

Spain Real Estate Outlook

FIRST HALF OF 2016 | SPAIN UNIT AND REAL ESTATE UNIT



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2016: impetus of new building

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Prices bottomed out

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Closing date: 11 April 2016

1 Editorial

In 2016 the Spanish economy will grow at a gentler pace than in 2015, but it will once again show growth rates above the European average. Trends in both employment and household income will be positive and will continue to stimulate housing demand. The improvement seen in the property market has finally translated into new building, which will lead to a significant increase in housing starts, the main driver of this industry in 2016.

In this context of market improvement, housing prices have left their lowest prices behind, and at the end of 2015 were already showing gains in value, on an aggregate level, in all the autonomous regions of Spain, for both new and existing residential properties. In some regions where the increases started earlier, such as Madrid and the Balearic Islands, prices are already more than 10% up on the lows of two or three years ago. The trend indicates that in 2016 there will be more markets with higher property values.

Mortgage lending is playing a significant role in this recovery, and will be crucial for its development in 2016. Flows of credit to families for the acquisition of residential property is evolving at a good pace, well ahead of sales, and the trend suggests that this will continue throughout 2016. Financing for property developers was already positive in 2015 and will slowly consolidate in 2016.

It is expected that this year finished residential properties will start to increase in number in some markets, while in others they might bottom out. At the same time building permits for new residential properties will grow at a rate of around 30%. This, together with the greater dynamism we are seeing in the market for land, will ensure the advance of the construction business. Thus it is expected that in 2016 investment in housing will grow again, increasing its weight in the economy.

Box 1 shows an analysis of the productivity of the construction industry. It analyses the historical development of labour productivity and total factor productivity (TFP), from a sectoral and international perspective. It reaches the conclusion that the industry, both in Spain and in other countries, has grown historically on the basis of accumulating productive factors, especially employment, and that in the future it would be advisable for the industry to grow more via quality than quantity of factors.

The improvement in the economy is leading to a decrease in emigration and a new magnet for immigration. In this regard, Box 2 shows the effects that the improvement we are seeing in the labour market as a result of increased economic activity will have on net migration. If in the long term the Spanish economy grows at its average GDP potential, immigration will be the factor that mitigates the limitations imposed by an ageing population. Forecasts indicate that we will see positive net migration figures in the short term, which will be a new incentive for residential demand.

Yours sincerely,

2 Recovery continues despite greater uncertainty¹

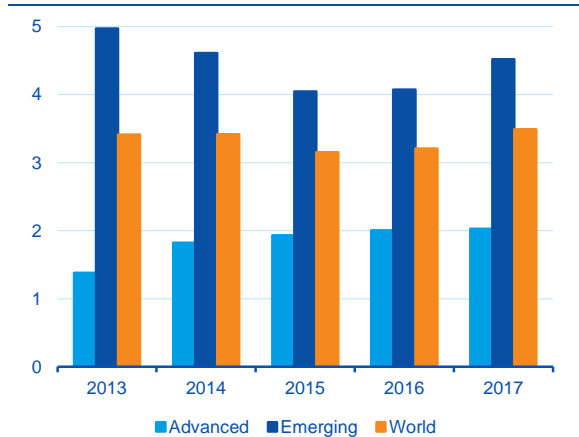
The Spanish economy continues to recover and will grow at around 2.7% in 2016 and 2017, according to the latest estimates of BBVA Research, which will allow net employment creation of close to a million jobs, bringing the unemployment rate to 17.5% at the end of the period. However the risks inherent in this scenario persist. From the domestic point of view, the risk that stands out most is that associated with the uncertainty over economic policy in Spain: although so far the real activity and employment figures show no signs of a significant slowdown in recovery, if this uncertainty is not resolved quickly and favourably, it could have a substantial impact. Apart from this, the risks associated with the slowdown in the emerging economies persist, with China and the oil exporting countries as the main sources of uncertainty.

Slower global growth in a risky environment

World GDP will grow by 3.2% in 2016, before accelerating moderately in 2017 to 3.5% (Figure 2.1). This growth, which remains the lowest since 2009, is conditioned by the decline in demand from emerging economies, particularly in Latin America, which look like contracting for two years in a row. The recovery in developed economies remains fragile and highly dependent on the eventual impact of the slowdown in world trade and the effect of financial instability on production, business investment decisions and consumer spending (see Figure 2.2). Growth in the USA and the euro zone, at 2.5% and less than 2% respectively, will not be enough to offset the relatively worse performance expected from the emerging economies.

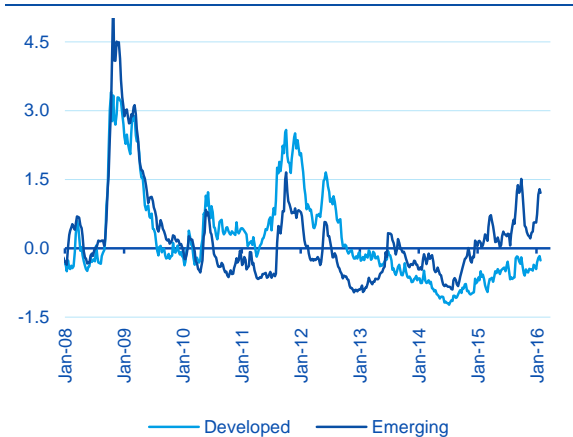
The intensification of some of the sources of risk has accordingly led to a new downward revision of world economic growth forecasts for 2016. China's transition to a lower growth pattern is accompanied by bouts of high financial volatility and falls in commodity prices with negative repercussions for countries that rely on commodity exports and those that are financially vulnerable.

Figure 2.1
World GDP, (% YoY)



Source: BBVA Research

Figure 2.2
BBVA index of financial stress (normalised values)



Source: BBVA Research and CRB

Moreover, the level of corporate indebtedness in those emerging countries most vulnerable to the circumstances described constitutes an additional source of instability, in a context of lower profits and higher financing costs (bigger risk premiums). Allied to this, geopolitical tensions in certain parts of the world

1: For more detailed information on Spain's economic situation, please refer to Spain Economic Outlook, First Quarter 2016, available at: <https://www.bbvarresearch.com/en/public-compuesta/spain-outlook-first-quarter-2016/>

and the risk of a scenario of low growth and low inflation in the major developed economies complete the outlook for the world economy in 2016.

All the same, the orientation of monetary policy adopted by central banks in developed economies will remain decisive. The start of the process of normalisation of interest rates by the US Federal Reserve has not led to any substantial increase in financial volatility, thanks to the Fed's repeated assurances that the process will be a gradual one. As for the ECB, given the political instability and the lack of fiscal stimulus measures, its role will continue to be crucial to prevent a serious deterioration in financing conditions. The stability of the euro exchange rate against the dollar, and above all the fall in inflation rates caused by the downward revision of the oil price forecast for 2016, led the ECB in January to open the door to a new round of stimulus measures.

Spain: growth continues at higher rates than in the EU as a whole

In 2015 the Spanish economy consolidated the recovery begun in mid-2013. Although the macroeconomic environment was not without risk, the positive trend in economic activity and employment was maintained, encouraged by significant tailwinds (such as the fall in oil prices), the increased support from fiscal and monetary policies and the structural changes made in recent years. The expansion of activity was concentrated in domestic demand, particularly the growth in consumer spending and capital expenditure. There was also a notable recovery in residential investment which although less intense than expected showed the first annual growth for nine years. By contrast, net external demand drained growth for the second consecutive year due to the upturn in imports, since exports increased in an environment of slowdown in the emerging economies and gradual recovery in the developed economies.

The outstanding balance of credit to the private sector fell in 2015. At the same time new lending increased by 12.0% in the year, although with a declining trend over the course of the year due in part to the increased uncertainty in the international markets. The cost of new borrowings moved downwards, helped by the cut in EURIBOR, reduced sovereign risk and the lower credit risk faced by banks.

In the next few quarters, the fundamentals of the Spanish economy support continuing recovery over the rest of the two-year period. BBVA Research estimates indicate that activity will grow by 2.7% in both 2016 and 2017, which will allow the creation of around one million jobs during the period as a whole and reduce the unemployment rate to around 17.5% (Figures 2.3 and 2.4).

The expansion of activity will be supported by both internal and external factors. The global economy will continue to grow at slightly above 3.0%, which together with lower oil prices will support the increase in Spanish exports, despite the appreciation of the exchange rate against emerging currencies. Similarly, the expansionary monetary policy will facilitate the increase in demand.

Domestically, the continued recovery of the fundamentals, the progress in correcting imbalances and a moderately expansionary fiscal policy will contribute to an increase in domestic demand. In this regard, prospects for household consumption are favourable, despite the expected trends in financial wealth and the decline of some temporary stimuli. Job creation, lower tax pressure and the absence of inflationary pressures will boost real disposable income in the coming quarters. The expected growth in housing wealth and the expectation that official interest rates will remain at historically low levels will also encourage private consumption. In addition, new consumer finance transactions will continue to increase and will sustain spending in the medium term, especially on durable goods. On the other hand, economic uncertainties will continue to be a source of volatility for the financial markets.

As for public sector demand, the administrations used the recovery in activity and improved financing costs to implement an expansionary fiscal policy in the short term. In a scenario with no change in economic policy, the tone of fiscal policy will remain slightly expansionary during the coming two years. Thus for this

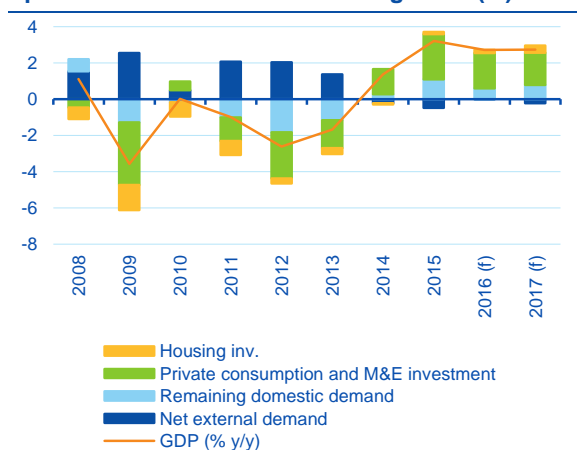
year it is expected that the business cycle will again reduce the public deficit, both through the effect of automatic stabilisers and thanks to the reduced burden of interest and social benefits. In turn we foresee some containment of other items of expenditure, more intense in current than in capital expenditure. However, the fiscal reduction will continue to have a negative effect on administrations' structural revenues, although this will not prevent the public deficit from falling again in 2016 and 2017.

All the same, the increase in final demand will cause a significant increase in imports, which will probably result in a negative contribution of net external demand to growth, despite the good performance expected from exports.

Although the Spanish economy continues to grow at a healthy rate, some external and internal risks remain or have even increased. Among the former, we note those associated with the slowdown in emerging economies, especially China and oil exporting countries. At domestic level, uncertainty about economic policy has increased, and if it intensifies or persists, the possibility of its exerting greater pressure on the recovery cannot be ruled out.

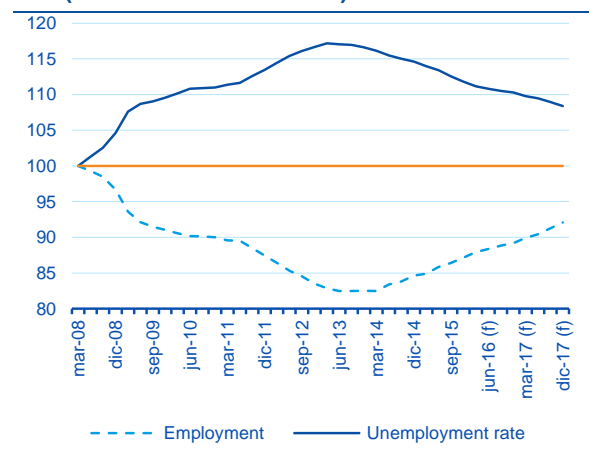
Moreover, the public deficit again exceeded the stability target in 2015 which, in the absence of specific measures, raises the probability of the target's being missed for the next two years. This may lead to a loss of trust on the part of the markets and the European authorities.

