civil engineering accentuated its decline during this period. The year therefore closed with a 4.2% increase for building and a 9.4% decline in civil engineering, which, together with specialised projects, accounts for the annual growth in the construction sector of 1.8%.

**Figure 2a.1** GDP Accumulated Construction  
Billions of pesos in real terms and YoY % change



Source: BBVA Research based on data from SCNM, INEGI

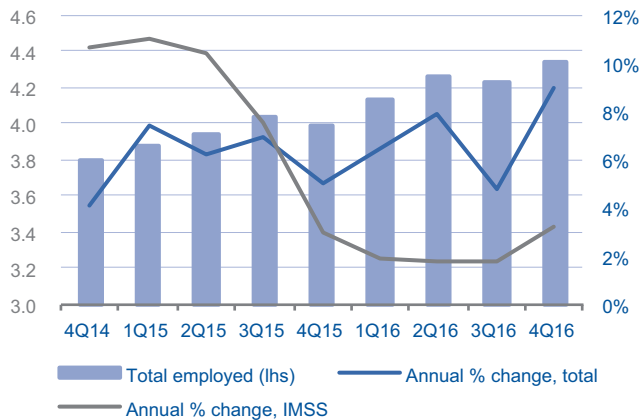
**Figure 2a.2** GDP Accumulated Construction by components  
YoY % change



Source: BBVA Research based on data from SCNM, INEGI

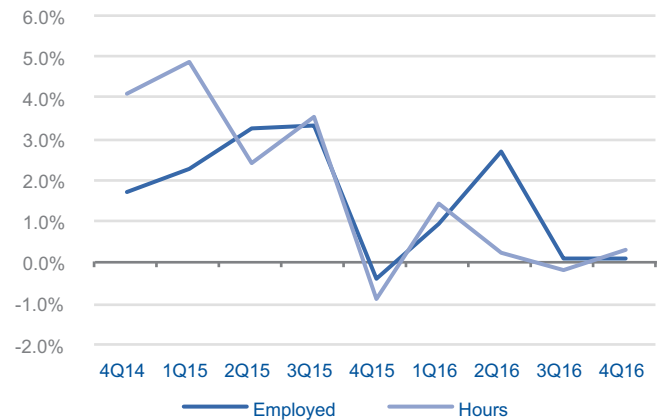
As construction activity increases, more inputs and a greater number of workers are needed to complete the work. For this reason, as the sector's GDP grows, it is normally observed that the number of workers follows the same trend. With the figures for the third and fourth quarters, total employment of the sector rose to above 8%, while the workers on the sector registered with the IMSS grew at a rate of just above 2%. The employment data recorded by the IMSS is consistent with the slowdown in the sector, while according to ENOE employment shows a much higher result. This could be due to the fact that the construction companies are hiring more workers than the increase in the work to be performed. In this regard, the productivity rates seem to coincide, as labour productivity stagnated in the last two quarters of 2016.

**Figure 2a.3** People employed in the construction sector  
Millions of workers and YoY % change



Source: BBVA Research based on data from ENOE, INEGI

**Figure 2a.4** Productivity index in construction  
YoY % change

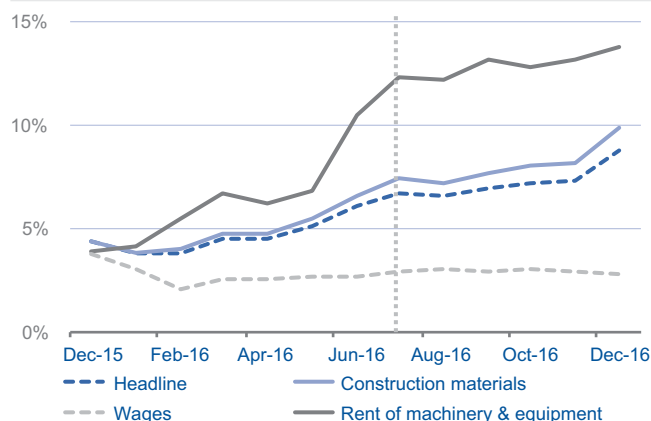


Source: BBVA Research based on data from the INEGI

## Construction faces an increase of around 8% in its inputs

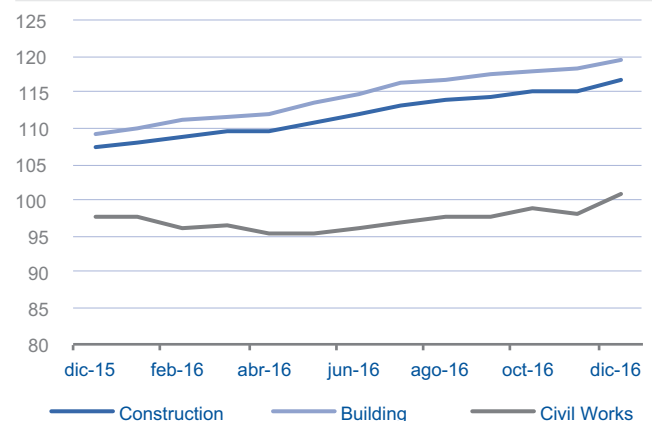
Consistent with lower labour productivity in the construction sector, it can be observed that wages are maintaining their constant growth rate, since they are the only factor of production that does not accelerate its costs. The rest of the components saw their price level rise considerably, in particular machinery and equipment rentals, which increased by more than 12% at an annual rate. The result is that at the end of 2016, the construction input price index grew by more than 8%, which is higher than the rate of inflation. From the perspective of the type of work, building underwent a higher increase in the prices of its inputs than did civil engineering. This result coincides with the increased activity of the former and the stagnation of the latter. As there is a greater demand for building inputs than for civil engineering, the former's prices are increasing faster.

**Figure 2a.5** INPP Construction inputs  
YoY % change



Source: BBVA Research based on data from the INEGI

**Figure 2a.6** National Producer Price Index  
Base 2008 = 100

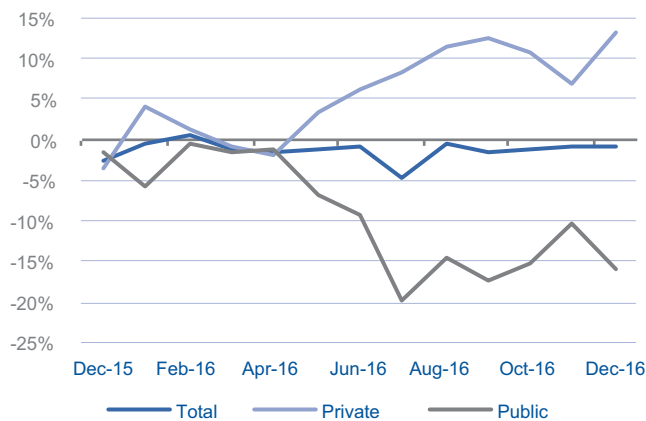


Source: BBVA Research based on data from the INEGI

The private sector tends to have a larger share of building works, while the public sector contributes more to infrastructure works, which are included in civil engineering. The higher value of construction by the private sector can be associated with the positive result for building. Conversely, civil engineering is falling as the public sector invests fewer

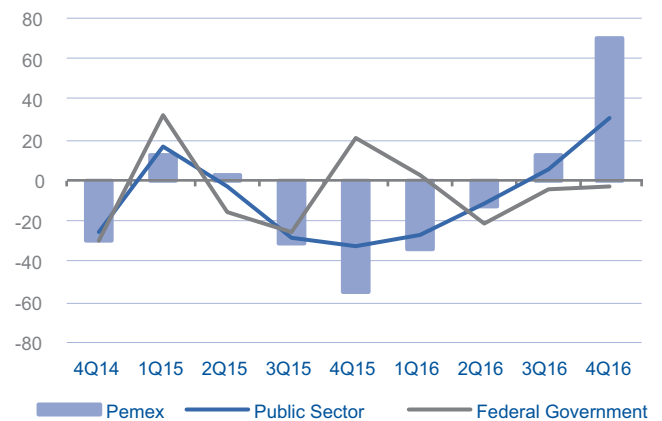
resources. As has been observed over the past four years, non-compliance with the National Infrastructure Programme and the ever-smaller budget for infrastructure projects are reflected in the lower level of activity. Along with the smaller budget, the lower expenditure allocated to investment in physical capital suggests that the trend will continue during 2017. Although at the end of 2016 there were increases in public sector spending, this is a base effect because of the very low levels seen in previous periods (public sector spending during 2016 was 744 billion pesos, while in 2015 it was 812 billion pesos in constant pesos).<sup>1</sup>

**Figure 2a.7** Value of construction by sector  
YoY % change



Source: BBVA Research based on data from the INEGI

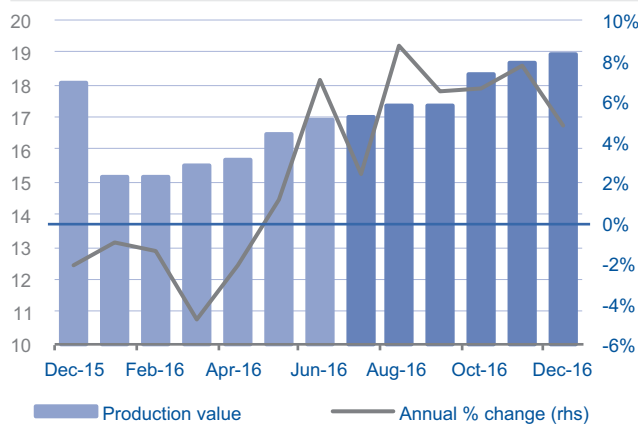
**Figure 2a.8** Public physical capital expenditure  
YoY % change



