

VALUATION OBSERVATORY

REPORT ON THE HOUSING MARKET IN SPAIN (2014)

ITS PRICES, EVOLUTION AND THE ECONOMIC REASONS BEHIND THEM

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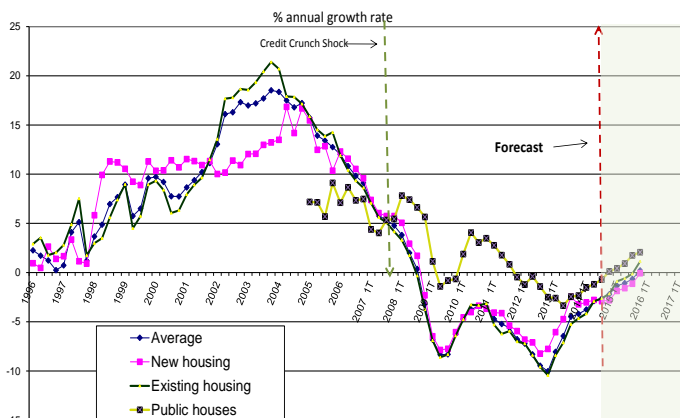
Introduction

At the end of 2014, the real estate market continues to follow the downward trend that began with the financial crisis and there has been insufficient recovery of the conditions necessary for its growth. Said market and particularly the housing sector have very sensitive balancing mechanisms that are dependent on the influence of three groups of factors: demand, the evolution of supply, and the conditions of the financial system. In previous economic cycles, the weaknesses of certain factors were set off by the strengths of others, thus allowing the market to evolve more stably over time. Its growth was the most intense when the three groups of influence behaved positively. However, after the credit crunch of 2007, the three groups of factors upon which this market depends have evolved negatively, dragging the building sector and the real estate market into the deepest crisis experienced in Spain since 1981.

Said process has affected housing prices. The evolution of housing prices and their value are important for any economy, given that they are an indicator of multiple references such as profitability (affecting investment), guarantees (setting collateral conditions for credit and loans), incentive for

construction (encouraging developers or promoters to take action), and wealth (determining the amount of household savings), amongst other more specific factors. These relationships make prices more than just a pseudo-balancing mechanism for the residential real estate market, as they are also a reference when analysing profitability and risk in the financial market as a whole.

Figure 1.- HOUSING PRICES IN SPAIN. NOMINAL TERMS IN EUROS BY M²



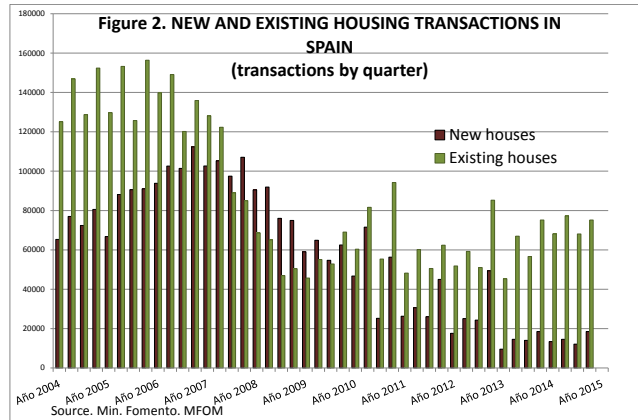
Source: Ministerio de Fomento / DG de Vivienda

This report includes an analysis of Spanish residential real estate prices and of its housing sector in general taking into account the latest data available, and it makes predictions regarding their short-term evolution.

The evolution of housing prices

Housing prices have continued to evolve negatively since 2008, in what has now become the longest period of deflation ever seen in the residential real estate sector. Throughout the entire year 2014 (up to its 3rd Quarter) prices fell at a slower rate but the variation from year to year continues to be negative. It is estimated that 0% growth will be reached at the start of 2015 (Figure 1). Such behaviour is a reflection of the average prices recorded in the different regions in Spain, some of which showed positive growth figures in 2013 (the Balearic Islands, Navarra, the Basque Country, Extremadura and Madrid). However, with the exception of the Balearic Islands, the others have again shown negative figures over the last few quarters, thus making the average results for the next few periods unclear. The behaviour of housing prices in Spain does not vary greatly from the trends observed in other European countries, albeit prices did begin to rise at the beginning of 2014 in some of them, such as Germany and the United Kingdom.