Figure 2.3
Spain: contributions to YoY GDP growth (%)



(f): forecast.
Source: BBVA Research based on INE

Figure 2.4
Spain: level of employment and unemployment rate (1Q08 = 100. SWDA data)



(f): forecast.
Source: BBVA Research based on INE

3 Increased financing crucial for the development of the real estate industry

Félix Lores – Spain Unit | Ignacio San Martín, David Cortés, Leopoldo Duque – Real Estate Unit

The most significant variables of the real estate ended 2015 on a positive note. The market was driven by demand, and 9% more residential properties were sold than in the previous year, thanks to positive trends in the fundamentals, especially employment and financing conditions. Thanks to the dynamism of the labour market, the year ended with approximately half a million more people in work than at the end of 2014, with the consequent increase in household incomes and recovery of business and household confidence indices. The cost of financing continued to fall, and new lending to finance residential investment showed strong impetus throughout the year.

In this context, after seven years of decline, there was an increase in construction activity. Building permits for new housing, while admittedly starting from rock-bottom, increased by 43% relative to 2014. Building a new house usually takes between eighteen months and two years from the time the building permit is applied for until the completion certificate is signed, so the number of new residential properties coming onto the market at present is still small, which favours absorption of the existing over-supply.

The recovery in demand and the gradual decline in current supply are reflected in a recovery in house price. In fact, in 2015 house prices increased across the board, they can be said to have bottomed out and embarked upon a new period of stabilisation. In the most active markets, such as the Mediterranean coast and the major centres of business activity, prices are already showing significant upturns.

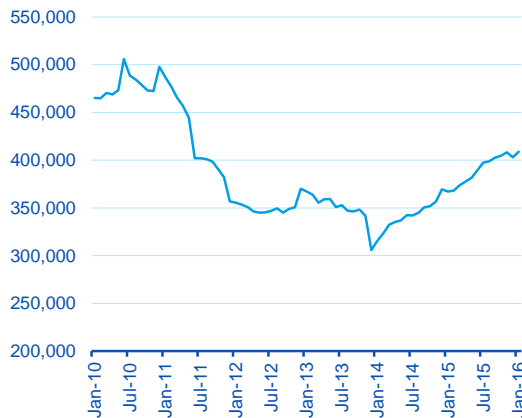
Prospects for the next few years are encouraging. The positive forecasts of economic growth and the loose monetary policy of the European Central Bank underpin the continuation of the positive trend in demand for housing and mortgage borrowing through 2016. At the end of 2016 the economy will have had three years of job creation, which will no doubt once again act as a magnet for immigrants and an additional boost for the property market.

So far, data for the first few months of 2016 have been positive: both sales and building permits showed higher growth than that of the last few months of 2015. Also, following the slowdown seen in January, new lending in February was back on the growth track. The industry however, like the rest of the economy, is not without risks. The uncertainties surrounding global growth and those relating to economic policy in the next few years could be imposing constraints on households' and businesses' investment decisions, and could end up affecting both demand and supply in the industry.

The industry is being driven by demand, underpinned by the fundamentals

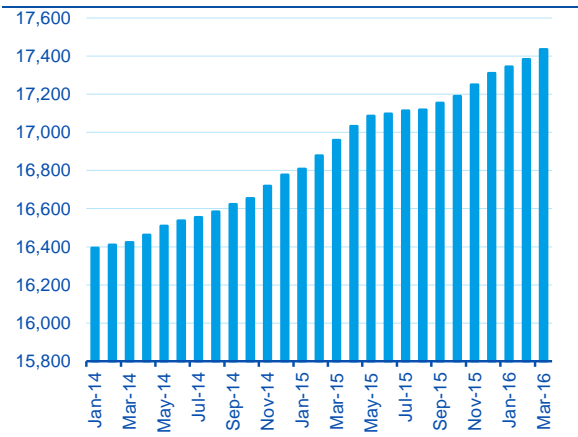
A total of 401,226 residential properties were sold in 2015, an increase of 8.6% relative to 2014. This solid growth reflects favourable trends in the factors that go to make up demand. However in the last part of the year, sales were less dynamic, moderating the growth trend seen in the previous quarters (Figure 3.1). This slowdown in sales was significant, especially in December. Demand fundamentals evolved positively in 2015, and most of them did not reflect a slowdown in the last part of the year. In fact, the pace of job creation picked up again in the last three months of the year, as can be seen from the Social Security registration data (Figure 3.2).

Figure 3.1
Spain: sales of residential properties (SWDA)



Source: BBVA Research based on CIEN data

Figure 3.2
Spain: workers registered with the Social Security (monthly average, SWDA)



Source: BBVA Research based on MESS data

During 2015, job creation favoured the increase in gross household disposable income, which ended the year up by 2.3% on that of 2014. This increase was basically due to the remuneration of workers taking up newly created jobs and to the increase in the gross operating surplus, since the net balance of property income received (mainly interest and dividends) declined during the year. Household income was given a further boost by the tax cuts initially scheduled for 2016 being brought forward to 2015 (Figure 3.3).

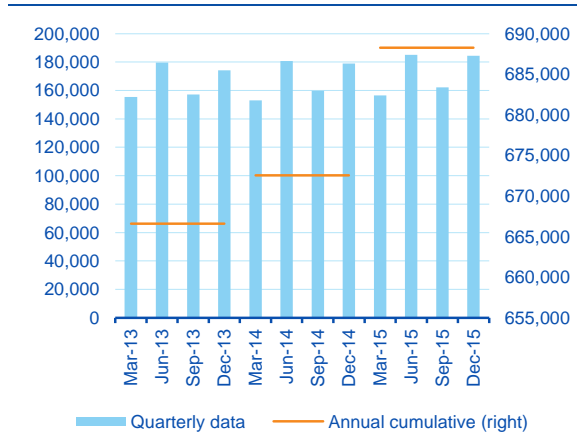
As a result of these factors, consumer confidence grew in the last few months of the year. In fact the index which captures the outlook for the development of the economy reached its highest level in December, even surpassing the levels recorded before the crisis (Figure 3.4).

Financing conditions also remained favourable. Interest rates fell further in the latter part of the year, contributing to the increase in new lending to finance residential property buying, although the increase was more moderate than that seen at the beginning of the year. Thus in December 2015 the rate of interest for new mortgage loans was 2.3%, 0.1pp less than in September, a very similar reduction to that seen in one-year EURIBOR.

In summary, the way the main demand fundamentals evolved in the last few months of 2015 does not appear to explain the slowdown in sales in the same period. In fact, in the early part of 2016 we have seen the opposite phenomenon: while the positive trend in demand fundamentals slackened, housing sales surged. In the first month of the year residential property transactions increased by 20.4% compared with December on a seasonally adjusted basis (SWDA). Employment also improved in the first quarter of 2016, as shown by the increase in the number of people registered with the Social Security, which grew at a similar monthly average to that of last year. Consumer confidence indicators for their part reflected a moderation in expectations of economic development in the next few months, and despite remaining at a high level the index showed a significant decline in January which was extended through February and March, with a final reduction of just over 17 points.

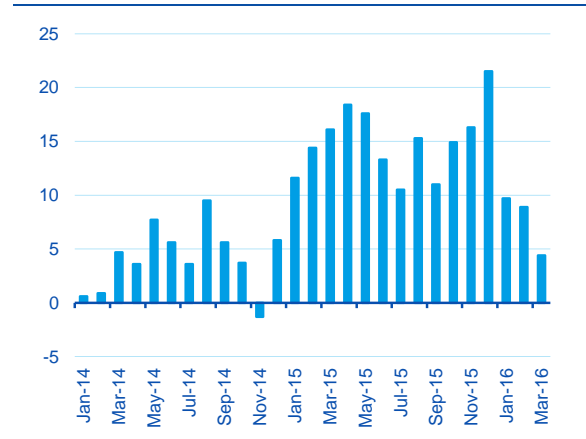
In short, it seems that the uncertainties are being translated into a more erratic property market, and that while they persist, the market will continue to show a degree of volatility. In any case in the medium and long term, the solidity of these fundamentals augurs well for increased sales of residential properties.

Figure 3.3
Spain: gross disposable household income (€ millions)



Source: BBVA Research based on INE

Figure 3.4
Spain: consumer confidence*



* Note: perception of the economic situation in the next twelve months.

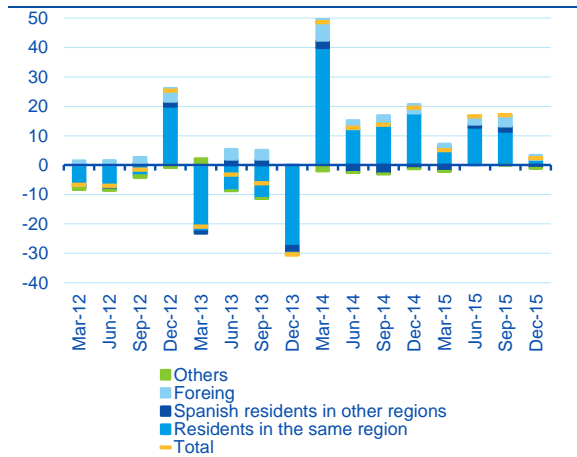
Source: BBVA Research based on MESS data

An analysis of demand shows that in 2015 the majority (71%) of residential properties sold were purchased by residents of the autonomous region in which the property was located. The second biggest group of buyers consisted of foreigners, who bought 17.3% of the total, and the third biggest was composed of residents of autonomous regions other than those in which the properties were situated (10.9%). The dynamics of these segments indicate that purchases by foreigners showed the biggest growth in 2015, up by 13.1% on 2014. Purchases by residents of the same region as that of the property increased by 10.9%, while those by residents of regions other than those of the properties declined by 1.0%. (Figure 3.5).

Thus in a context of generalised sales growth, the weight of purchases by foreigners at the end of the first half of 2015 was up by 0.4 pp on H1 2015, at 17.5% of the total. By country of origin, the increased proportion of UK citizens stands out, with the UK not only holding its position as leading country of origin increasing its share in 2015 to reach 21.3% of total foreign sales. France was the second most frequent country of origin (8.7% of total foreign sales) and Germany the third (7.3%), with no significant changes in their weights during the half-year.

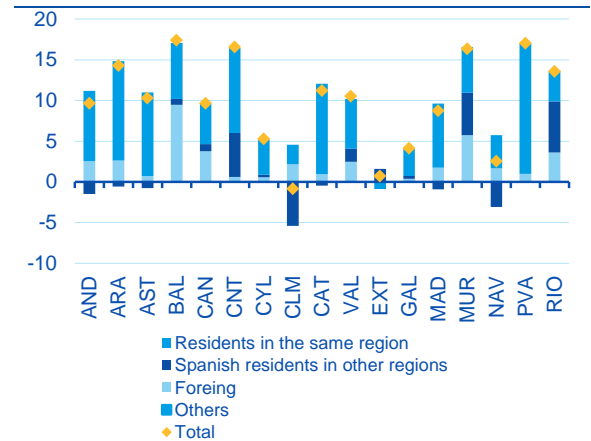
By autonomous region, in year-on-year terms, 2015 ended with increased housing sales in all the autonomous regions except Castilla-La Mancha, where they down by 0.8% on 2014. This decline was the result of a fall in the number of buyers from other regions and lacklustre demand from the region itself. In general terms, in most of the autonomous regions domestic demand was the main driver of the positive trend in sales last year, although there were some notable specific features in some regions. For example in the Balearic Islands much of the growth in sales was due to increased demand from foreigners, up by 25.9% YoY, way above the 13.1% national average increase. The contribution from foreign demand also played an important role in the Canary Islands and in Murcia. In some markets, notably Cantabria, Murcia and La Rioja, the significant number of purchases by residents of other regions stands out. In Asturias, Castilla y León, Catalonia, Galicia and the Basque Country there was a notable lack of dynamism in non-domestic segments of demand.