Source: BBVA Research based on data from the INEGI

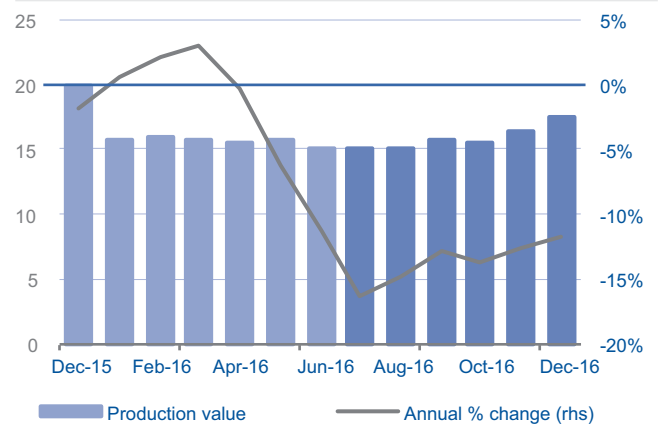
According to the information reported by the construction companies, the value of projects associated with building has continued to rise since the beginning of 2016. This trend will continue during 2017, but at a slower pace due to the slowdown in the residential sector. In contrast, the value of infrastructure works has been in negative territory during the second half of the previous year, and we do not expect this to change in the first half of 2017 due to both the lower approved budget and inefficient spending.

**Figure 2a.9** Value of building construction  
Billions of pesos in real terms and YoY % change



Source: BBVA Research based on data from the INEGI

**Figure 2a.10** Value of infrastructure construction  
Billions of pesos in real terms and YoY % change

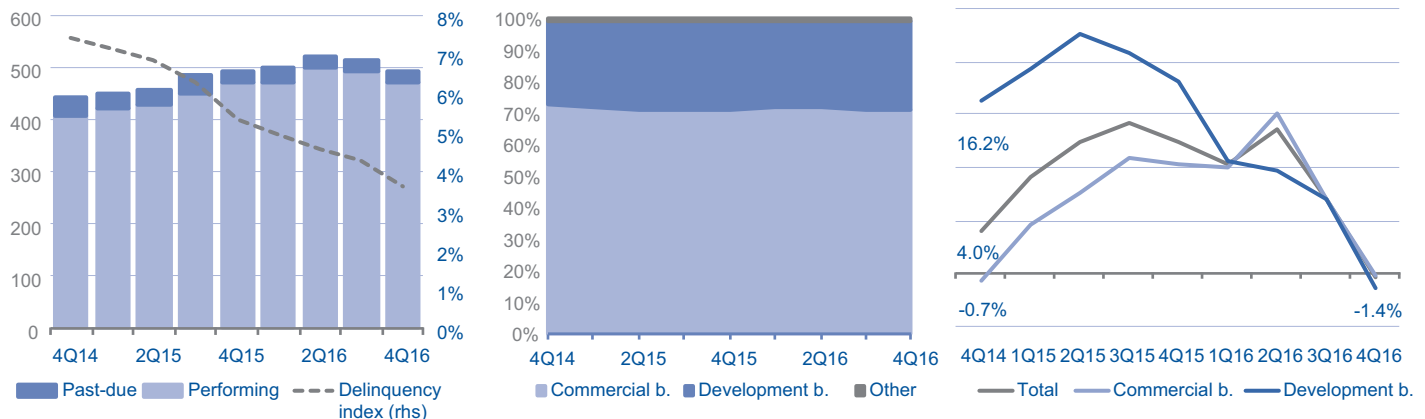


Source: BBVA Research based on data from the INEGI

<sup>1</sup> Although not all expenditure on physical capital goes to public works or infrastructure projects, the greater part does, and this tends to explain changes in the civil engineering sub-sector.

Since the second half of the previous year, the balance of bank credit for construction decreased. This had not been observed steadily since the year 2014 when the loan portfolio for productive construction decreased. On this occasion, the development bank showed the biggest drop, with two billion pesos, while the balance for commercial banking decreased by 1 billion pesos. In the case of commercial banking, the net effect is due to an increase in credit portfolios for building, but a drop of almost 12 billion pesos in communication links infrastructure. This latter result was in line with the drop in activity in civil engineering. The good news is that the decrease in the delinquency rate is due to a fall in the level of non-performing loans and not only due to origination, which went from 26 billion pesos to 18 billion pesos, mainly in the credit portfolio for productive construction.

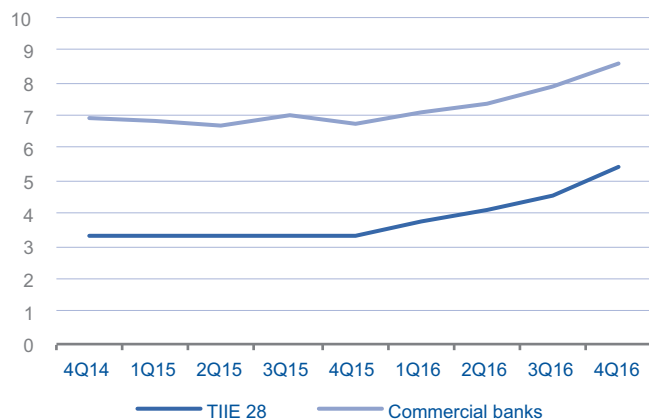
**Figures 2a.11, 2a.12 y 2a.13** Total balance of lending to construction in real terms, % share and YoY % change  
Billions of constant pesos and percentage



Source: BBVA Research based on Banco de Mexico data

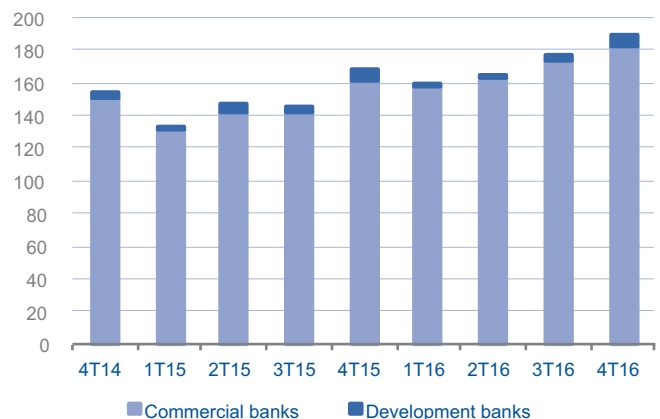
The tightening of monetary policy continues to have an effect on the interest rates charged for construction loans through the interbank equilibrium rate (TIIE). Commercial banks are continuing to increase their interest rates as the cost of funding rises due to the Bank of Mexico's monetary policy. Despite this, the origination of bank credit continues to flow, at an even faster rate than before. The demand for credit for the sector comes mainly from building, where the activity is greater. On average, 160 billion pesos were originated during the first half of 2016, but in the rest of the year the figure exceeded 180 billion pesos. We estimate that these resources will allow building work to continue in the short term.

**Figure 2a.14** Rate of interest on lending for construction  
Annual interest rate



Source: BBVA Research based on data from the CNBV

**Figure 2a.15** Origination of lending for construction  
Billions of pesos in real terms



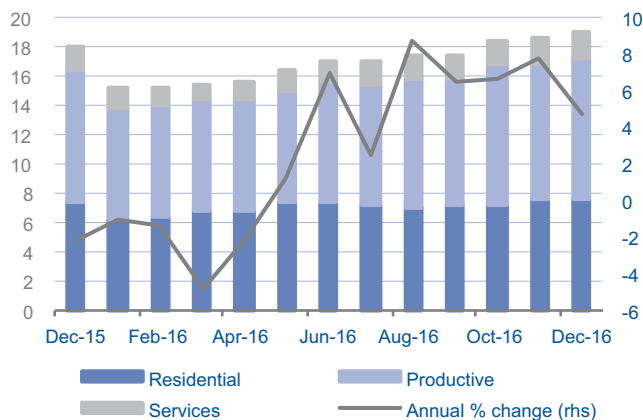
Note: annualised figures

Source: BBVA Research based on data from the CNBV

## Building continues to support the sector, but its strength is declining

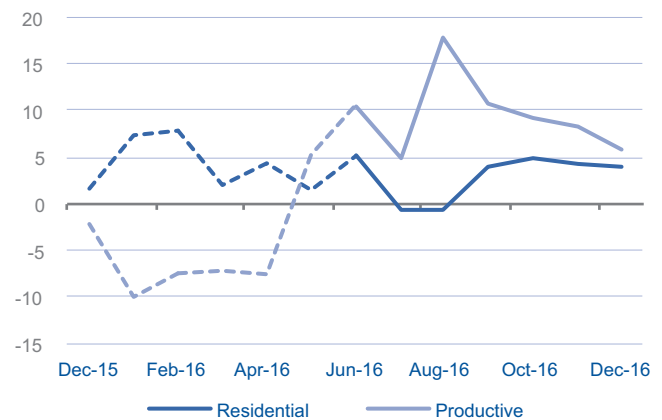
2016 was another year in building's track record as the backbone of the construction sector. Housing construction and productive construction showed positive rates during the second half of 2016. In terms of the value of construction, productive construction is already the main component of this sub-sector, followed by housing, and then by public service projects, such as schools and hospitals. Residential construction has lost ground to both types of construction, which is a sign that the housing sector is slowing down and the secondary market is beginning to take on greater importance as a counterweight to new housing. An example of the latter is the fact that the register of housing to be built in 2017 continues to decrease to almost 300,000 units, a figure that could continue to fall during the rest of the year. In a similar sense, the deceleration of productive construction could be accentuated as the market for shopping centres becomes saturated in some urban areas and industrial premises are less in demand if manufacturing activity slows down as a result, for example, of an adjustment in exports.