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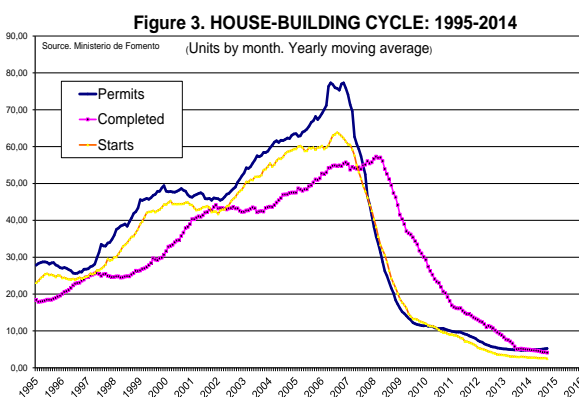
Lower prices have not been an incentive to significantly increase demand in the market, and up until 2013 there was a progressive drop in the number of housing transactions performed (Graph 2). During said period, the number of transactions reached a level that was somewhat less than 40% of the maximum figure reached during the height of the cycle (2006), the majority of which transactions involved unrestricted housing, with a small percentage of them involving newly-constructed homes (12%). From the

beginning of 2014, transactions timidly started to recover, having reached the equivalent of 50% of the cycle's maximum figure. This points to a certain degree of increased market activity, which may reflect the attractiveness of lower prices. With regard to buyers, approximately 16% are foreign residents and 1.3% are foreign non-residents, which means that market demand is mainly made up Spanish residents. The predominance of sales involving existing housing is due, particularly, to the limited number of newly-constructed homes that are available on the market.

The slight increase observed in transactions does not seem to be a reflection of improved conditions for demand (because, if that were the case, it would have caused more stability in the prices of existing homes and even higher prices in newly-constructed housing) although, to a certain degree, the increase does reflect the attraction of lower prices. The distortion that exists in the market due to the disappearance of sales by individual owners, the fact that institutions are practically the only new sellers in the market, and the weak recovery of the factors that encourage demand, have all significantly affected and limited the recovery that should have taken place, considering the number of transactions involved.

Supply of newly-constructed housing

The financial crisis had a drastic effect on the building sector in Spain, slowing the pace of its production to an all-time low. In 2014 the Spanish economy began building the lowest number of homes since 1960 (Figure 3).

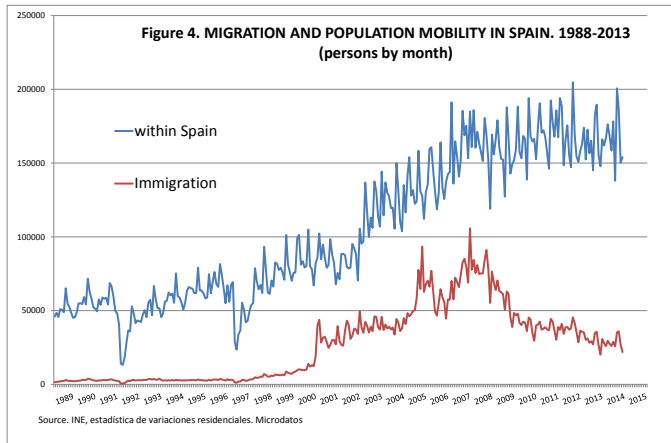


This situation has caused newly-constructed housing in Spain to be in lack of supply, which, simultaneously, has contributed to the disappearance of small and medium sized builders, who previously made market supply more dynamic, which in turn has caused a loss of production structures that is very difficult to recover. Likewise, this has also caused qualified professional (architects, engineers, etc...) to go unemployed, thus contributing to the destruction of human capital and productive resources.

Experience from other periods gives cause to believe that the recovery of private construction will be very slow over the next few years, although a push by public initiatives could encourage activity in the sector as a whole, contributing to a quicker recovery than that experienced in 1983 and in 1992. In absence of such public incentives, it is very unlikely that there will be a positive accumulated net growth in new housing until at least the middle or end of 2015. Regions with more active demand will be an exception to the foregoing. The reasons for said evolution are clearly rooted in the sudden freeze on demand.

Factors influencing the demand for housing

There are three factors that determine the evolution of long-term prices: the existence of demographic demand, affordability and, in the case of homeownership, credit availability.