Figure 3.5
Spain: contribution to YoY growth in sale of residential properties (in pp)



Source: BBVA Research based on MFOM data

Figure 3.6
Spain: contribution to YoY growth in sale of residential properties in 2015 (in pp)



Source: BBVA Research based on MFOM data

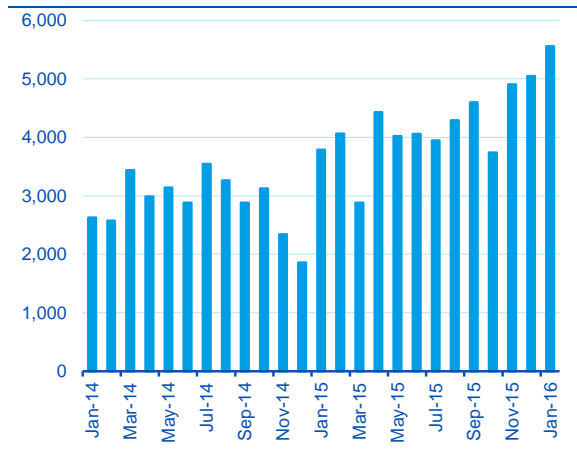
Supply continues to decrease, in spite of the increase in construction activity

Last year was the year in which the trend in new housing construction turned. The number of building permits for new housing increased by 42.5% year-on-year, to 50,000 units. While the impetus was strong, it came in a context of very low levels of activity (housing starts are still at only 5.7% of 2006 levels). In the last quarter of 2015 the number of building permits showed positive growth, increasing by 6.7% (SWDA) compared with Q3 (Figure 3.7).

The good pace of activity is seen also in the increase in employment in the industry: last year the number of construction workers registered with the Social Security rose by 37,000, 3.7% more than in 2014 and half a percentage point more than the average growth in employment (Figure 3.8). Similarly, the number of people unemployed in the industry fell by 89,800, a decrease of 16.5% year-on-year and a bigger reduction than that of the overall national average of 8%. The positive trend in new construction works in 2015 was further endorsed by the consumption of cement, which increased by 5.4% YoY.

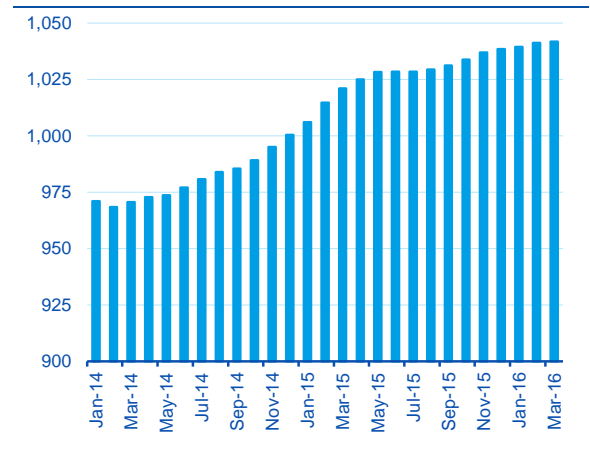
Since the beginning of 2016, figures for employment, cement consumption and building permits have behaved more erratically. In the case of cement, January showed a small decline, followed by recovery in February. Job creation slackened in January and February, and in March it showed signs of stagnation. We shall have to wait and see whether this trend is confirmed in the next few months. And lastly, building permits again surged in January (10.1% MoM SWDA). Thus we can say that so far the uncertainty surrounding economic policy does not seem to be causing a reduction in construction activity, although it could be making the market more volatile than would otherwise be the case.

Figure 3.7
Spain: building permits for residential properties (SWDA)



Source: BBVA Research based on CIEN data

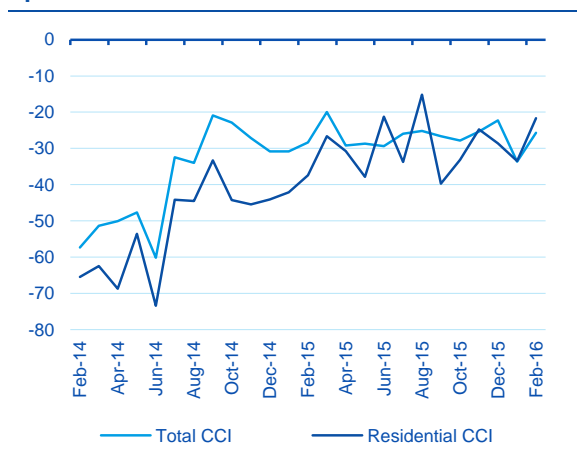
Figure 3.8
Spain: construction workers registered with the Social Security (monthly average, SWDA)



Source: BBVA Research based on MESS data

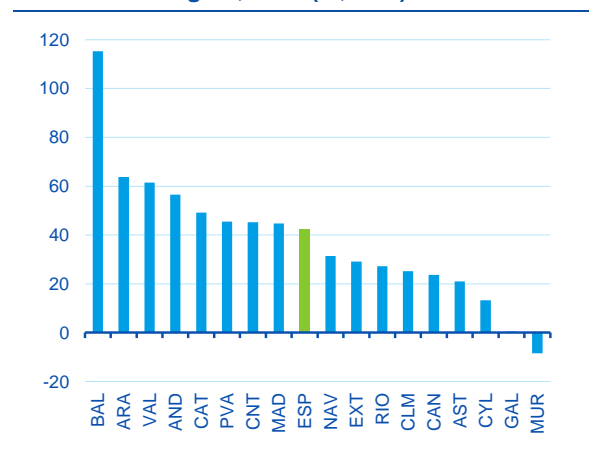
The Construction Climate Indicator produced by the Ministry of Industry, Energy and Tourism, behaved similarly to the supply variables: business confidence in the industry, especially the new construction segment, deteriorated in the home stretch of 2015 and on into January 2016. However, in February confidence recovered strongly, reaching similar levels to those of mid-2015 (Figure 3.9).

Figure 3.9
Spain: construction climate indicator



Source: BBVA Research based on MINETUR data

Figure 3.10
Spain: building permits for housing new starts by autonomous region, 2015 (% YoY)



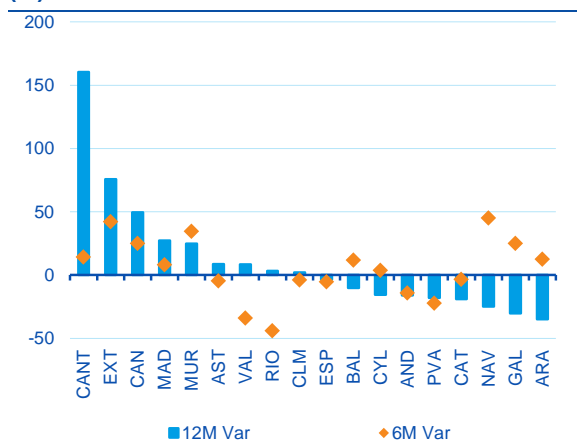
Source: BBVA Research based on MFOM data

At regional level, housing starts in 2015 remained very uneven, as shown in Figure 3.10. While admittedly the numbers of building permits are at rock-bottom in all seventeen autonomous regions, all of them except Murcia showed increases in new housing permits granted in 2015. The increase of 115.2% in the Balearic Islands stands out particularly. In Aragón, Valencia, Andalusia, Catalonia, the Basque Country, Cantabria and Madrid the increase in the number of building permits surpassed the national average (42.5%); in Navarre, Extremadura, La Rioja, Castilla-La Mancha, the Canary Islands and Asturias the increase was somewhat below the average and in Castilla y León and Galicia it was appreciably less.

At the same time the number of residential properties completed continues to stabilise and form a floor. At the national level, we see that residential properties completed have now fallen for eight consecutive years, with the 3.6% fall in 2015 being the smallest decline since the start of the crisis. With this, and bearing in mind that housing starts have accumulated two years of growth, we infer that the number of completed residential units will bottom out during 2016.

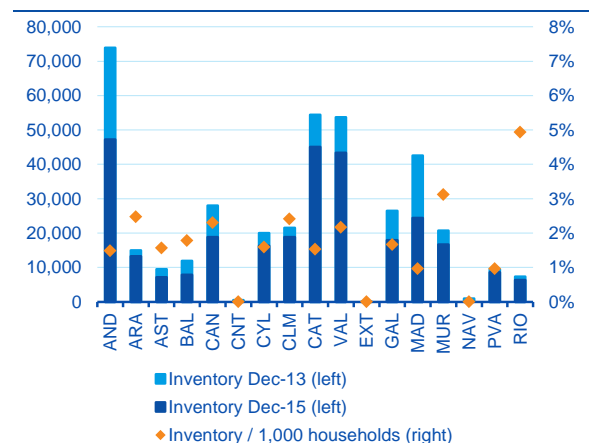
At regional level we see a very uneven picture. While admittedly the number of residential properties completed in 2014 declined in all the autonomous regions, in 2015 we started to see signs of recovery in some of them, as in the case of Murcia, Madrid, the Canary Islands and Extremadura, where the number of residential properties completed in the past year has shown significant growth, which has been maintained in the past six months. In the Balearic Islands and Castilla y León, the growth observed in the past six months shows that completed residential properties are close to bottoming out. (Figure 3.11).

Figure 3.11
Spain: changes in work completion certificates (%)



Source: BBVA Research based on MFOM data

Figure 3.12
Spain: changes in the stock of housing new builds



Source: BBVA Research based on MFOM and INE data

This decline in the supply of new housing, together with the increase in demand for housing, is leading to shrinkage of the stock of new housing on offer. Indeed in some regions such as Madrid, Cantabria and Extremadura, over-supply has ceased to be a problem for the market, since the level is below the frictional housing stock (estimated at between 1% and 1.5% of the total housing stock), which is the volume of residential properties needed for the market to function properly (Figure 3.12).

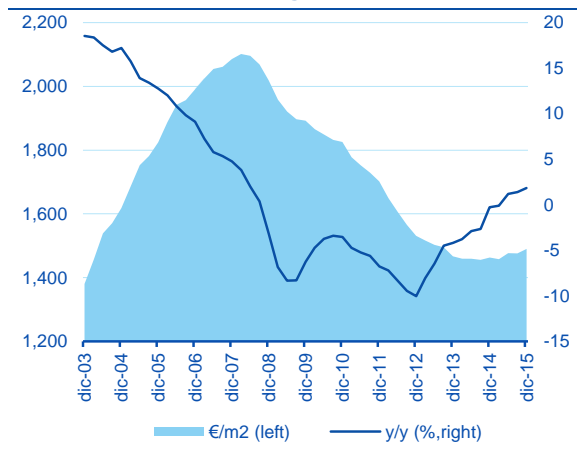
Another indicator confirming the growth in construction activity, and providing some assurance for the future, is the trend in the land market. In particular, although the number of urban land transactions was practically stable in 2015 (-1.1% YoY), the area transacted was 3.8% more than in 2014, which implies that the transactions concerned bigger plots.

Housing prices have bottomed out and are now rising

The growth in demand and the decline in supply have led to an increase in housing prices of 1.1% average YoY in 2015, as can be seen from the data produced by the Ministry of Public Works and Transport based on property appraisals. In the case of residential properties sold, notaries' data, gathered and compiled statistically by the INE, show an increase of 3.6% in average prices in 2015. Other price indicators point in the same direction and suggest as a whole that housing prices bottomed out and increased slightly in 2015.

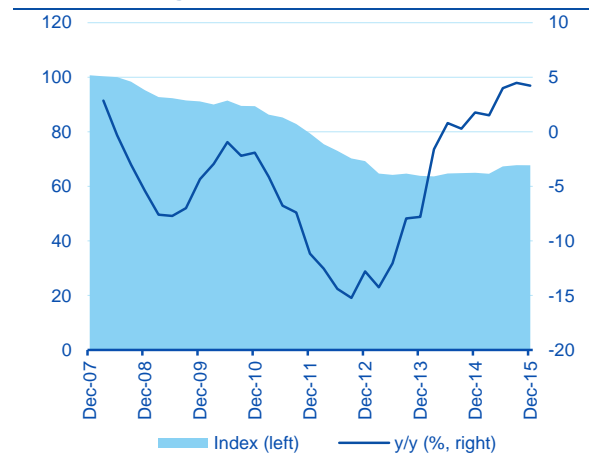
According to the Ministry of Public Works and Transport, housing ended 2015 at an average price of €1,490.10 per square metre, a similar level to that of H2 2004. This means that appraised values showed positive YoY growth in three consecutive quarters, preceded by two stable quarters (Figure 3.13). According to the INE, at the end of 2015 housing prices completed seven consecutive quarters of gains, so we can say that they are leaving their lows behind and consolidating their growth trend (Figure 3.14).