**Figure 2a.16** Gross value of building construction  
Billions of constant pesos



Source: BBVA Research based on data from ENEC (National Survey of Construction Companies), INEGI

**Figure 2a.17** Gross value of building construction  
YoY % change (annualised series)



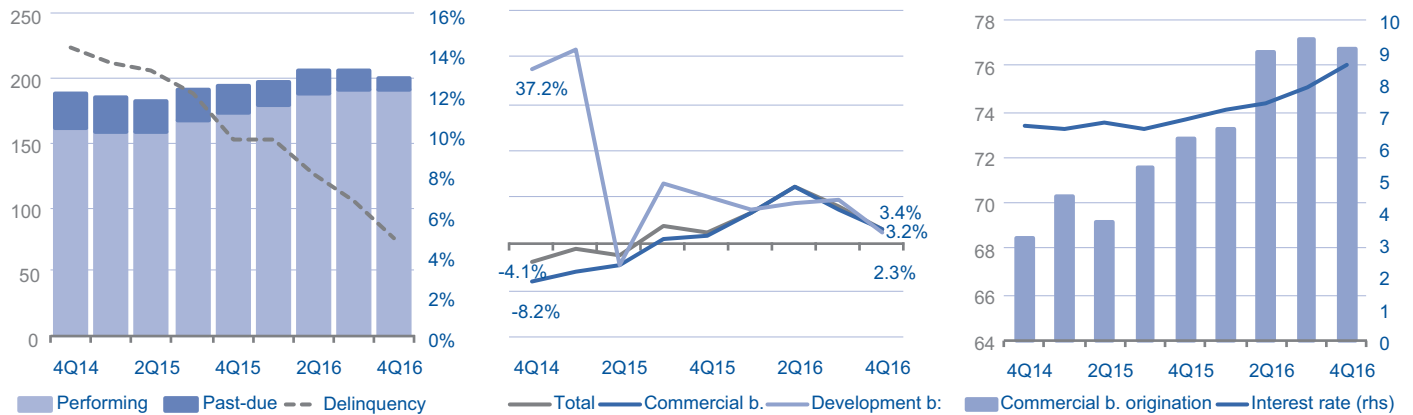
Source: BBVA Research based on data from ENEC (National Survey of Construction Companies), INEGI

The behaviour of the credit portfolio for building is not consistent with what is observed in its real part. However, in the annual rate, the total credit balance grew slightly, compared to what was observed during the first two quarters, when it decreased. The reason is that the overdue balance on this portfolio fell by almost 9 billion pesos as regards credit to productive construction. Also, for residential and other projects the overdue balance fell, but by a smaller amount. This is actually good news, as it improves the quality of the portfolio, as shown by the delinquency rate already falling below 5%.

In real terms, the balance of the credit portfolio for building grew during 2016 at a rate of 3.4%, as a result of a 3.2% increase by commercial banks and 2.3% by development banks. Other financial institutions, with a minimal share, grew by 16%. Throughout the year, the balance decelerated, which could be associated with higher interest rates on credit to this activity being driven by monetary policy.

The GDP of building is slowing down, but it is continuing to grow. This has led to a requirement of financial resources that is reflected in a growth in the origination of bank credit despite the increase in interest rates. The current rates at which banks originate credit have not fully reflected the higher financing cost, which, together with the activity of the sub-sector, may be allowing placement to grow. However, in the face of the slowdown in new housing, the flow of new credit could be quickly reduced in the second half of 2017.

**Figures 2a.18, 2a.19 y 2a.20** Total real balance of building credit, YoY % change, origination (annualised) and interest rate, billions of constant pesos and %



Note: The growth rate of the total balance is a weighted average of its components, so it is expected to be in between the rates of each bank. This is not the case, because we have omitted the growth rate of other financial institutions, whose rate is 16%, because their share is minimal.

We have used the annualised origination series to reduce the seasonal effect of credit.

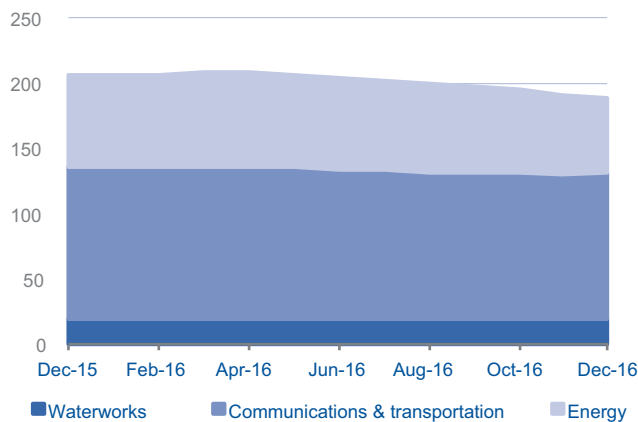
Source: BBVA Research based on data from Bank of Mexico and CNBV

## A recovery in civil engineering is increasingly less likely

### The GDP of civil engineering is down 10% at year-end 2016

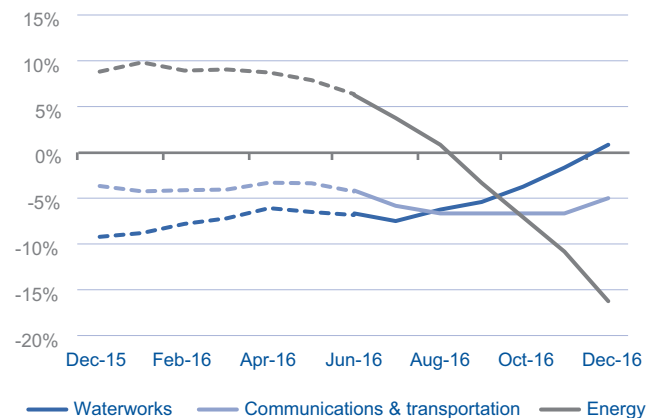
We have commented that sustained growth in the construction sector requires civil engineering to progress along with building. Infrastructure projects have an effect beyond the construction sector itself, since they influence the productive capacity of the economy, that is, the potential GDP for many other economic activities. For the past four years, the GDP of civil engineering has had a negative performance in general, with some exceptions that aim at a very austere level of progress. This result is confirmed by what was observed at the close of 2016 and unfortunately there are no indicators that point to a change in 2017.

**Figure 2a.21** Gross value of infrastructure  
Billions of pesos in real terms (annualised)



Source: BBVA Research based on data from ENEC, INEGI

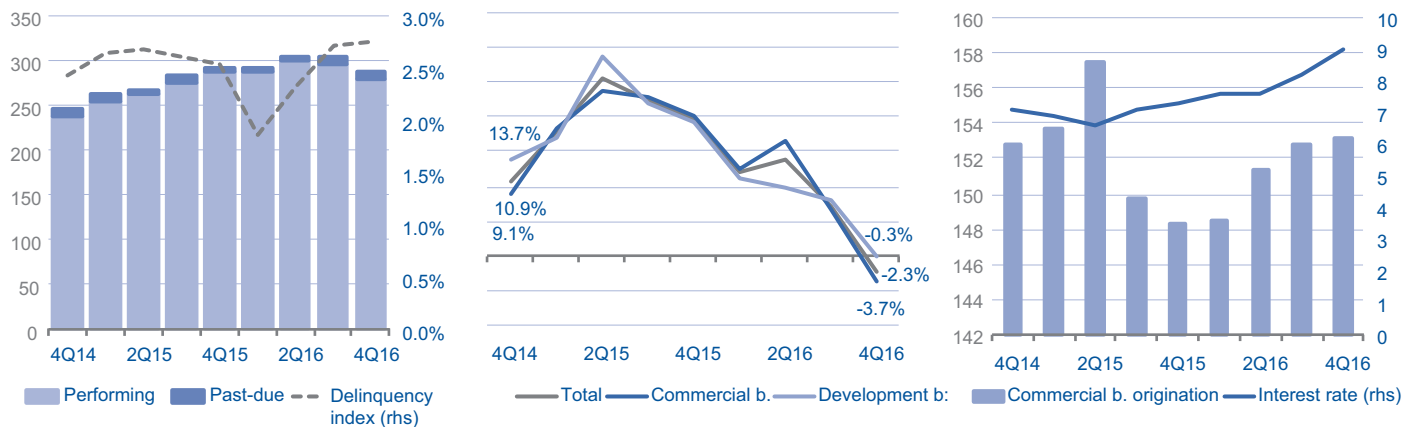
**Figure 2a.22** Gross value of infrastructure  
YoY % change (annualised series)



Source: BBVA Research based on data from ENEC, INEGI

During the second half of 2016, the gross value of works associated with infrastructure fell for the first time below 200 billion pesos in annualised figures. The energy sector has absorbed most of this decline, followed by communications and transport. Only hydraulic works increased during this period. At the end of the year, energy works fell more than 15%, while the value of communications and transport infrastructure fell by around 5%. Both figures are consistent with what is observed in the GDP of civil engineering.