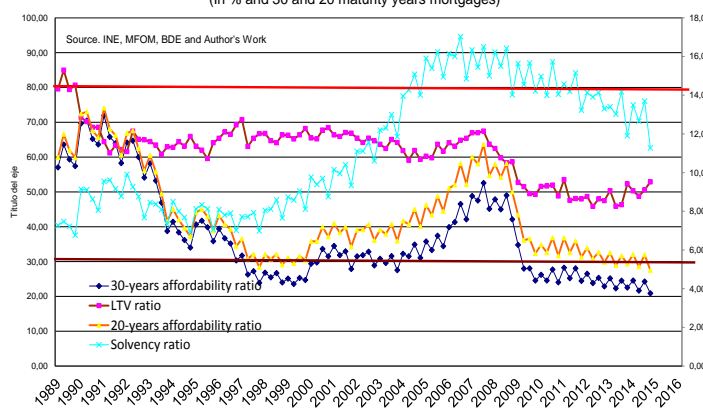


As to the first factor, both the statistics in the 2011 Census, as well as the data regarding migration and mobility, point to an increasingly strong demand. Based on census data, one can deduce that almost 900,000 potential nuclei existed for new households that were not created this year¹. On the other hand, the population's mobility (Figure 4) within the Spanish territory has remained at all-time highs, while the flow of immigration has stabilised, which together imply that there is an important internal demand for housing, aside from

any new households that may be generated. Said demand would justify the volume of transactions that appear in the statistics, despite the fact that households face less favourable conditions to carry them out.

Potential demand becomes actual demand if the people are capable of paying, that is to say, if they fulfil all the requirements necessary for them to be solvent and if they have sufficient income to do so. The creation of more stable employment and the growth of income from employment are two indicators that help meet such requirements and which contribute to people's making the decision to form a household. The high rate of unemployment, particularly amongst the youngest social stratum, and the temporary nature of their employment make for a very negative scenario with regard to the housing demand for young households. Nevertheless, the ability to pay for homes with existing salaries points to their being more affordable since 2009, which is something that is also evidenced by the direct ad-hoc indicators. The first of which, the general indicator of debt/income or the *affordability ratio* (Figure 5), shows that, since 2009, the effort of a household to pay for a home purchased at current prices, with low

Figure 5. SPANISH HOUSING AFFORDABILITY RATIOS (In % and 30 and 20 maturity years mortgages)



interest rates and the current level of income, is, on an average, less than 30%. The requirement that the relevant household must meet so that said figure really indicates whether the housing is affordable for them is their ability to obtain credit, being that low interest and the drop in prices offset the lower incomes they obtain, with regard to housing affordability.

The second indicator is the *Loan to Value (LTV) ratio* which is shown in the same Figure 5 and reflects, since 2008, a tightening of

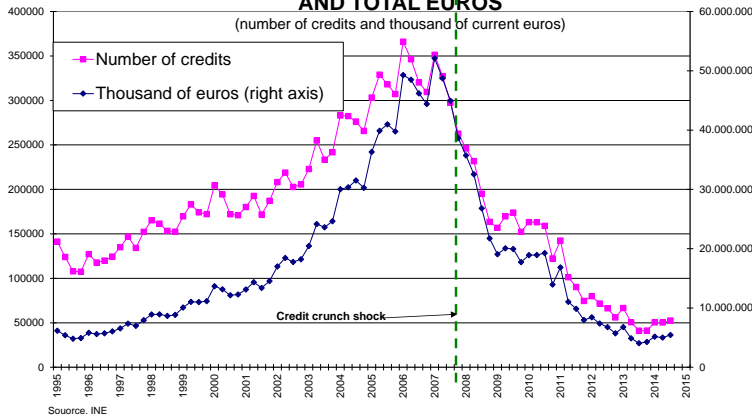
the requirements to obtain loans (expressed in terms of the total amount loaned per home) and, therefore, increases in the amount of prior capital that is required to obtain credit, resulting in a decrease in the number of loans granted.

¹ Said figure is equivalent to the transactions that were carried out at the height of the cycle, which leads one to believe that the needs to be covered range between 600 and 700 thousand units per year.

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As a consequence of the first indicator, and despite the second, those households that obtain a loan for a period of more than 25 years (1st requirement) and have permanent income available to them (2nd requirement) will have greater payment capacity under the current conditions.