Figure 3.13
Spain: appraised housing values



Source: BBVA Research based on MFOM data

Figure 3.14
Spain: housing price index

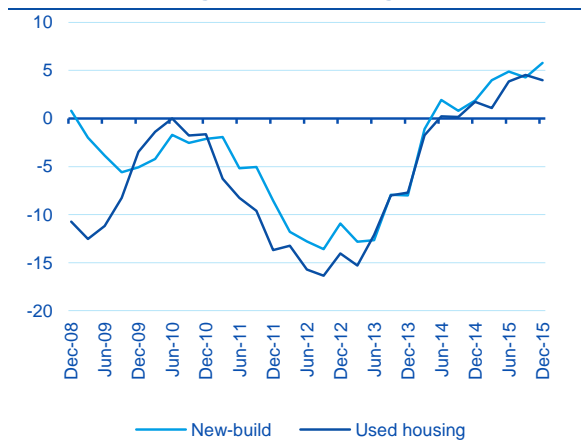


Source: BBVA Research based on INE

By type, the price increases occurred in both new-build and used housing. New-build prices increased by 4.7% annual average, while used housing prices rose by 3.4% in the year. Although both segments showed a clear growth trend, in the latter part of 2015 we saw a difference: whereas the increase in new-build housing prices continued to gain traction, that in used housing prices moderated slightly (Figure 3.15). This may be due to either of two factors, or a combination of both. On the one hand, the ever decreasing supply of new-build housing might be pushing prices up more intensely. On the other hand, the moderation in demand seen in the last quarter of the year might have made itself felt in used housing prices, slowing their growth.

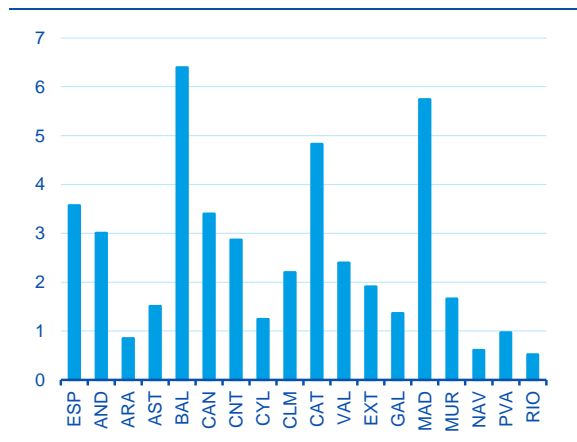
At regional level, housing prices increased in all markets in 2015, according to data from the INE's housing price index. The increases seen in the Balearic Islands and in Madrid were particularly significant, at around 6% for the year in both cases. The increase of nearly 5% in Catalonia also stood out. At the other extreme, the most modest increases, less than 1%, were to be seen in La Rioja, Navarre and Aragón. Thus for the first time since the onset of the crisis, housing prices increased in all the autonomous regions (Figure 3.16).

Figure 3.15
Spain: YoY change in the housing price index (%)



Source: BBVA Research based on INE

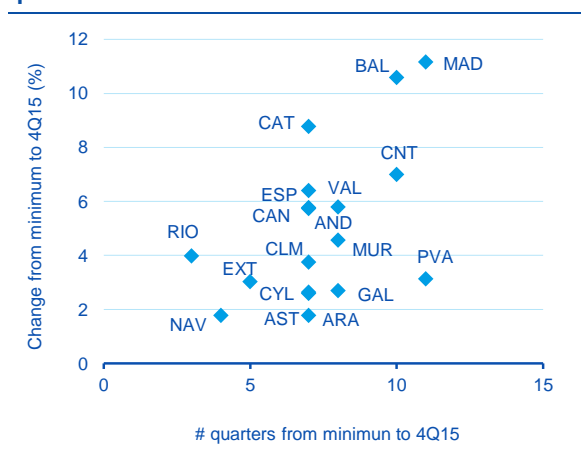
Figure 3.16
Spain: YoY change in the housing price index 2015 (%)



Source: BBVA Research based on INE

Figure 3.17 shows the degree of consolidation of the increase in prices in the various regions. Madrid and the Balearic Islands could be classed as the markets where the change in the housing price trend first started and where the increase is greatest: eleven quarters have gone by since prices touched bottom in Madrid, and ten in the Balearic Islands, both regions having accumulated an increase of more than 10%. Both regions have particular features that explain this performance: Madrid is one of the regions that has come out best from the crisis, with GDP growth in excess of the national average, strengthening domestic demand; the Balearic Islands, a tourist region *par excellence*, is one of the main draws for foreigners to establish their retirement home or secondary residence. Similarly, in regions such as Catalonia and the Canary Islands, where there is also significant demand from foreigners, there is a high degree of consolidation in the change of trend in housing prices.

Figure 3.17
Housing prices. Rates of change and number of quarters with increases



Source: BBVA Research based on INE

Figure 3.18
Year-on-year change in new-build and used housing prices (%)

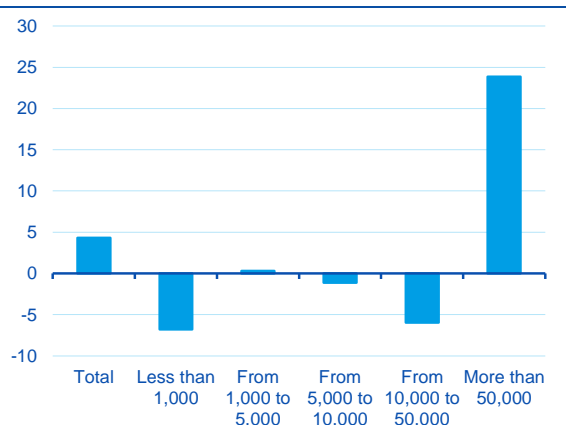


Source: BBVA Research based on INE

By type, in 2015 on average the increase in new-build housing prices exceeded that in used housing prices in all the autonomous regions. Moreover, prices of both new-build and preowned housing increased in all regions except Navarre, where preowned housing prices fell by 0.4% relative to 2014 (Figure 3.18). In particular, the Balearic Islands, Madrid and Catalonia were the three regions where prices of both new-build and preowned housing surpassed national average growth. At the other extreme, Navarre, La Rioja, Aragón and the Basque Country were the furthest below the average for both new and used.

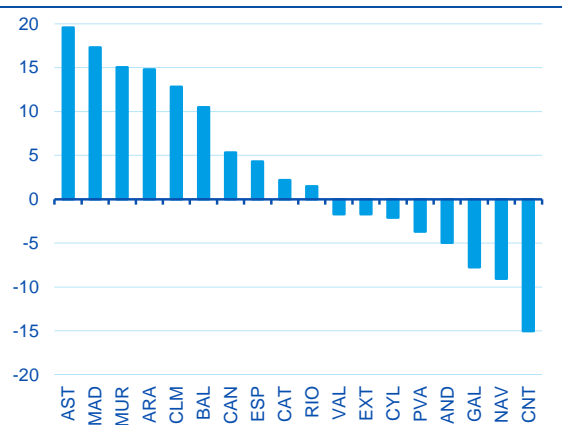
In 2015, the increase in housing prices was accompanied by a 4.3% increase in the price of urban land relative to 2014, according to data of the Ministry of Public Works and Transport. As can be seen in Figure 3.19, the price increases were led by large municipalities, with more than 50,000 inhabitants. The other markets, except for that of between 1,000 and 5,000 inhabitants, which practically remained unchanged, showed falls in prices. In any case, it must be borne in mind that land statistics are particularly volatile. This volatility is seen more clearly in the regional analysis. In Figure 3.20 we see that the price of urban land rose sharply in Aragón and Asturias, regions that do not particularly stand out in terms of housing price increases; in Madrid, where the increase in housing prices seems to be consolidated; and Murcia, where new-build housing prices rose at a rate close to the average. Regions with a clearly rising price dynamic, such as the Balearic Islands and Catalonia, also showed increased in the price of urban land.

Figure 3.19
Spain: average price of urban land by size of municipality in 2015 (% annual change)



Source: BBVA Research based on MFOM data

Figure 3.20
Average price of urban land in 2015 (% change YoY)



Source: BBVA Research based on MFOM data

Financing: a key factor for growth in demand

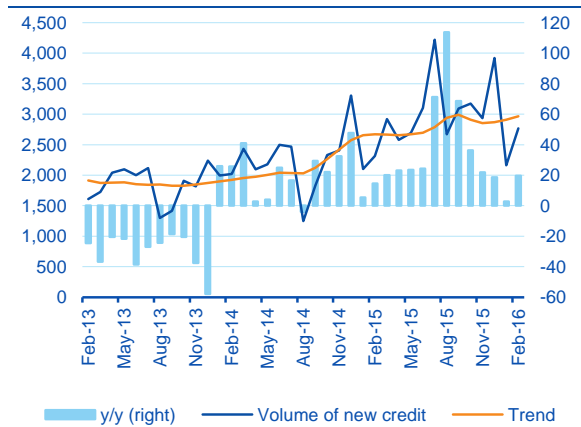
Mortgage lending is proving to be one of the main factors underpinning the growth in demand for housing. The combination of an expansive ECB monetary policy and the improved outlook for the economy in general and the housing market in particular, have allowed a gradual reduction in financing costs and favoured expansion of the market on both the demand and the supply side.

In the last few months of 2015 growth in the flow of new lending to finance house buying moderated relative to that seen in the middle quarters of the year. In any case, 2015 ended with an increase of 33.2% in new lending, the second year of increase after seven consecutive years of decline. Initial indicators in 2016 point to significant growth in lending for residential investment, in line with that seen in the last few months of 2015. (Figure 3.21).

This increase in credit has been clearly reflected in the increase in the number of mortgage loans granted for buying homes, with 25.8% more loans being signed in 2015 than in 2014. On top of that, 2016 started with a

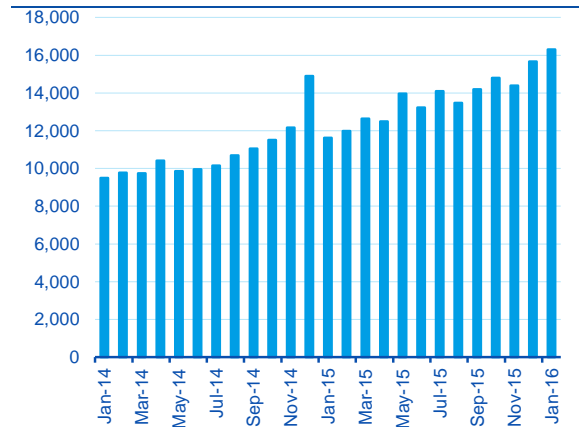
new advance - in January the number of mortgage signed was up by 4.1% (SWDA) on December (Figure 3.22).

Figure 3.21
Spain: flow of new credit to households for home purchase



Source: BBVA Research based on Banco de España data

Figure 3.22
Spain: residential mortgage loans (SWDA)



Source: BBVA Research based on CIEN data

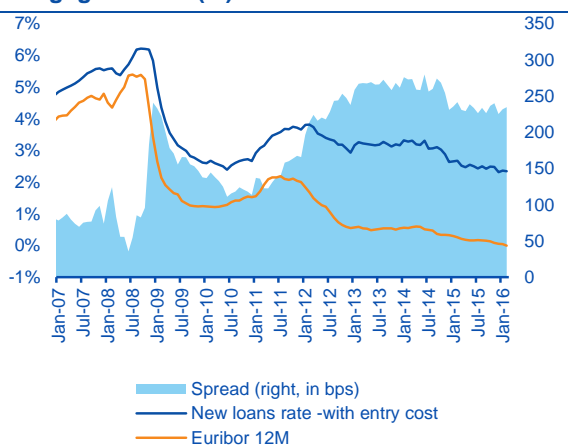
The ECB's latest decisions have been aimed at boosting credit in order to bring about more dynamic economic activity and raise the rate of inflation, which has been in negative territory for the past few quarters. As a result of these decisions, interbank interest rates have been on a downward path throughout 2015 and so far in 2016. Twelve-month EURIBOR, the main mortgage loan benchmark in Spain, ended March 2016 at a negative 0.012%, representing a reduction of 22 basis points from March 2015.

Similarly, the improvement in the economic outlook has allowed lending margins to be reduced, bringing the interest rate for new transactions² in February to 2.34%, 33 basis points less than in February 2015. This puts interest rates associate with the mortgage lending market to an all-time low, which is undoubtedly encouraging demand (Figure 3.23).