**Figures 2a.23, 2a.24 y 2a.25** Total balance in real terms of lending for infrastructure, % share and YoY % change  
Billions of pesos and %



Source: BBVA Research based on Banco de Mexico data

The banking credit market for this sub-sector presents similar results. The balance of the banking, commercial and development portfolio closed at 287 billion pesos, slightly below the 300 billion pesos that it had already exceeded during 2016. According to figures from the Bank of Mexico, the fall in the portfolio is due to the credit balance for communication links and stagnation in other engineering work. A lower demand for financing is to be expected, given that there are fewer infrastructure projects. This credit portfolio has been decelerating since 2015, but at the end of 2016 it entered negative territory for the first time.

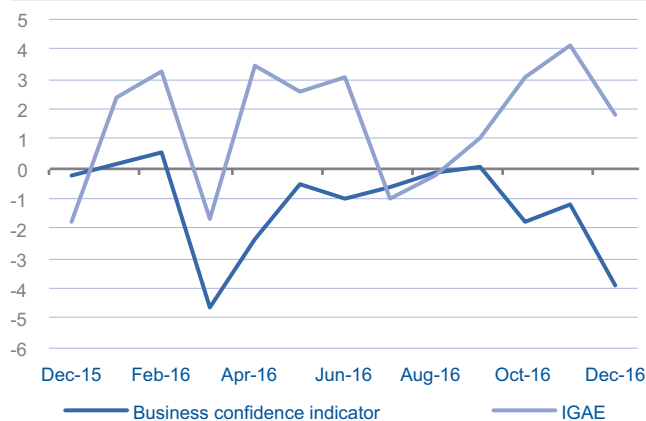
The origination of credit has been affected by the combination of lower activity and higher interest rates. As was the case with building credit, the other types of projects also suffered from the tightening of monetary policy through higher interest rates. However, there was a negative impact on projects other than building, as the flow of credit stopped due to a fall in applications for financing.

The budget for infrastructure projects in 2017 is almost 30% less than in 2016; coupled with the indebtedness of some federal entities, we estimate that the opportunity for more credit to flow to these works will decrease and the balances could continue to fall. The reason is the combined effect of a lower demand for credit in the face of budget cuts and higher interest rates.

## GDP of Construction will show minimal progress in 2017

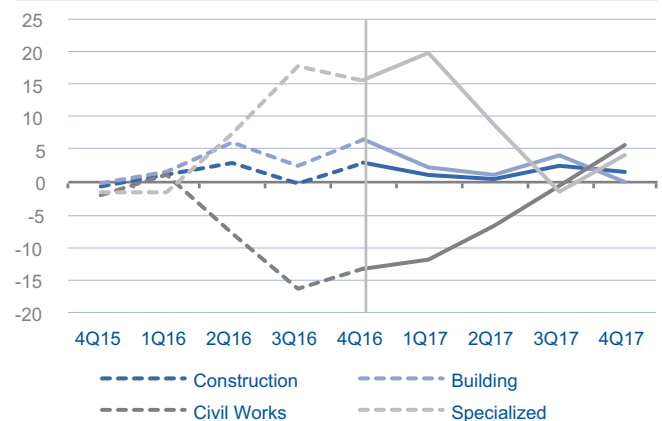
Even though it is not a new development, civil engineering continue to show a negative trend in its economic activity, which has been reflected in the placement of bank credit. Although the change in monetary policy has led to an increase in the cost of financing, it is the lower number of infrastructure projects that have impacted the demand for credit. In contrast, the GDP of building has continued to move forward and, despite the increase in the interest rate, credit is flowing into this sub-sector. The slowdown, mainly in the residential part, could nevertheless shut off some opportunities for placement. This is revealed by lower business confidence, as measured by the index published by the INEGI, and by a smaller number of plans to build housing as recorded by the National Housing Register. Both indicators point to a year with a lower rate.

**Figure 2a.26** Advance indicators for construction  
YoY % change



Source: BBVA Research based on data from the INEGI

**Figure 2a.27** GDP of Construction by components  
YoY % change



Source: BBVA Research based on data from the INEGI

For the last four years, building has driven construction. During the same period, civil engineering has been characterised by negative performance. The net effect is that the sector is growing less and less as building exhausts its spaces. Next year this trend will be even more marked. Civil engineering will not recover during 2017, as there is a lower budget for infrastructure and pressure on state public finances has led to the closing of the opportunity for more projects. Similarly, residential projects are below 300,000 units. The positive contribution will be based more on productive construction: the construction of industrial premises and shopping centres will keep pace during this year. We expect this to further increase the value of residential construction projects, sustaining growth in the construction sector of slightly above 1%.



## 2.b Mortgage market ends its cycle

### Only banking grows, at a slower pace than expected

#### Bank mortgage lending up by 1.7% in real terms

Mortgage financing performed below our estimate. The slowdown was higher than expected in the second half of 2016. The amount financed by banks increased 1.7% in real terms at year-end, after a five-year period of placement at a faster rate than the economy as a whole. Employment, the main determining factor of effective housing demand, grew at an annual rate of 4%. It was a positive result, but not what was expected in order to maintain the pace of mortgage origination. In addition, a deterioration in consumer expectations due to less economic activity and the increase in interest rates in particular, had a significant short-term effect on the demand for mortgage credit, which will continue to be reflected during 2017.

**Table 2b.1** Mortgage lending: number of loans and amounts of financing granted by institution  
Thousands of loans and billions of 2016 pesos

Mortgage Origination	Number of loans (Thousand)			Loan amount (MXN bn)			Average sum (MXN thousand)		
	Dec-15	Dec-16	Annual % change	Dec-15	Dec-16	Real annual % change	Dec-15	Dec-16	Real annual % change
Public agencies	457.4	432.5	-5.4	173.8	160.0	-8.0	380	370	-2.7
Infonavit	393.0	369.1	-6.1	130.4	118.3	-9.3	332	321	-3.4
Fovissste	64.4	63.4	-1.5	43.4	41.7	-4.0	674	657	-2.5
Private intermediaries <sup>1</sup>	141.8	139.3	-1.7	149.6	152.1	1.7	1,055	1,092	3.5
Bank <sup>2</sup>	141.8	139.3	-1.7	149.6	152.1	1.7	1,055	1,092	3.5
<b>Subtotal</b>	<b>599.2</b>	<b>571.8</b>	<b>-4.6</b>	<b>323.4</b>	<b>312.1</b>	<b>-3.5</b>	<b>540</b>	<b>546</b>	<b>1.1</b>
Co-financings <sup>3</sup> (-)	56.7	50.9	-10.3						
<b>Total</b>	<b>542.5</b>	<b>521.0</b>	<b>-4.0</b>	<b>323.4</b>	<b>312.1</b>	<b>-3.5</b>	<b>596</b>	<b>599</b>	<b>0.5</b>

1: While there are other private credit institutions (such as unregulated agents), not having reliable public information are not included.

2: Includes: credits for self-construction, re-structures, acquisition, credits for former employees of financial institutions and credits for payment of liabilities and liquidity.

3: Credits granted with Infonavit and Fovissste.

Note: It considers the housing price index of the Federal Mortgage Society (Sociedad Hipotecaria Federal) as deflator.

Source: BBVA Research with Infonavit, Fovissste ABM, Banco de México, CNBV and SHF data

### Housing institutes, greater contraction in the amount

Both public housing institutes fell both in the number of mortgages and in their amount in real terms. Even with a looser credit limit, Infonavit's financing contracted by 9.3% in real terms, a proportionally greater decrease than the drop in the number of loans, which also depressed the average amount of credit. The average mortgage granted by the institute remained on the rise until 2015, but by 2016 housing prices exceeded the nominal placement. The increased granting of loans in the middle-income and residential segments, as well as the increases in the maximum financing limits, would have stimulated the higher amounts requested. Nevertheless, by eliminating the price effect, fewer resources were requested than during 2015. In addition to the foregoing, the lower budget for subsidies reduced the share of loans for social interest housing in the portfolio of both public institutes.