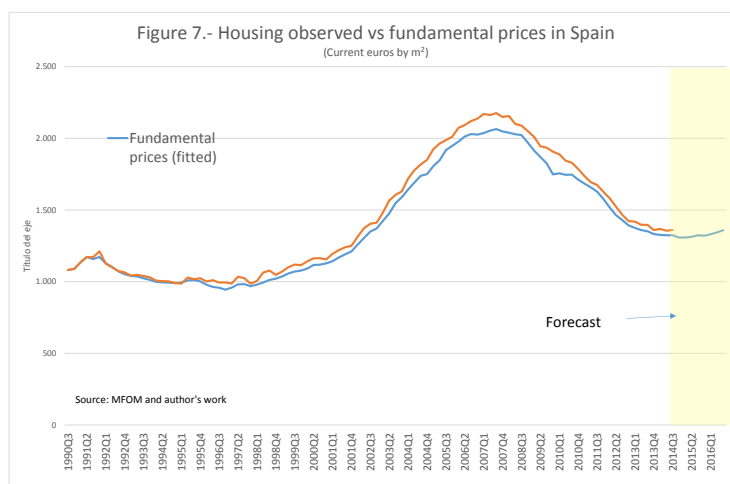
Figure 6. MORTGAGES FOR HOUSING IN SPAIN. NUMBER AND TOTAL EUROS



the stable income necessary to afford housing) and severe lending restrictions (which make it necessary to have saved large amounts previously in order to afford purchased housing)².

Since 2008 financing has decreased systematically for most production activities, but it has done so particularly for the building sector. Figure 6 reflects the important plunge taken by housing mortgages in Spain, as well as their standstill at all-time lows in the 3rd Quarter of 2014, which backs the idea that credit restriction continues to exist. The severe credit crunch simply makes purchased homes unaffordable, which means that there will be no full recovery until financing is again used for such purposes. On the other hand, the alternative to homeownership is rental housing. The rental housing market is very limited in Spain and it does not seem probable that, in the short term, it could replace buying as the general formula for obtaining a home.

Observing all these indicators as elements that determine housing prices provides one with useful information to evaluate housing prices and their evolution. A price forecast can be made by taking into account the fundamental factors set forth above and making a long-term model of their behaviour over time (Figure 7). The forecast that is reflected within the yellow band of the Figure indicates a slightly structural increase in housing prices as from the end of 2015, after their definitive stabilisation. This result



is consistent with the observation that prices evolve erratically amongst the different regions and that distortions exist in the market's operation.

² Both factors, but particularly the second, constitute market failures that hinder the proper operation of the mechanism for housing distribution.

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- **Conclusions and short-term prospects**

To conclude, the situation of Spain's housing sector is defined by a building sector that is at all-time lows, housing prices that are bottoming out, nearing 0% growth, and a market where transactions are relatively stable at a minimum figure of 300,000 transactions per year. Over the last few years the demand for housing in the market has accumulated due to the potential households that are not being created and the high degree of mobility amongst the population. Homeownership is highly affordable, despite two important limitations that restrict entry to the market: credit (limited by means of high cash requirements equivalent to 45% of the house's price) and the lack of stable employment, where salaries are frozen. Consequently, prices have not recovered and the supply of newly-constructed housing is not growing, despite the fact that it is needed.

The short-term prospects for the evolution of this sector depend directly on the economy's recovery as a whole. If the negative forecasts for the third recession do not prove true, housing prices will again recover slowly and the building sector will most likely follow their lead with a difference of about six months. Creating incentives for building in places where demand has accumulated would work as a mechanism to accelerate the process, which will, in any case, be slow over the next few years.

- **Different indicators for housing prices**

One of the most controversial questions that has arisen over the past few months is the disparity that exists in the explanations for housing price indices, depending on the statistic source used and also on the opinions of the companies that generate their own price databases. Although it is not a question of much dispute in Spain, it is a well-known point of discussion in publications related to housing prices. One question that has raised a lot of arguments is the methodology used to construct these pricing indices. Most countries where such indices have been developed use three types: weighted indices, those based on hedonic pricing, and those involving repeated sales adjusted by hedonic methods. Having several indices provides one with more tools for understanding the evolution of housing prices. For example, the United States uses the following housing price indices: the NAR (weighted), the OFHEO (repeated sales of mortgages on homes in the secondary market, adjusted for quality) and the Case-Shiller index (repeated property transactions, adjusted for quality).