The reduction in mortgage costs also had a positive effect on Spanish families' access to housing last year. Despite the 1.8% increase in housing prices in 2015, the reduction in financing costs and the improvement in Spanish households' gross disposable income allowed the BBVA affordability risk ratio³ to continue to improve, reaching 129% at year-end 2015 (Figure 3.24).

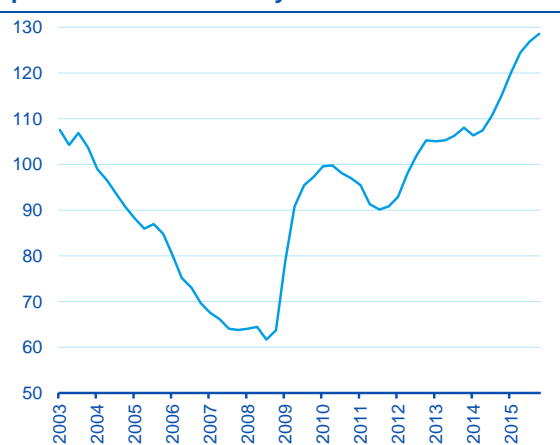
2: This interest rate is the A.P.R. Resulting from the reference interest rate, which in Spain is generally 12-month EURIBOR, plus the margin applied by the lending bank and the fees associated with the signing of the mortgage contract.
3: A detailed explanation of this indicator can be found in Box 2 of the Real Estate Outlook review for December 2015: https://www.bbva.com/wp-content/uploads/2015/12/Situacion_Inmobiliaria_dic15.pdf

Figure 3.23
Spain: interest rates associated with the mortgage market (%)



Source: BBVA Research based on Banco de España data

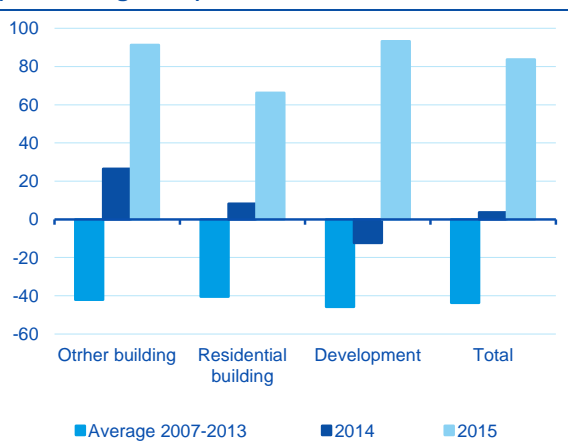
Figure 3.24
Spain: BBVA affordability risk ratio



Source: BBVA Real Estate based on INE and Banco de España data

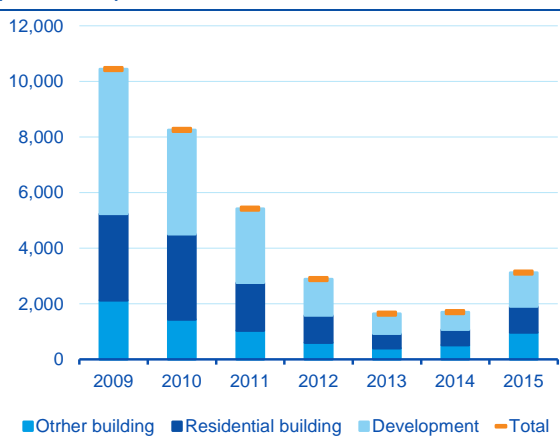
Not only did lending to households show a rising trend over the course of last year, the increase in lending to businesses in the industry was also significant. In aggregate terms, financing to Spanish businesses increased by 9.9% compared with 2014, according to new lending data from Banco de España. In the case of companies in the construction industry, the increase was greater, albeit from a very low base. Financing to developers and construction companies grew by 83.7% in 2015, according to data from CIEN, the Notarial Statistical Information Centre, the second year of growth following the timid advance of 3.7% in 2014. The breakdown by type of activity indicates that although construction companies started to see an increase in the flow of credit in 2014, developers did not see this until 2015, for the first time since the onset of the crisis. Thus companies dedicated to property development saw the flow of new credit surge by 93.3%, in the case of those dedicated to building new housing, the increase was 66.2% and in that of builders of non-residential buildings it was 91.3% (Figure 3.25). These very significant increases took place in a context of rock-bottom levels - new lending in 2015 was just 5.1% of the figure for 2007 (Figure 3.26).

Figure 3.25
Spain: new lending to construction companies (% annual growth)



Source: BBVA Research based on CIEN data

Figure 3.26
New lending to construction companies (€ millions)



Source: BBVA Research based on CIEN data

Prospects

The outlook for demand for this year is positive, with demand fundamentals expected to continue evolving on an upward path. Expectations of economic growth of 2.7% p.a. over the next two years support hopes that job creation and the improvement in gross disposable household income will continue. In fact BBVA Research's latest forecasts point to the creation of a million new jobs in the two-year period 2016-2017. Furthermore, the European Central Bank's commitment to holding interest rates low and working to get financial institutions to lend more will have an encouraging effect on a market in which the majority of transactions rely on third-party financing. Thus in the central scenario we expect sales of residential properties in 2016 to show a similar performance to that of 2015, posting an increase of about 10%, which would imply the sale of some 440,000 residential properties. All this presupposes that the economic and political uncertainties do not end up being definitively transferred to demand.

The consolidation of the growth in demand in 2015, and the prospects of progress in the next two years provide assurance that the building of new residential properties will continue to increase in the next few years. Above all, bearing in mind that the over-supply of housing in the areas with the highest levels of economic activity, namely the major cities and certain stretches of the Mediterranean coast, has ceased to be a problem. In fact there are markets in which new housing is already starting to be in short supply. Growth will continue to be very uneven from one region to another.

In 2016 it is expected that finished residential properties will start to increase in value in some markets, while in others they might bottom out. At the same time building permits for new residential properties will grow at a rate of around 30%. This, together with the greater dynamism we are seeing in the market for land, will ensure the advance of the construction business. Thus we expect that in 2016 residential investment will grow at a rate of 3.8%, bringing the weight of this investment to 4.6% of GDP.

As for housing prices, we expect the advance to continue, supported by the increase in demand for and the gradual reduction in the supply of housing. Again, prices will evolve rather unevenly: in the most active markets (major cities and Mediterranean coast) price increases will be relatively intense, whereas in the less active markets prices have not yet started on the upward trend and will remain stable in real terms. Forecasts point to an overall price increase of 3% in 2016 for the country as a whole.

Lastly, expectations as to how financing costs will evolve in the next few months are also positive. On the one hand, if the economy continues to grow as hoped and housing prices move upwards, margins applied to lending might continue to come down. On the other, the expansive monetary policy ensures low financing costs for banks, which slowly but surely will be passed on to the real economy in the form of more lending. In this regard, the latest surveys published by the ECB on bank loans revealed that, according to Spanish banks, the general conditions for both ordinary and mortgage loans had improved and the expected them to continue growing in the first quarter of 2016.

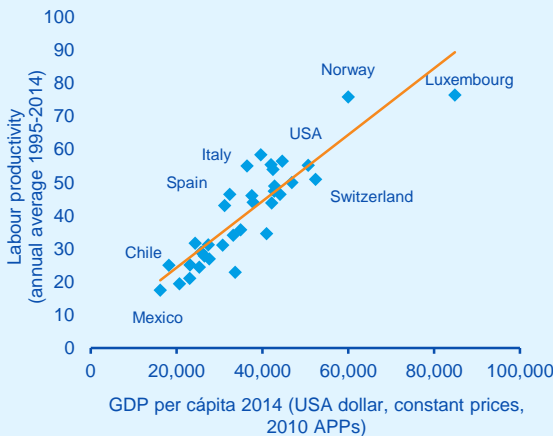
Box 1. Productivity of the construction industry in Spain

David Cortés, CFA – Real Estate Unit | Félix Lores – Spain Unit

Introduction

The analysis of the growth in productivity of an economy is pertinent given that it is the most important factor for explaining the improvement in citizens’ welfare. Figure R.1.1 shows the positive correlation that exists between growth in the productivity of the labour factor, measured as the gross value added (GVA) per hour worked, and GDP per capita.

Figure R.1.1
Correlation between growth in productivity and GDP per capita in OECD economies



Source: BBVA Research based on OECD data

The contribution of the construction industry to the development of the Spanish economy has been relatively substantial over the past twenty years⁴. Spain’s economic growth has largely relied on an industry which, historically, has had a lower rate of growth in productivity than other sectors. This study, like others⁵, finds that the growth in the industry’s GVA came mainly from the accumulation of productive factors, mainly the labour factor, and not from the accumulation of knowledge or technology.

However, international comparison shows that the Spanish construction industry is by no means the worst in this respect. In general, in all the countries analysed, construction is labour-intensive and shows growth in productivity at lower rates than the average for their economies.

Following the improvement in productivity seen by the industry in the years of this last crisis, the industry’s recent recovery has once again been accompanied by an increase in employment, but also by a fresh reduction in productivity. Of course the industry’s recovery will involve an increase in employment, given the brutal correction during the crisis, but the industry ought to endeavour to move ahead on a growth path in which technological capital and the knowledge economy play a more prominent role and favour growth in productivity in the medium and long term.

The purpose of this box is to analyse the productivity of the construction industry in Spain over the past twenty years. To do this we study two measures of productivity.

First we carry out an analysis of labour productivity, measured as GVA per hour worked, from a national viewpoint, comparing the various economic sectors, and from an international perspective, comparing the Spanish data with those of other major European countries. This analysis is carried out using the OECD’s STAN database.

Next, we carry out an analysis of total factor productivity (TFP), using the data provided by the EU KLEMS database.⁶ If the aim is to equate productivity with changes in the way productive factors are combined as opposed to the number of factors, then total factor productivity (TFP) is the more appropriate measure.

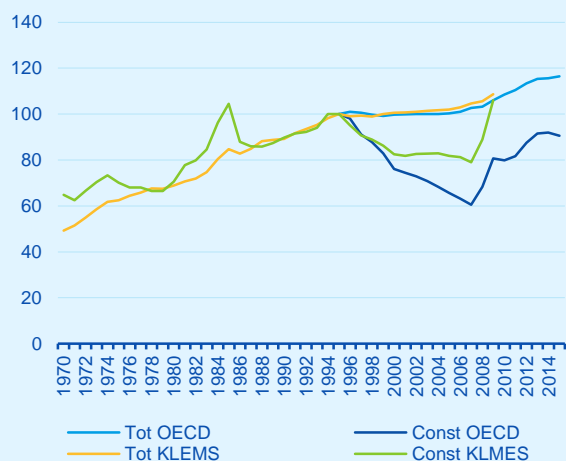
4: According to the INE’s Quarterly National Accounting data, between 1998 and 2007 the construction sector was responsible for nearly 30% of Spain’s GDP growth. Conversely, 75% of the fall in the economy between 2008 and 2013 was a consequence of the contraction of construction.

5: Mas and Robledo (2010) find that for the 1995-2007 period of expansion, the growth of the Spanish economy was due above all to a strong process of accumulation of factors.

Labour productivity

An analysis of the productivity series for the construction industry and the economy as a whole allows us to differentiate three periods. In the first period, from 1970 to the mid-1990s, the industry's productivity showed a similar trend to that of the economy as a whole. In the second period, from 1995 to 2007, the industry's productivity decreased significantly. And in the last one, which ran from 2007 to 2014, the years of the last economic crisis, the industry was particularly hard hit but productivity recovered (Figure R.1.2).

Figure R.1.2
Spain: labour productivity (gross value added per hour worked, 1995=100)*



* Note: OECD series at constant 2010 prices, KLEMS series at constant 2005 prices)
Source: BBVA Research based on OECD and EU KLEMS data

Table R.1.1 shows that over the past 45 years, growth in productivity in construction has been significantly lower than the average, depressing the increase in overall productivity. Differentiating the aforementioned periods, we see that except in the last seven years, productivity in the industry advanced at a slower pace than the national average.