**Table 2b.2** Infonavit: Annual Operational Programme (POA)  
Thousands of loans and millions of pesos

Type	Loans					Investment (billions of pesos)				
	Pro-grammed Dec-2016	Advance December 2016	Advance December 2015	% of compli- ance Dec. 2016 vs goal	YoY change	Pro-grammed Dec-2016	Advance December 2016	Advance December 2015	% of compli- ance Dec. 2016 vs goal	YoY change
Mortgage loans	350,000	372,983	396,226	106.6	-5.9	123,915	115,760	119,838	93.4	-3.4
New	227,800	236,810	261,129	104.0	-9.3	80,232	70,458	75,202	87.8	-6.3
Used	122,200	136,173	135,097	111.4	0.8	43,683	45,302	44,636	103.7	1.5
Improvements	165,000	79,224	293,824	48.0	-73.0	4,986	2,249	8,462	45.1	-73.4
<b>Total</b>	<b>515,000</b>	<b>452,207</b>	<b>690,050</b>	<b>87.8</b>	<b>-34.5</b>	<b>128,901</b>	<b>118,009</b>	<b>128,300</b>	<b>91.6</b>	<b>-8.0</b>

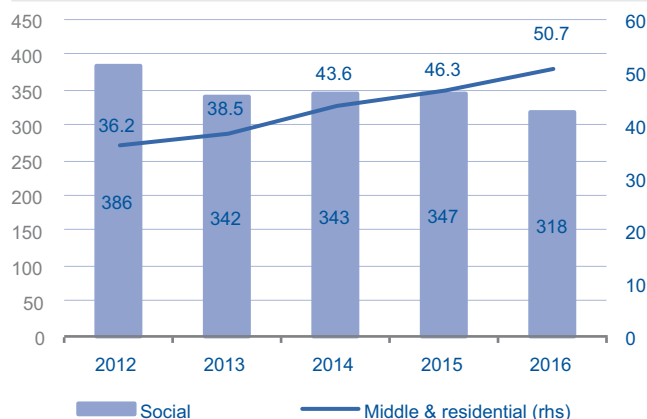
Note: Includes infonavit support, so the figures do not match table 2b.1

Source: Infonavit. Report by the Director-General. January 2017

Infonavit suggested in its latest Financial Plan that the number of loans for purchase would remain unchanged for 2016. It therefore kept its annual mortgage loan programme at 350,000. Used housing had remained at 34% of the loans granted for purchase. However, in 2016, according to data from the Annual Operating Programme, this share increased to almost 37%, and even the amount of investment used to finance used homes exceeded what had been scheduled by almost 4%. On the other hand, the resources used on mortgages for new homes covered 87.8% of what was budgeted and the number of loans decreased by 9.3%. These results suggest that members of this institute increasingly prefer used housing to new housing, probably due to the better locations of the former.

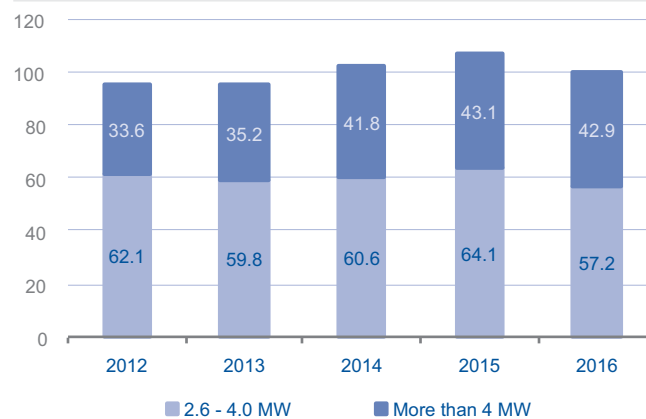
The fact that the maximum credit limit established by the institute has already reached 1.6 million pesos has resulted in greater participation in the mid-end and residential segments. In addition, financing is increasingly being directed towards workers earning 4 times the minimum wage or more, while in the segment of workers who receive lower incomes and who require more support, the number of loans granted has fallen.

**Figure 2b.1** Infonavit: mortgage loans by segment  
Thousands of loans



Source: BBVA Research based on data from Infonavit

**Figure 2b.2** Infonavit: loans granted per salary level  
Thousands of loans



Source: BBVA Research based on data from CONAVI

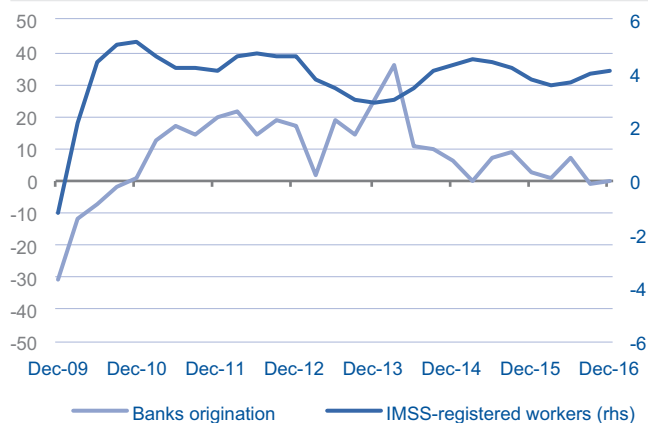
The same was true of loans for home improvements, which covered only 48% of that proposed in the AOP and fell by 73% compared to the previous year. This contraction is largely explained by the tightening of the institute's oversight to confirm that these resources are in fact being used for this purpose and not for the purchase of other durable goods.

The Fovissste also recorded a lower level of activity in 2016, although the contraction was of a smaller magnitude. This is explained by the fact that the Fund has dedicated a greater proportion to serving the middle-income segments, with an average amount that remained above 650,000 pesos in 2016. Another important feature of Fovissste is that it diversified the destination of its products even further. Of the total of loans for purchase granted in 2016, 45% of the amount financed went to used homes. In turn, loans for refurbishment practically doubled from 2015 to 2016 and accounted for just over 35% of the total.

## Lower employment growth and higher interest rates

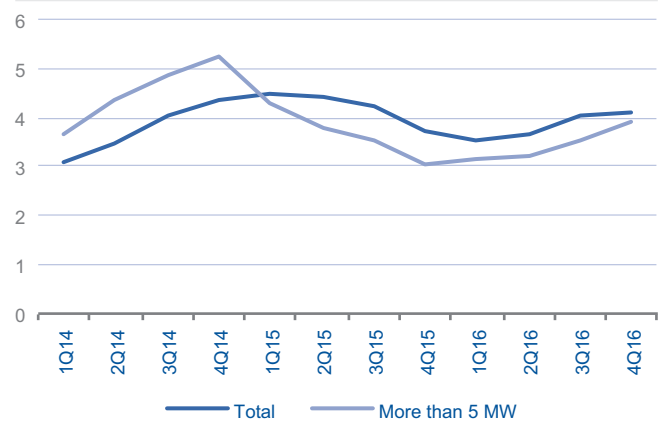
In our last issue of **Mexico Real Estate Outlook**, we emphasised the importance of the fact that employment would continue to grow steadily, while we did not expect significant increases in the mortgage interest rate. The first condition was partially fulfilled, since, although employment grew in 2016, it did so to a lesser extent, mainly in the segment of paid workers earning 5 times the minimum salary or more.

**Figure 2b.3** Mortgage credit by banks and IMSS employment YoY % change



Source: BBVA Research based on CNBV and IMSS data

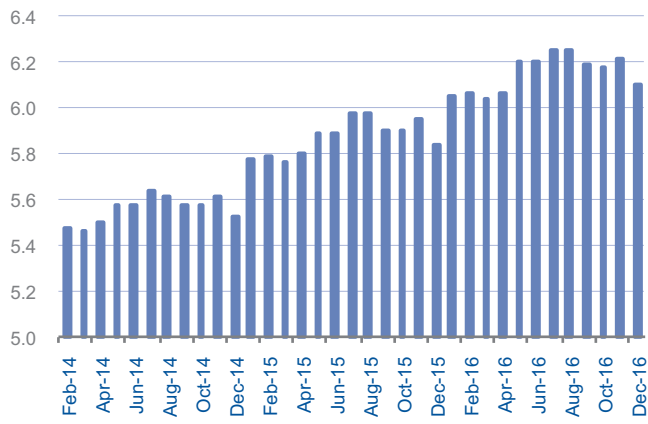
**Figure 2b.4** IMSS employment by salary level YoY % change



Source: BBVA Research based on data from the IMSS

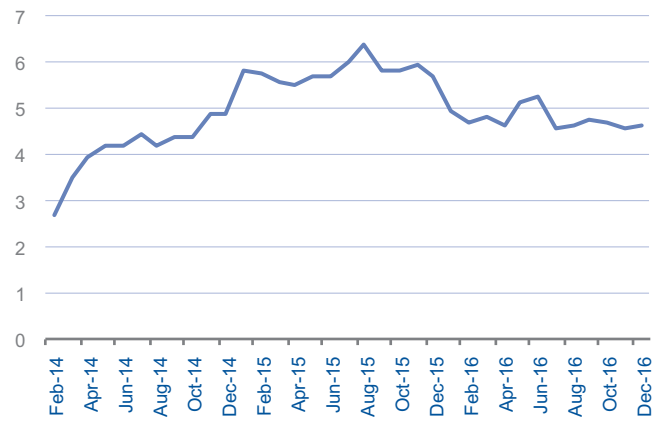
In line with the number of workers, the wage bill also contributed positively to the decision to buy homes throughout the year. However, after reaching its highest growth, above 6% in real terms during 2015, this was below the rate of progress. So, during 2016 it increased at rates of 4.5% on average, in line with the rise in inflation, and is expected to continue accordingly in 2017.