During the expansive 1995-2007 period, growth in the industry's productivity was significantly

negative. This sharp reduction made itself felt in the economy. In fact, had it not been for construction, the productivity of the economy would have grown at an average annual rate of 0.8%, 0.6 pp more than was actually the case. Lastly, between 2008 and 2015, we saw the reverse process - a sharp reduction in GVA of construction (-45.1%) accompanied by greater job destruction, over 60%. This led to a sharp increase in productivity, 5.4% as an annual average, which favoured the growth of productivity of the economy.

Table R.1.1
Spain: labour productivity (% average annual change)*

	Total economy	Construction	Total without construction
1970-1995	2.9	1.9	3.0
1996-2007	0.2	-4.1	0.8
2008-2015	1.6	5.4	1.1

*Note: 1970-1995 with KLEMS; rest with OECD
Source: BBVA Research based on OECD and EU KLEMS data

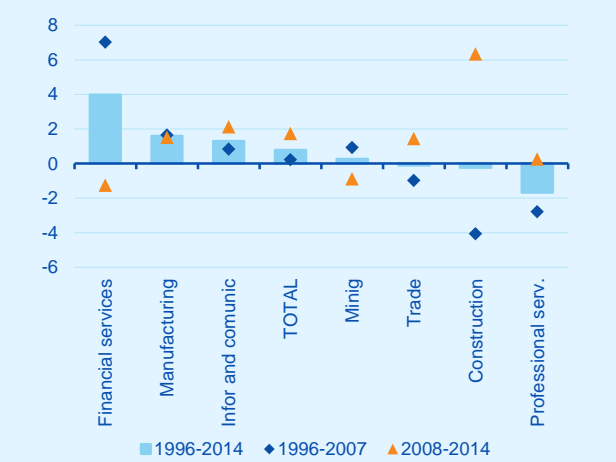
Notably, in 2015, when the industry started to recover, the trend in productivity switched. In fact it fell to an annual rate of 1.4% in 2015, the result of a 5.2% increase in GVA and an 8.1% increase in the number of persons employed.

In comparison with the main productive sectors of the economy, Figure R.1.3 shows how from 1995 to 2014 construction, together with professional services, showed the least growth in productivity, while financial services and manufacturing were the most productive sectors in over this 20-year period.

A greater chronological disaggregation shows how the in the period of expansion of the Spanish economy, construction was the industry in which productivity fell furthest, while the financial services sector showed the biggest improvement.

6: The productivity data for this article was taken from the EU KLEMS database (ISIC Rev.4) and the OECD's STAN database. For the analyses of labour productivity, which do not require estimates of capital, we used the OECD's database, which covers up to 2014, whereas the EU KLEMS database only covers up to 2009. However, for the analyses of TFP and the factors' contributions to growth, we used the EU KLEMS database exclusively, since it allows analysis with a greater degree of disaggregation by sector and has longer historical series, in some cases going back to the 1970s.

Figure R.1.3
Spain: labour productivity (% average annual change)

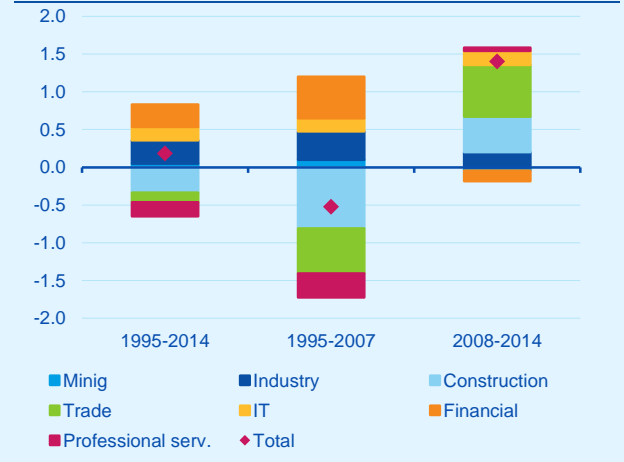


Source: BBVA Research based on OECD and EU KLEMS data

Conversely, during the crisis, construction was the industry with the biggest increase in productivity, while productivity in financial services declined.

When analysing contributions by sector, Figure R.1.4, we see that financial services, information and telecommunications and manufacturing are the sectors that managed to sustain growth in productivity over the past 20 years. Differentiating the various periods, we see that during the boom, construction was the main culprit for the contraction in Spanish productivity, together with trading and professional services. Conversely, in the crisis these sectors contributed positively to growth in productivity. Only the IT and manufacturing sectors made positive contributions in both periods. These data point to Spanish productivity as a whole having been heavily affected by that of the least productive sectors⁷.

Figure R.1.4
Spain: contribution to growth in productivity by sector* (in pp)

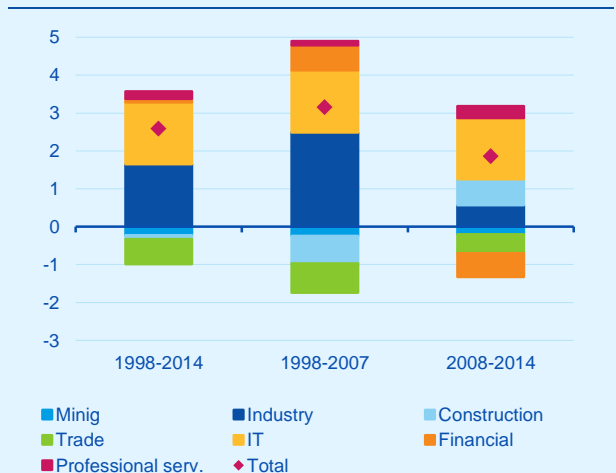


* Note: productivity of non-agricultural sectors excluding real estate services
Source: BBVA Research based on OECD data

The question arises as to whether this pattern was peculiar to Spain or whether it was also seen in other European countries. To answer this question we compared productivity trends in Ireland, which experienced a property boom and bust similar to Spain's. In Figure R.1.5 we see how the Irish construction industry showed a trend similar to Spain's: a sharp fall in productivity in the boom years and recovery in the crisis. However, the fact that Ireland was less dependent on construction than Spain, and the greater contribution made by the productivity of other sectors such as manufacturing, IT and telecoms, were enough to neutralise the draining effect of construction on overall productivity in the period 1995-2007.

7: There is currently a debate in Spain on whether it should change its production model in order to improve productivity. Figures such as R.1.4 and R.1.5 may lead to the interpretation that indeed what lies behind Spain's low productivity is an excessive allocation of resources to the least productive sectors. However, recent studies such as those of García-Santana et al (2016) and Picazo et al (2016) have found evidence to suggest that the low productivity of the Spanish economy might be caused more by poor redistribution of resources among businesses in the same sector than by poor redistribution among sectors.

Figure R.1.5
Ireland: contribution to growth in productivity by sector* (in pp)



* Note: productivity of non-agricultural sectors excluding real estate services
Source: BBVA Research based on OECD data

Spain is the country with the most erratic productivity of those studied (Table R.1.2). In the period 1995-2007 it was the country in which productivity declined most (by 4.08%). And in the period 2008-2014 it was the country with the biggest increase (6.34%). This, plus the comparatively greater relative weight of the sector, makes the impact of these changes on the economy as a whole all the heavier⁸. Another interesting fact illustrated by Table R.1.2 is that, looking at the period 1995-2014 as a whole construction productivity did not evolve more unfavourably than in other countries. In fact productivity in Italy and France fell by more than it did in Spain on average. In this respect the Netherlands and the UK had the most productive construction industries of the sample between 1995 and 2014. What we do see in all the countries analysed is that labour productivity in the construction industry has been lower than that of the rest of the economy in the past 25 years, comparing the whole period 1995-2014.

Table R.1.2
Productivity of the construction industry: GVA per hour worked (% average annual growth)

	Spain		Italy		France		Germany	
	Total Constr.	Total Constr.	Total Constr.	Total Constr.	Total Constr.	Total Constr.	Total Constr.	Total Constr.
1996-2007	0.21	-4.08	0.44	-0.98	1.76	0.20	1.90	-0.07
2008-2014	1.73	6.34	0.17	-0.67	0.57	-2.33	0.49	0.83
1996-2014	0.77	-0.24	0.34	-0.86	1.32	-0.73	1.38	0.26

Source: BBVA Research based on OECD data

Table R.1.2 (cont.)
Productivity of the construction industry: GVA per hour worked (% average annual growth)

	Ireland*		The Netherlands		UK	
	Total	Constr.	Total	Constr.	Total	Constr.
1996-2007	2.60	-2.29	1.67	1.53	2.10	0.73
2008-2014	2.21	3.43	0.57	0.31	-0.01	0.19
1996-2014	2.43	0.21	1.26	1.08	1.32	0.53

*Note: data since 1999
Source: BBVA Research based on OECD data

Total factor productivity

Labour productivity is a partial measure, which does not allow us to distinguish which part of its growth is due to a greater accumulation of factors and which to efficiency improvements in the use of these factors. In order to differentiate these effects, growth accounting and Total Factor Productivity (TFP) are calculated. Our analysis has used the EU KLEMS⁹ database, which breaks down a sector's growth in value added into the increase in the volume of work, measured in number of hours, and the increase in its quality¹⁰. The increase in the quality of labour is determined by three other factors: i) improvements in the workforce's skills; ii) increases in capital allocations per hour worked and iii) TFP. Table R.1.3 shows the growth in value added of the main productive sectors of the Spanish economy and their contributions to this growth.

8: Between 1995 and 2007, GVA of construction in Spain was equivalent to 11.7% of GDP, as an annual average, whereas in the euro zone as a whole it was 5.9%. Between 2008 and 2015 its weight fell to an annual average of 7.9% of GDP in Spain while in the euro zone as a whole it held steady at 5.5% of GDP.

9: The methodology applied by EU KLEMS is based on the seminal work of Jorgenson and Griliches (1967).

10: What we refer to as the quality of labour is known as labour factor productivity in the literature. To avoid confusion with labour productivity as analysed in previous sections, we prefer to use the concept labour factor quality.

Table R.1.3
Spain: Growth* in GVA and contributions to growth by sector

	Growth in GVA	Hours Worked	Quality of Work	Skills Improvements	ICT K per hour	NON-ICT K per hour	TFP	Knowledge Economy
	$a = b+c$	b	$c = d+e+f+g$	d	e	f	g	$h = d+e+g$
1995-2007								
TOTAL (TOT)	3.47	1.92	1.53	0.33	0.44	1.40	-0.65	0.13
Agriculture (A)	0.71	-0.77	1.48	0.18	0.01	0.53	0.76	0.95
Manufacturing (C)	2.25	0.39	1.86	0.38	0.32	0.86	0.30	0.99
Energy Supplies (D-E)	3.63	0.85	2.78	0.12	0.18	1.81	0.67	0.97
Construction (F)	4.82	4.50	0.32	0.24	0.15	2.05	-2.12	-1.74
Automotive sales and repairs (G)	4.22	2.08	2.14	0.45	0.34	1.42	-0.07	0.72
Information and communications (J)	5.50	1.40	4.10	0.58	1.53	2.38	-0.39	1.72
Finance and insurance (K)	5.94	0.48	5.46	0.13	1.27	-0.12	4.19	5.58
Real estate (L)	3.91	0.87	3.04	0.06	0.08	3.41	-0.52	-0.37
Professional & administrative (M-N)	4.84	5.57	-0.73	0.65	0.77	1.37	-3.51	-2.10
Public Admin. & other services (O-U)	2.89	1.88	0.88	0.38	0.40	0.71	-0.61	0.17
Public Admin. (O)	2.55	0.83	1.72	0.65	0.43	0.50	0.14	1.22
2008-2009								
TOTAL (TOT)	-1.31	-1.73	0.43	0.52	0.20	1.15	-1.44	-0.72
Agriculture (A)	-2.07	-1.67	-0.40	0.18	0.00	-0.29	-0.29	-0.11
Manufacturing (C)	-7.99	-5.42	-2.57	0.93	0.10	0.43	-4.03	-3.00
Energy Supplies (D-E)	0.77	0.54	0.23	0.22	0.05	1.99	-2.03	-1.77
Construction (F)	-4.27	-10.23	5.96	0.85	0.05	1.51	3.55	4.45
Automotive sales and repairs (G)	-0.55	-2.08	1.53	0.52	0.06	0.46	0.50	1.07
Information and communications (J)	0.13	0.94	-0.81	0.50	0.23	0.65	-2.19	-1.46
Finance and insurance (K)	-0.55	-0.19	-0.35	0.47	1.47	4.38	-6.67	-4.73
Real estate (L)	0.42	-0.10	0.52	0.09	-0.01	2.67	-2.23	-2.15
Professional & administrative (M-N)	-0.78	1.97	-2.76	0.78	0.29	0.56	-4.40	-3.32
Admin. Public & other services (O-U)	3.37	2.53	0.90	0.28	0.20	0.72	-0.30	0.18
Admin. Admin. (O)	3.99	3.53	0.46	0.07	0.28	0.66	-0.55	-0.20

* The growth rates are the arithmetic means of the annual growth rates. Contributions are in percentage points
Source: BBVA Research based on EU KLEMS data

Available data allow us to analyse only up to 2009, so in order to be consistent with the foregoing analysis, and bearing in mind the significant differences between periods, we have differentiated the analysis into the periods 1995-2007 and 2008-2009.

During the boom period of 1995-2007, the sectors in which GVA grew most were construction, professional services, financial services and ICT. If we analyse the growth pattern of these sectors, we see a clear difference between the behaviour

of the construction and professional services sectors on the one hand and financial services and ICT on the other. In the first two, growth is explained almost entirely by the increase in the number of hours worked, with the contribution from quality of labour being practically immaterial. The opposite is the case in the finance and ICT sectors. In these sectors it is the quality of labour and not the quantity that makes the real contribution to growth.

This translates into the construction and professional services sectors showing greater contractions of TFP. This result is very similar to that obtained by analysing labour productivity. Moreover, growth accounting reveals that the contribution of non-technological capital was much more than that of technological capital. This shows that the sector's strong growth in the period 1995-2007 was basically due to the intense accumulation of factors, mainly labour, and non-

productive capital, and not to increased technological development as was the case in other productive sectors¹¹.

If we compare the Spanish construction industry with that of other major European countries (Table R.1.4) we also see that Spain's TFP declined by more than that of any other country during the boom years.

Table R.1.4
Spain: Growth* in GVA and contributions to growth by sector

	Growth in GVA	Hours Worked	Quality of Work	Skills Improvements	Technological K per hour	Non-technological K per hour	TFP	Knowledge Economy
	$a = b+c$	b	$c = d+e+f+g$	d	e	f	g	$h = d+e+g$
1995-2007								
The Netherlands	1.05	1.27	-0.22	0.49	0.22	0.34	-1.27	-0.56
UK	2.13	0.87	1.25	0.25	0.17	0.60	0.23	0.65
Germany	-2.87	-2.66	-0.21	0.18	0.02	-0.05	-0.36	-0.16
Italy	1.84	1.66	0.19	0.03	0.14	1.14	-1.12	-0.95
France	1.10	0.77	0.33	0.19	0.14	0.41	-0.41	-0.08
Spain	4.82	4.50	0.32	0.24	0.15	2.05	-2.12	-1.74
2008-2009								
The Netherlands	-1.25	0.04	-1.29	-0.16	0.07	0.43	-1.63	-1.72
UK	-8.68	-2.70	-5.98	1.13	0.02	-0.12	-7.02	-5.86
Germany	-3.45	-0.17	-3.28	0.22	0.07	-0.10	-3.48	-3.19
Italy	-5.60	-1.73	-3.88	0.44	0.05	0.14	-4.50	-4.02
France	-3.91	0.54	-4.46	0.17	0.07	0.80	-5.50	-5.25
Spain	-4.27	-10.23	5.96	0.85	0.05	1.51	3.55	4.45

* The growth rates are the arithmetic means of the annual growth rates. Contributions are in percentage points
Source: BBVA Research based on EU KLEMS data

However, although Spain shows the smallest contribution of productivity in the period, productivity in construction contracted in all countries except the UK. However, Spain's poor productivity would be explained by greater growth of hours worked.

The period of expansion covers 12 years of information, allowing a more complete analysis; however for the period of adjustment we have data for only two years, 2008 and 2009. This prevents us from drawing conclusions as to what

exactly happened during the years of correction (2008-2014), but it does allow us to see how the sectors and the other countries reacted in the first few years of the crisis.

In terms of sectors, during the period 2008-2009 two facts stand out: Firstly, that the sectors which had relied most on knowledge and technological development for their growth during the period of expansion, such as the finance and ICT sectors, were those that contracted least in these two years of adjustment. Secondly, that TFP of the

11: García-Santana et al (2016) find evidence to suggest that in Spain resources have not always gone to the businesses that invested most in technological capital, training and technology. And these results are even more severe in the construction sector.

construction industry grew at a very high rate, the highest of any sector. Thus it seems that the volatility of the sectors that are most intensive in hours worked and least intensive in quality of labour is much higher than that of the sectors in which the quality of labour is more significant.

Bearing in mind the characteristics of the industry, the strong growth in productivity in these two years was due not to any technological leap, but to the sharp contraction in employment. If we analyse the quality of labour, we see that investment in capital per hour of employment falls for both technological and non-technological capital.

From these results we infer that the construction industry is highly labour-intensive and, more than any other sector, resorts to the labour factor to adjust activity to the different phases of the economic cycle.

This behaviour is similar to the pattern observed internationally (Table R.1.4). It is striking that in all the other countries compared, GVA and productivity fall at the same time. In Spain, the sharp fall in GVA was accompanied by a significant upturn in productivity. The reason for this is that in the other countries the adjustment of the contribution of hours worked is more moderate than in Spain, and most of the adjustment is explained by the quality of labour.

Another interesting point that we observe is the appreciable improvement in the skills of the workforce in the construction industry during the period 2008-2009. Their 0.24 pp contribution to GVA growth in the boom years rose to 0.85 pp in 2008-2009. The explanation for this could be that the contraction of employment was largely centred on the least skilled employees, the segment whose numbers had particularly increased during the last property boom.

Table R.1.5
Spain: Level of education in the economy as a whole and in the construction industry (2002)

	2002			
	% Basic education only		% 15-29 years	
	Construction	Total	Construction	Total
SP	73.0	51.0	31.5	26.2
NETH	43.9	29.3	26.5	26.3
RU	27.6	25.5	23.9	26.0
FRA	37.7	28.3	22.9	21.7
ITA	71.5	45.8	22.9	19.4
GER	17.5	15.9	23.3	20.7

Source: BBVA Research based on EU KLEMS data

Table R.1.5 (cont.)
Spain: Level of education in the economy as a whole and in the construction industry (2009)

	2009			
	% Basic education only		% 15-29 years	
	Construction	Total	Construction	Total
SP	60.4	40.5	28.8	19.5
NL	37.4	25.1	24.0	25.6
RU	22.9	19.5	26.5	24.3
FRA	31.6	22.9	28.0	20.9
ITA	61.1	36.5	21.4	15.0
GER	15.1	14.1	21.5	21.0

Source: BBVA Research based on EU KLEMS data

In fact, in the Spanish construction industry, the percentage of young people with only basic education in the boom years was much higher than in the rest of the Spanish economy and in other major European countries with the exception of Italy (Table R.1.5). In 2002, the percentage of employees with only basic education was 73% in Spain's construction industry, whereas in Germany's it was 18%. With the onset of the recession we see how in all countries the percentage of employees with only basic education falls, in the case of Spain from 73% in 2002 to 60% in 2009. This confirms that young people with only basic education were the worst affected by the crisis.

Another interesting aspect that we observe when comparing the level of education in the Spanish construction industry with others sectors and

countries, is that in all the countries of the sample, the qualifications of the workforce in the construction industry are less than the average for the economy as a whole, Germany being the country with the smallest difference. Moreover, although the crisis improved the level of qualifications of the construction sector's workforce, in 2009 Spain was still far below the levels of Germany, the UK, the Netherlands and France.

Closing Remarks

The first thing to highlight is that the rate of growth in the productivity of the construction industry has historically been lower than that of the rest of the Spanish economy.

We have also seen that the growth in the productivity of the construction industry is one of the most volatile in the whole economy. During the expansive cycle of 1995-2007 it was the sector in which it deteriorated most, while in the period 2008-2014 it was the sector with the sharpest upturn. This is so at both national and international level. The analysis of TFP shows that sector grew and contracted faster by adjusting the intensity of its productive factors, especially the quantity of labour, and not by changing its productive efficiency.

When we compare the industry internationally, we see that Spain's growth in productivity for the period 1995-2014 was not the worst of the sample. Italy and France show relatively low growth, while UK, Germany and the Netherlands are those with the highest growth rates. What is common to all countries however is that growth in productivity of the construction industry has been historically lower than that of the rest of the economy. On this point, growth accounting shows how in nearly all countries construction has grown by accumulating productive factors, especially employment and non-productive capital, and not by developing new technological processes.

As construction gradually recovers, it would be positive for both the industry and for the economy as a whole, the sector's growth to be increasingly underpinned by the companies that bet most on technological capital, training and knowledge.

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Box 2. Employment, immigration and housing demand

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Introduction

One of the Spanish real estate sector's main concerns at present is the medium- and long-term trend in demand for housing. In general, demand for housing is closely correlated with demographic variables, more specifically household formation.

The latest long-term demographic projections of the INE, Spain's National Statistics Institute¹², indicate that the country's population will continue to decline in the next few years and that the rate of household formation will decline significantly until 2030, with an average of around 60,000 new households a year, whereas in the past ten years the annual increase has been 240,000.

If these projections are confirmed, building of new residential properties to meet demand from new households would decline significantly relative to the historical average, with repercussion for the real estate industry as regards new construction: the residential property development segment might shrink even further.

Changing the structure of the population pyramid requires increasing the fertility rate or increasing de immigration, given that the other demographic variable, life expectancy at birth, will continue to increase. Even if measures were taken to bring Spain's birth rate up to the replacement rate, the effect would not be immediate: it would take more than two decades for it to have an appreciable effect on the structure of the population. Therefore immigration presents itself as the only possible way of making up the likely shortage of manpower that will arise in the medium and long term. Otherwise we would be artificially limiting the creation of employment, which would hobble the Spanish economy's growth possibilities.

This study sets out to examine the possible development of net migration in Spain in the medium and long term in a scenario of average

economic growth similar to that of the potential Gross Domestic Product (GDP). With this we aim to take an in-depth look at the dynamics of the future population and household formation and to estimate housing requirements in a medium- and long-term scenario.

At present, the employment being generated by economic growth is being covered, to a very great extent, by the large pool of unemployed persons in today's Spanish labour market. In any case, as happened in the last decade, as the economy grows and the unemployment rate declines, net migration will again turn positive, and increasingly so, which will stimulate demand for housing.

Employment and net migration

There is copious academic literature on the effects of migratory flows on the labour market and vice versa¹³. In general, from the point of view of the economy, migration plays a significant role in mitigating the negative effects of ageing populations like Spain's.

Population and household formation are variables which in the medium and long term are affected by, among other things, the economic conditions of a country and specifically the employment that an economy is able to generate. Thus in open economies population growth, and with it an increase in the number of households, comes about both through organic growth and as a result of the incorporation of new immigrants (or the return of emigrants) attracted by the opportunities in the labour market. The immigrants' origin will depend on several factors, prominent among them the determinants of the country of origin, the type of employment offered, and relations or bilateral agreements between Spain and their countries of origin on employment.

In this respect, Spain's experience in the last decade suggests that positive net migration

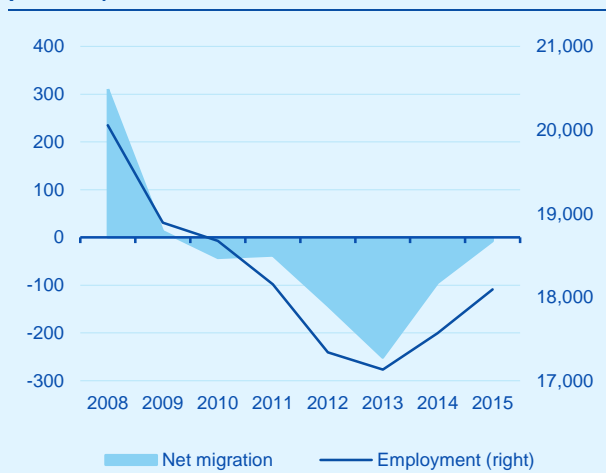
12: Instituto Nacional de Estadística (National Statistics Institute), 2014: Population projections 2014-2064 and Household projections 2014-2029.