**Figure 2b.5 Real IMSS wage bill**  
Billions of constant pesos



Source: BBVA Research based on IMSS and INEGI data

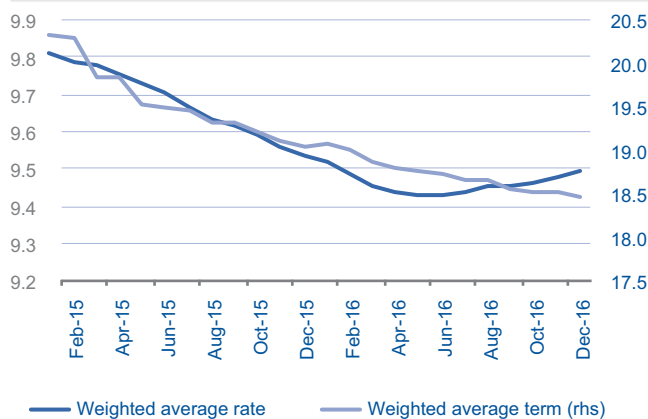
**Figure 2b.6 Real wage bill**  
YoY % change



Source: BBVA Research based on IMSS and INEGI data

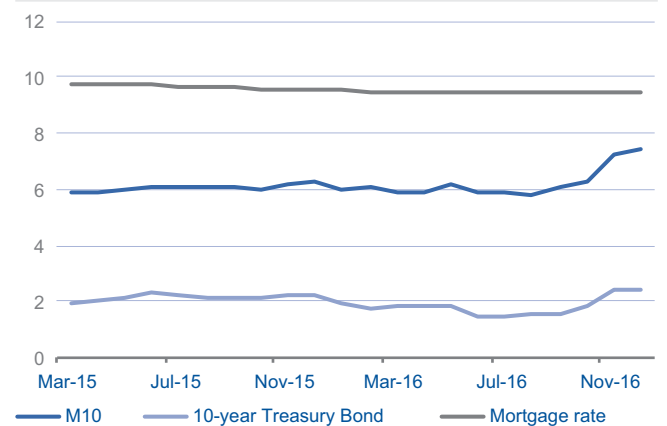
In the case of mortgage interest rates, not only did they stop falling but slight increases were observed in the latter part of the year. These increases had a prudential effect on consumers, since the market had already spent just over two years with a downward trend in mortgage rates. The Bank of Mexico reference rate added increases totalling 250 basis points throughout 2016. However, 200 points, that is, 80% of the increases, occurred in the second half of the year. Although we have shown that the monetary transfer to the mortgage market is limited, as it has been so far, families could generate high expectations of an increase in the cost of credit even though they have not in fact occurred. The consumer's response to housing was to suspend or delay the decision to buy and this even lessened the seasonal effect at the end of each year, a period in which there is a greater demand for mortgage loans compared to other months.<sup>1</sup>

**Figure 2b.7 Weighted Average Interest Rate and Mortgage Term (Nominal Interest Rate and Years)**



Source: BBVA Research based on data from ENOE, INEGI

**Figure 2b.8 Mortgage interest rate and long-term interest rate, Percentage**



Source: BBVA Research based on data from the INEGI

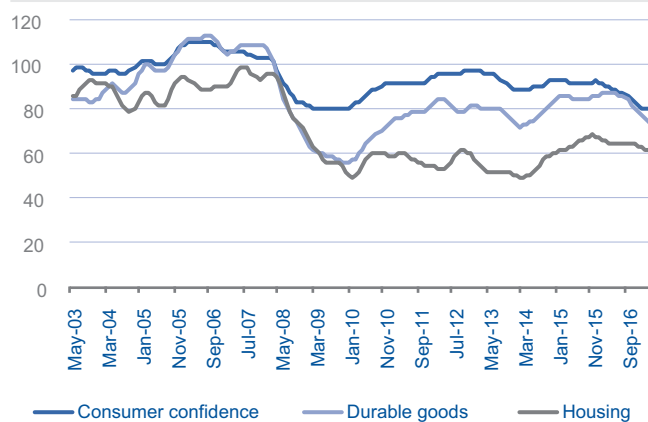
<sup>1</sup>: While the November to December rate was 30% on average over the past two years, at year-end 2016 the acceleration was only 22%.

On the other hand, long-term interest rates, which have greater transmission to the mortgage market, also began to rise, after several months of stability. This sum of factors depressed the demand for mortgages during the second half, a situation which could continue in 2017. In spite of all this, the average mortgage rate only registered an increase of 45 basis points, remaining at considerably lower levels and much lower than those experienced in short-term rates.

## Consumer confidence in negative territory

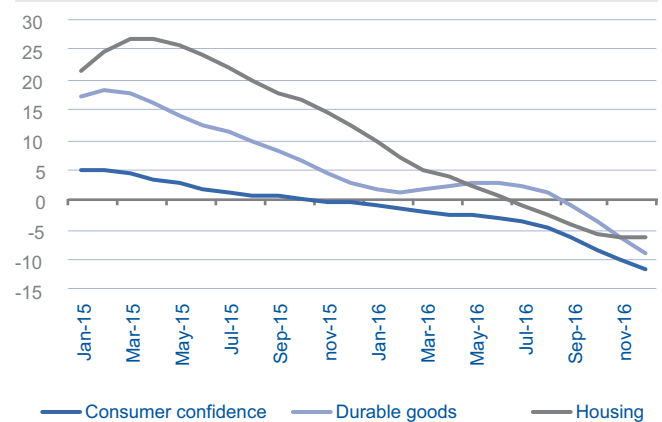
Consistent with lower employment growth and an expectation of higher long-term interest rates, consumer housing confidence deteriorated markedly during the second half of 2016. Although this is not a tangible indicator of activity in the sector, it has shown itself to be useful for anticipating periods of deceleration.

**Figure 2b.9** Consumer Confidence Index  
Base 2003 = 100



Source: BBVA Research based on INEGI data

**Figure 2b.10** Consumer Confidence Index  
YoY % change



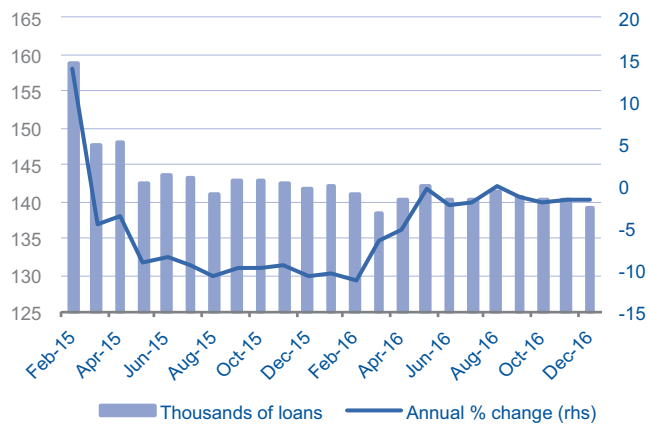
Source: BBVA Research based on INEGI data

In Figure 2b.10 we can see that since the end of 2015 the consumer confidence index has not risen. Meanwhile, the expectations of families regarding their incursion into the housing market continued to improve during the first half of 2016, but in the second half they declined, indicating a lower probability of demands for housing and, therefore, for mortgage credit.

## Banks maintained their growth in terms of amounts in 2016

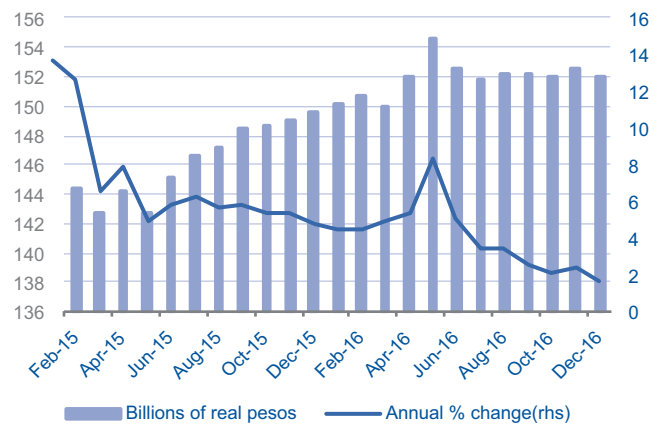
Bank performance remained in positive territory in 2016 in terms of the amount, in contrast to the housing institutes, although, of course, they have not avoided the process of deterioration in the determining demand factors. In line with the market trend of purchasing more expensive homes, the growth in the amount financed was combined with a contraction in the number of loans (less than the housing institutes), resulting in an average mortgage amount 3.5% higher in real terms than in the previous year.

**Figure 2b.11** Origination of bank credit for housing  
Thousands of annualised loans and YoY % change



Source: BBVA Research based on data from the CNBV

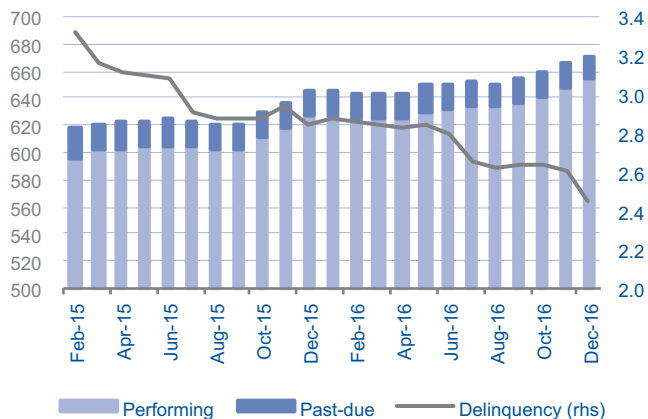
**Figure 2b.12** Origination of bank credit for housing  
Billions of real annualised pesos and YoY % change



Source: BBVA Research based on data from the CNBV

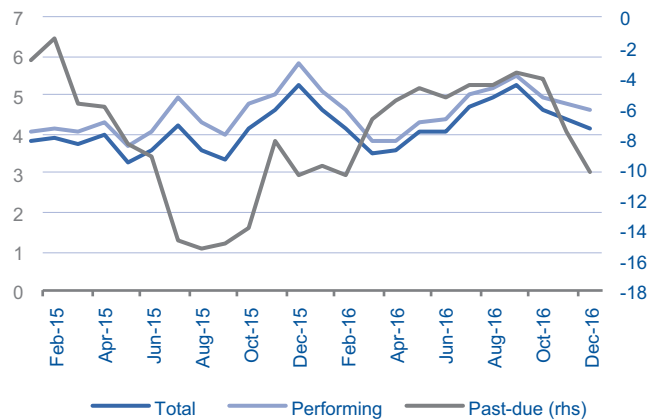
The balance of the mortgage loan portfolio continued to grow during the second half of the year, at rates close to 5% on average between January and June, driven mainly by the current balance, which increased at similar rates. In contrast, the non-performing loan portfolio remained in negative territory throughout 2016, which has allowed the NPL ratio to maintain its downward trend, reaching a minimum level of 2.4% in December.