13: For an in-depth review of this literature, see: Okkerse, L. (2008). How to measure labour market effects of immigration: a review. *Journal of Economic Surveys*. 22(1): 1-30.

figures as well as mitigating the demographic imbalances inherent in an ageing society, also help meet the needs of an expanding labour market. Thus in the period 2000-2011 the number of foreign residents in Spain increased by 4.7 million, peaking at nearly 5.75 million according to INE data. Since then the foreign population has fallen by nearly a million, to 4.75 million in 2015. In relative terms, the increase in the number of immigrants in Spain was significant, going from 2.3% of the resident population in 2000 to 10.1% in 2015.

Trends in employment and net migration figures for Spain in the past few years highlight the close correlation between the two¹⁴. Thus, from data since 2008, we see that when employment falls, net migration declines, and vice versa. In mid-2015, net migration was negative and close to 7,300 persons, according to the latest INE data. (Figure R.2.1).

Figure R.2.1
Spain: Employment and net migration (000s of persons)



Source: BBVA RE based on INE data

The growth of the Spanish economy in the next few years will lead to a reduction in unemployment and improvements in living standards, making it a more attractive destination for economic migrants and leading to greater dynamism in population and household formation

and generating an additional source of demand for housing. Thus the economic prospects for 2016 and 2017 are positive with GDP growth expected to be around 2.7% average per year, which will make possible a net addition of nearly a million jobs in these two years. This rate of job creation will encourage the arrival of new immigrants, leading, if the current trend continues, to positive net migration as early as 2016.

Long-term growth scenarios

The INE's demographic projections start out from the structure of the Spanish population existing in 2014, which it projects into the long term, assuming net positive migration in the period 2015 to 2030 of nearly 13,000 people a year on average. These projections indicate that by 2030 Spain will have lost a million inhabitants compared with the current population, although it will have gained more than 850,000 households due to the effect of the expected smaller size of households.

Analysing population changes using an approach based more on economic growth (and increasing employment) than on the population pyramid, the results obtained for the medium and long term are radically different from those suggested by the INE: if the Spanish economy grows at the rate of its potential GDP in the next few years, not only will the population not decline, but we will once again see positive net migration figures big enough to affect the property market.

In order to examine the effects of increased employment on migration, we constructed three long-term scenarios¹⁵:

- The first is characterised by potential average annual GDP growth of 1.9% in real terms, with an average annual increase in employment of 1.4%.
- The second scenario is characterised by a slightly bigger increase in activity (2.3% per year) and annual average net job creation of 1.9%.

14: For a more detailed analysis of the link between employment and migration in Spain, see: Izquierdo M., Jimeno J. F. and Lacuesta A.: Spain: from immigration to emigration?. Working document 1503 Banco de España. 2015

15: See note on assumptions at the end of the chapter.

- The third scenario assumes an increase in GDP of 0.5% and an increase in employment of 0.3% a year on average.

We start out from the situation existing in the Spanish labour market at the end of 2015, when the active population was 22.8 million, of whom 18.1 million were in employment and 4.7 million were unemployed.

A positive pace of job creation allows the employment rate of all age groups to be improved, and in the medium term will bring the unemployment rate down to a very low level in the two scenarios with the most economic growth, assuming low immigration. These data highlight the shortage of manpower that the Spanish economy will face in the medium and long term given the current population pyramid, as well as the need for increased immigration if constraints on economic growth are to be avoided.

Based on the proposed scenarios for growth in GDP and employment, and assuming the INE's net migration figure of 13,000 a year, then even in the more moderate growth scenario the estimates show that by 2025 the unemployment rate would fall below 7%, and would be negative by 2030. If economic growth were 2.3% p.a., the unemployment rate would be 12% in 2020 and 2% in 2025. In today's economies unemployment rates of less than 4%-5% are rarely seen; indeed, the greater the stress in the labour market, the easier it is to incorporate immigrants into the economy. (Box R.2.1).

Box R.2.1

BBVA and INE assumptions on changes in unemployment rate and net migration

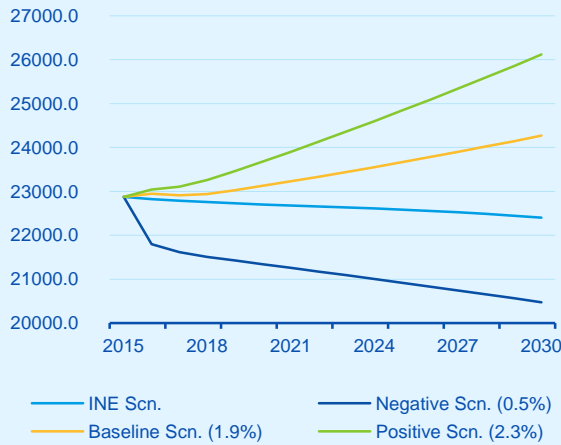
	Unemployment rate (%)			Net migration (000s)				
	BBVA RE assumptions			INE assumptions	INE assumptions	BBVA RE assumptions		
	Average GDP growth (%)					Average GDP growth (%)		
	0.5	1.9	2.3			0.5	1.9	2.3
2015	21	21	21	21	-66	-66	-66	-66
2020	19	15	12	16	-3	-63	123	244
2025	17	8	3	12	32	-26	176	306
2030	16	*	*	8	50	9	91	368

(*) this would correspond to a negative unemployment rate
 Note: general assumptions
 GDP growth: 0.5%; 1.9% and 2.3% p.a.
 Employment growth: 0.3%; 1.4% and 1.9% p.a.
 INE assumptions:
 Average net migration 2016-2030 = 13,000 persons per year
 BBVA assumptions
 Immigrant arrivals depend largely on levels of unemployment
 GDP growth 0.5%: average net migration 2016-2030 = -50,000
 GDP growth 1.9%: average net migration 2016-2030 = 140,000
 GDP growth 2.3%: average net migration 2016-2030 = 260,000
 Source: BBVA RE and INE

The assumption regarding the flow of immigrants is, once again, crucial to the development of these magnitudes. Thus if we take the INE's starting flow, which shows negative net migration between 2015 and 2020, turning positive at the beginning of the next decade, the active population would continue to shrink in the next few years, reaching about 22.4 million in 2030. In the case of average growth of 0.5% p.a., the active population would decline to 20.5 million in 2030.

Varying the assumptions on immigration, and coming closer to the data observed in the past 15 years, the potentially active population would increase to more than 24.2 or 26.0 million in 2030 in the case of average annual GDP growth of 1.9% or 2.3% respectively. (Figure R.2.2)

Figure R.2.2
Spain: projected active population 2016-2030



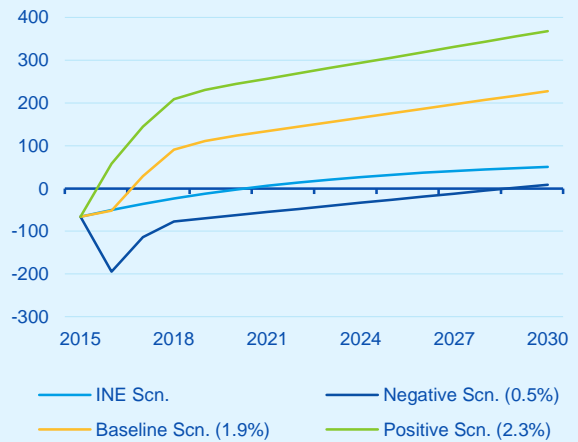
Source: BBVA RE based on INE data

With same growth scenarios, we have estimated the net migration that would allow unemployment rates to be kept at levels more similar to those seen in the last decade. Thus, we consider that when the unemployment rate falls below 18%, the arrival of immigrants will start to intensify. As the economy grows and the more unemployment falls, the greater will be the flow of immigrants. We assume that unemployment will not fall below a certain floor, which we set at 8% (a similar minimum to that seen in the last decade). We assume that the flow of immigrants will be sufficient to keep the unemployment rate at the pre-established level.

The results of the exercise indicate that in 2016 net migration will be positive, with a net increase of around 60,000 persons by the end of 2016 in the 2.3% GDP growth scenario. The balance would be slightly negative in the 1.9% growth scenario, by about -50,000 persons; and it would be around -200,000 persons in the case of GDP growth of 0.5%.

This suggests that if the Spanish economy were to grow at the rate of 1.9% p.a., average net migration between 2016 and 2030 would be around 140,000 a year. With annual growth of 2.3%, average net migration would be about 260,000 a year until 2030. (Figure R.2.3).

Figure R.2.3
Spain: projected net migration 2016-2030



Source: BBVA RE based on INE data

The property market will undoubtedly be favoured by the increase in employment: on the one hand there will be increased demand for residential properties, both primary and secondary, from existing inhabitants as a result of their increased income; and on the other hand the arrival of new immigrants will add to demand for housing.

New housing requirements

The intensity of the migration flows joining the Spanish economy is a political decision, on which immigrant demand for residential properties will largely depend. The greater the flow of immigrants, the greater the impact on the property market. If the flow were to be close to the 13,000 a year estimated by the INE, requirements for new residential properties would be well below historical requirements. If the net inflow were to be around 140,000 a year, the current annual number of new households would double. Given that the process of household formation among Spanish families is already on a declining path, the relative importance of the flow of immigrants will increase over time.

The type, location and mode of tenure of the housing sought by new immigrants will depend on a number of factors such as their level of income, available opportunities for employment, the attractiveness of the area from the tourist point of view and of course how long they intend to stay.

The European retired people who come to Spain in search of a residence in which to spend the greater part of the year usually go for medium-to-high priced detached houses located on the Mediterranean coast or in the Balearic or Canary Islands, generally on a freehold basis. In most cases the type and location of the desired residence is largely determined by these families' wealth.

Highly qualified workers usually settle in the major cities, where the (generally foreign) employers are established. If they do not intend to stay very long in Spain, renting presents itself as the most appropriate mode of tenure. The type of accommodation sought is usually determined by salary; in general, they are high quality and located in high income districts.

The group composed of immigrants seeking a better standard of living and job opportunities, and without any advanced technical qualifications, presents a more complex situation. Most of the people in this group are economic migrants, with no savings to invest in the property market and whose already modest wages are further depleted in many cases by the need to remit part of them to their families who still live in their countries of origin. This group usually opts for rented accommodation in modestly priced districts of the towns or cities where they find work. In cases where they intend to stay in Spain for the long term, some members of this group opt to buy, especially if household income so allows.

Conclusions and recommendations

The Spanish housing market is in a new phase, in which there is no shortage of residential properties as in decades past, the quality of the housing stock is controlled by means of building regulations, there are financial resources for both the development and the acquisition of residential properties and interest rates will be held at lower levels than in the previous decades and can be expected to be more stable. Furthermore, in the past few years the construction and real estate development industry has made intense efforts to become much more professional, while at the

same time joining the European Union meant joining a more open and competitive market with less protectionism.

If the Spanish economy continues to evolve at a pace that allows net job creation, then Spain will continue to be affected by immigration, leading to an increase in the population and in demand for housing.

The process of household formation in Spain is driven by the arrival of new immigrants, which will partly counteract the current Spanish demographic trend which points to significant reductions in the rate of formation of new households in the coming decades. The incorporation of immigrant households could upset the foreseeable and indeed already observable decline in demand for new housing in the medium and long term.

Note on methodology: scenarios

This study was conducted using four scenarios for the growth in immigration. The first one is based on the INE's demographic projections, and the other three are functions of the growth in employment using different assumptions regarding the potential growth rate of the economy. In these cases we assumed that the elasticity of employment relative to GDP is 0.7, which is the average of the past 20 years:

- **INE Scenario:** based on the INE's demographic projections
- **Baseline Scenario: GDP growth: 1.9% p.a.** (starting out from the estimates presented in: Hernández de Cos P., Izquierdo M. and Urtasun A. "*Una Estimación del Crecimiento Potencial de la Economía Española*" (an estimate of the potential growth of the Spanish economy). *Occasional documents 1104*. Banco de España 2015).
- **Positive Scenario: GDP growth 2.3% p.a.** (potential GDP growth with increased immigration).
- **Negative Scenario: GDP growth 0.5% p.a.** (Spain's potential GDP in 2015 as estimated by the IMF).

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