**Figure 2b.13** Balance of bank credit to housing  
Billions of constant pesos and delinquency (%)



Source: BBVA Research based on data from Banco de Mexico

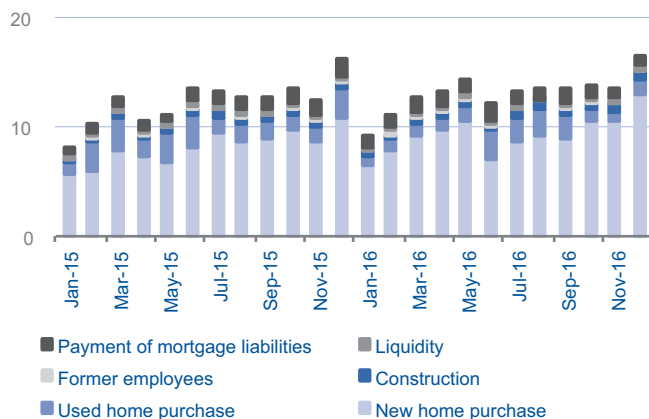
**Figure 2b.14** Balance of bank credit to housing  
YoY % change



Source: BBVA Research based on data from Banco de Mexico

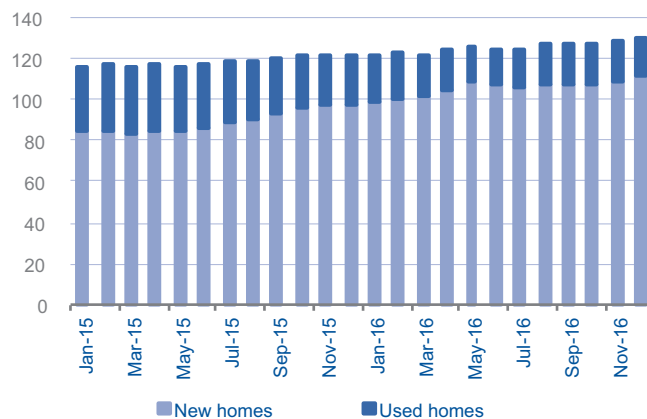
New housing remained the main mortgage loan product placed in 2016 by the banks, and even gained ground over used housing. On the other hand, other products, such as loans for liabilities and liquidity, which registered a boom in recent years, are beginning to lose momentum. This is largely due to the slowdown in interest rates, which has increased competition among banks when offering this product and also by lower expectations of economic growth, which have slowed down requests for financing for liquidity, whose purpose could be related to pursuing another type of business with a mortgage guarantee.

**Figure 2b.15** Origination of mortgage loans for housing  
Billions of pesos in real terms



Source: BBVA Research based on data from the CNBV

**Figure 2b.16** Origination of mortgage loans for housing  
Billions of constant pesos annualised by condition of use



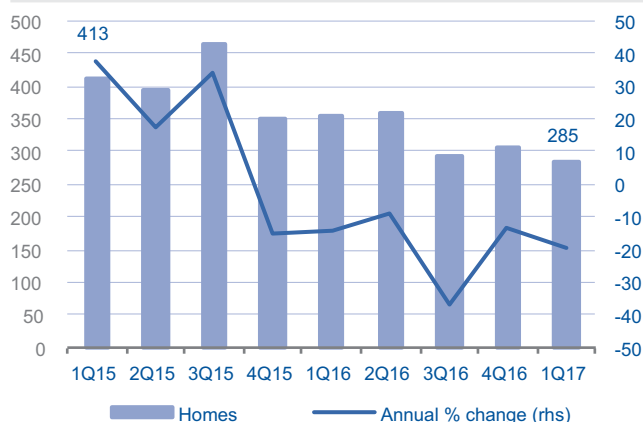
Source: BBVA Research based on data from the CNBV

## Housing construction faces major adjustments

The housing supply has been largely in line with the allocation of subsidies for the purchase of a home, since practically all the aid has been allocated to the purchase of new units. Although in 2016 the trend in the number of home construction projects continued to decline, this should not be a cause for concern, as much of this decrease is explained by a base effect compared to the previous two years, which received the largest amount of subsidies since 2007 in real terms.

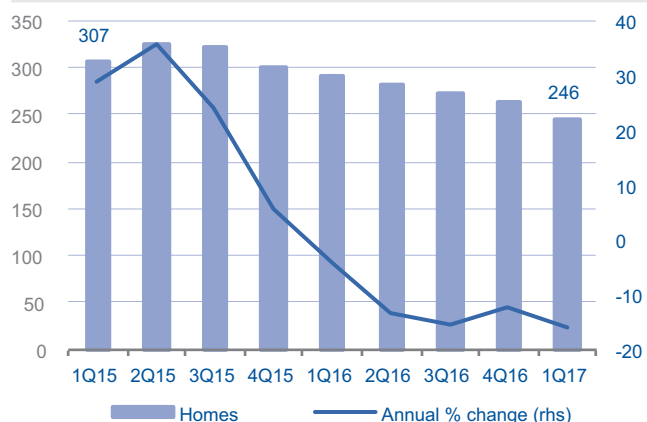
In addition, inventories have maintained the same trend, avoiding the accumulation of surpluses by producing only what the market can absorb. At the end of December, the number of projects in the National Housing Register (RUV from its initials in Spanish) contracted 13.1% in annualised figures compared to 2015 and stood at 305,000 projects, while inventories were reduced by 12.5%, also in annual figures, and totalled 264,000 homes completed.<sup>2</sup>

**Figure 2b.17** Registration of housing units with the RUV  
Thousands in annualised figures and YoY % change



Source: BBVA Research based on data from the RUV

**Figure 2b.18** Housing inventory in the RUV  
Thousands in annualised figures and YoY % change

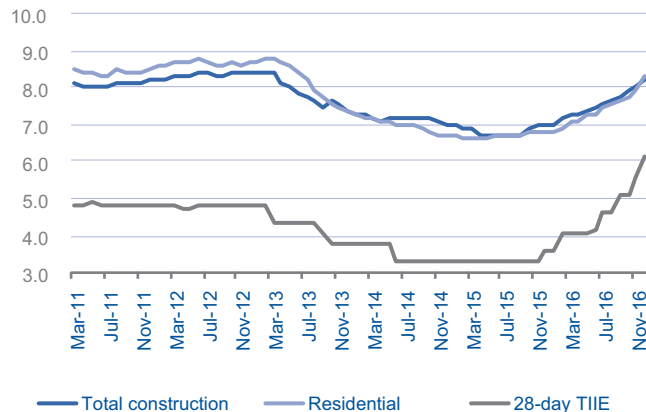


Source: BBVA Research based on data from the RUV

<sup>2</sup>: A dwelling is considered completed or habitable when 100% of the construction has been finished and it also has water, light and drainage services.

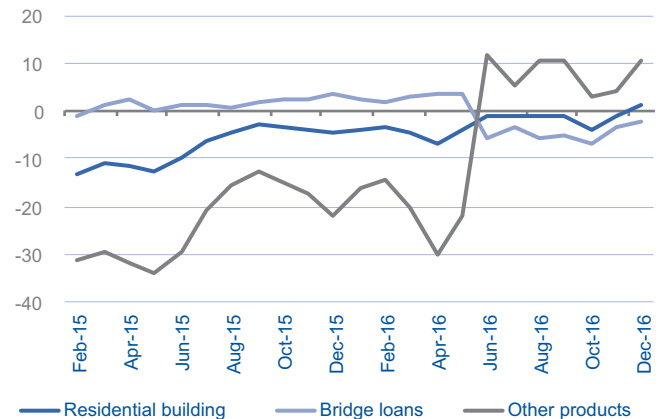
Another factor that undoubtedly had the greatest impact on the decision by builders to reduce the number of projects is explained by the increases in the benchmark interest rate by the Bank of Mexico. Although we have mentioned that there is little correlation between monetary policy and the individual mortgage market, in the case of the construction credit market the transmission is practically immediate through the TIIE at 28 days, but the level has not reached the peak of March 2013.

**Figure 2b.19** Interest rates for construction  
Annual percentage



Source: BBVA Research based on data from the CNBV and Banco de Mexico

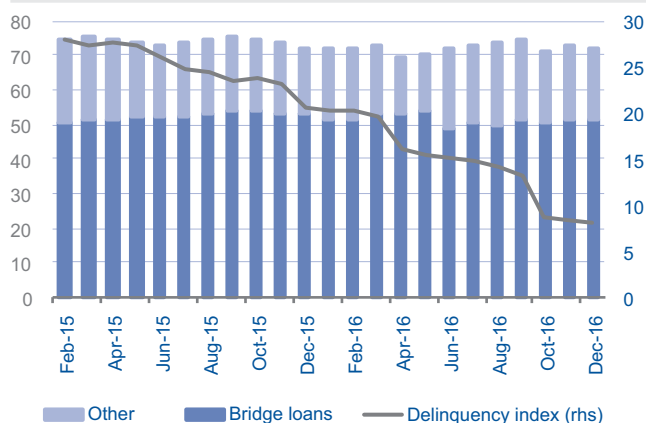
**Figure 2b.20** Balance of credit to residential building  
YoY % change



Source: BBVA Research based on data from the CNBV

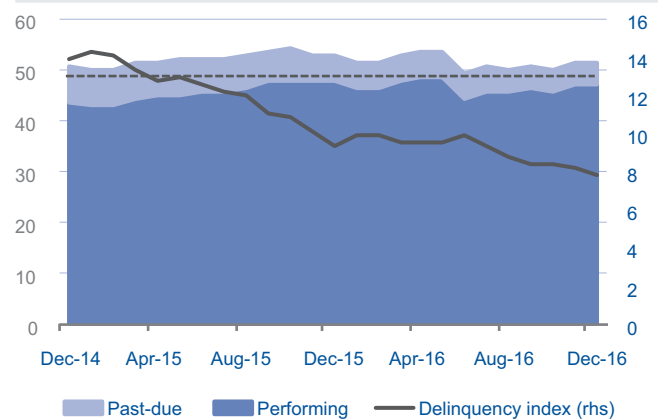
The succession of increases in the benchmark interest rate during the second half of 2016, which amounted to more than 200 basis points, were directly transmitted to commercial bank interest rates on loans for residential construction, as can be seen in Figure 2b.19. As a result, the balance of bridge credit registered negative growth rates from the announcement of an increase in the benchmark rate in June and remained in that territory for the rest of the year. In any case, the new interest rates on housing construction are still below what was observed during 2011 and 2012 when the RUV reported more than 400,000 and little more than 300,000 projects respectively, figures which are higher than those observed at the close of 2016.

**Figure 2b.21** Balance of residential building credit  
Billions of pesos in real terms and %



Source: BBVA Research based on data from the CNBV

**Figure 2b.22** Balance of bridge credit  
Billions of pesos in real terms and %



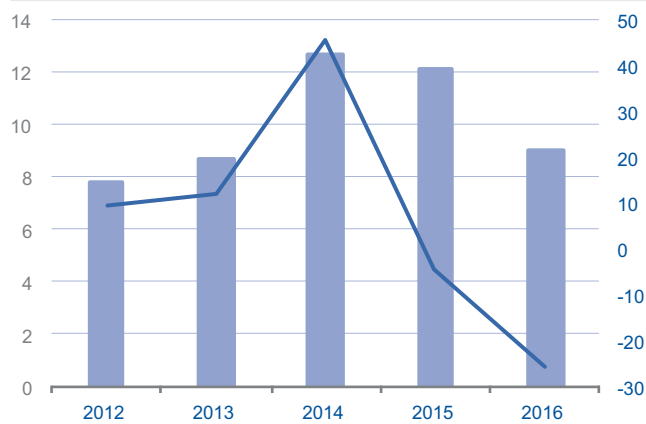
Source: BBVA Research based on data from the CNBV



However, although bridging loans were the main financing product because of their limited level of risk compared to other products; other loans registered increases of around 10%. Among these were unsecured loans, although until now these do not represent a cause of concern that could jeopardise the quality of the portfolio.

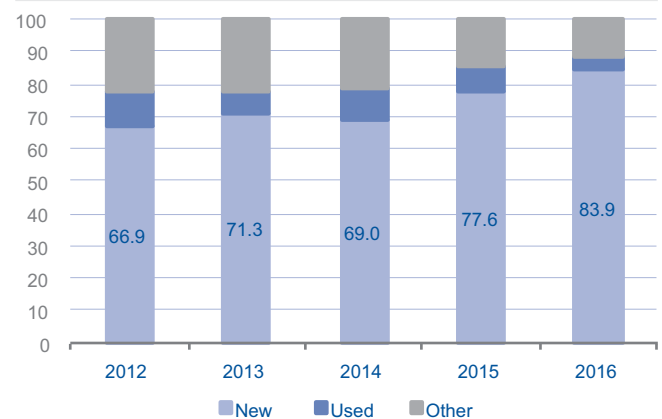
At the close of 2016, the balance of bridging loans stood at just under 50 billion pesos, but the delinquency rate has continued to fall and stands between 7% and 8%. This shows that the lower demand for credit is not a cause for concern, because builders are maintaining a balance between what they produce and what the market can absorb. In addition, it would also reflect the base effect of the reduction in federal government subsidies, which departed from the historical average in 2015, so that the 25% reduction in 2016 should be seen as a return to its long-term trend.

**Figure 2b.23** Amount of subsidies for housing  
Billions of pesos and YoY % change



Source: BBVA Research based on data from CONAVI

**Figure 2b.24** Amount of housing subsidies  
% share per housing solution



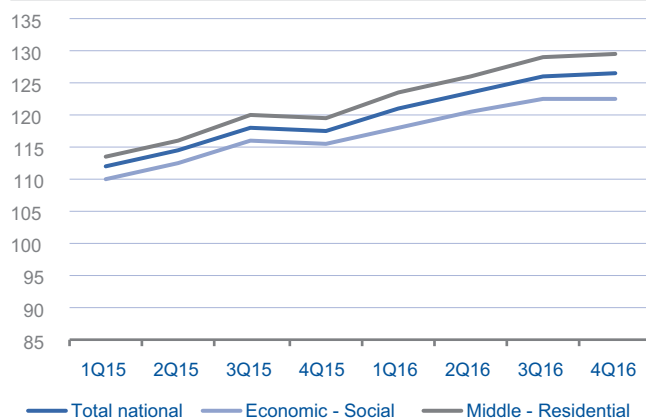
Source: BBVA Research based on data from CONAVI

## Housing prices grew 7.4% in 2016

are maintaining their downward trend.

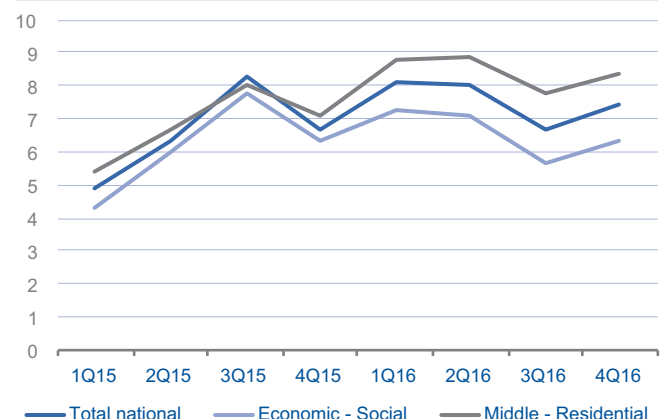
The housing price index continues to reflect appreciation levels above headline inflation, considering the adjustment in demand for lower employment generation and the uptick in rates. These items have explained most of the value cycles of real estate, since on the supply side there is no saturation and, as we have seen, inventories

**Figure 2b.25** SHF House Price Index  
Base 2012 = 100



Source: BBVA Research based on data from the SHF

**Figure 2b.26** SHF House Price Index  
YoY % change



Source: BBVA Research based on data from the SHF

The index for the middle-income and residential segments remains at levels above the aggregate and grew 5.9% at year-end 2016. Meanwhile, the index corresponding to the social interest segments increased by 4.3% in the same period. Our expectation for 2017 is that the pace of appreciation will continue, although at rates closer to those that will be registered by inflation, which could be around 6% per year.

## The mortgage market is likely to have a slight advance in 2017

In our previous issue, we mentioned that the combination of job growth and favourable financing conditions were essential for sustaining the growth of the sector. The change in the trend shown by interest rates, which remain at very competitive levels, has been combined with a slower rate of job creation, which is the main determining factor of the demand for housing. It is true that employment is continuing to rise at positive rates, which is encouraging. However, that of the segments earning 5 times the minimum salary or more, the market served by the banks, is already beginning to slow down. At the same time, long-term interest rates recorded upticks at year-end 2016, after several months of stability, which is likely to be passed on to individual credit. If these factors are maintained in 2017, the mortgage market could register a lower growth rate than the economy or even remain stagnant for the first time in several years.

On the supply side, conditions have been adjusted further downwards. However, this reflects responsible behaviour on the part of builders, who are maintaining their inventories at stable levels in line with market capacity and the lower level of subsidies.

These facts confirm that we are getting closer to the bottom of the mortgage market cycle. But it is also true that the sector is reacting increasingly efficiently to market signals, which is positive, since it allows both consumers and investors to relocate to the most convenient segment.

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