The underlying reason why there are multiple indices is because it is difficult to measure prices accurately for housing, as it is an asset that is heterogeneous by nature. Housing prices vary radically, depending upon their location, age, and the different ways their characteristics are assessed, depending upon on the culture and/or conditions of the demand that exists in the different markets. When this is what happens to an asset, then the evolution of the relevant price may be radically different from the average if the data used as the basis for the statistics is all concentrated in just a few markets. Therefore, the first requisite that is necessary for an index and its generality to be acceptable is that the observations that are used to calculate such prices are actually representative of each market included in the index. If they are not, prices and price evolution are going to be biased towards the relevant market or markets observed.

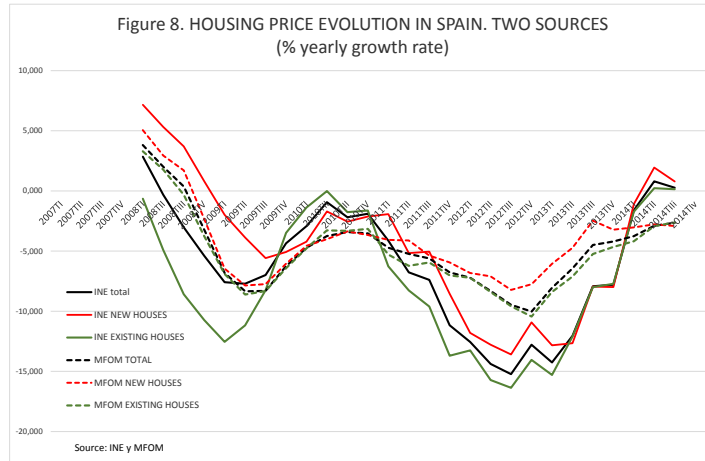
Weighted indices do not take quality into account, in other words, they do not take into account the differences in home quality when determining price. They only evaluate the price observed/obtained. This is the case of the index issued by the Ministry of Public Works, although the weighting used therein, based on the assessments provided to it by the AEV members, is very precise from the perspective of location, which makes it a high-quality index.

The index issued by the "INE" (Spanish National Institute for Statistics) uses a hedonic base, therefore, housing quality is taken into account when constructing the index. This index also includes (and weighs on the basis of) the location, thus making it an index that reflects such characteristic very well. The methodology that it applies is a common methodology used by other indices in the European countries, thus making it possible to compare the evolution of housing prices calculated in this way with those of the EU.

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Being that the INE index takes quality into account, it can detect changes that arise in relation to surface area, rooms, type of home, etc. This is the main difference it holds with the index issued by the Ministry of Public Works, in addition to time lags and the use of data declared in public deeds. The unavoidable changes that arise in housing quality throughout the building cycle can cause hedonic indices to be more volatile than weighted ones, which means that their results can vary at certain points in the cycle.

This difference is less noticeable when there is a large volume of transactions in the market, but it is much more noticeable in small markets. This occurs because when there are many elements observed,



their characteristics tend to converge with the average and price valuation coincides with the strictly mathematical average. But when there are few elements observed, said elements tend to become concentrations of units with similar characteristics (or similar locations), which makes the averages calculated to reflect quality, different from those using weighting. Said differences arise and they cause the calculated indices to be different. This is what happens in Spain's two price indices, as illustrated by Figure

8.

As one can see, the different volatility in these two indices is significant and the index issued by the Ministry of Public Works is the most stable of the two. Said volatility could indicate a situation where there are changes in the quality of the homes during the observation period (although it can also come from the contracting parties' tax behavior), so that said changes absorb their part and accentuate the contraction in the price component that does not take into account the "cost of housing quality". In other words and according to the latest data, a deeper plunge in this index would seem to imply that it is measuring higher quality units that are unidentified by the market and that, if this component is eliminated, it produces an adjusted price that falls faster than if it were not adjusted for the component, and vice versa. Another reason for the variance in evolution is found in the lower number of observed elements in all the typologies, which could cause some specific elements to "weigh" more than others within a hedonic index. For example, some studies find that in periods of recession transactions are concentrated in those involving smaller and cheaper homes, while in periods of expansion, all types of homes are sold. This is a cause for disparity that would be reflected in a hedonic index but not in a weighted one.

The INE index shows that prices have stopped falling in 2014, whereas the weighted index issued by the Ministry of Public Works continues to reflect a negative trend. If one assumes that both indices have the same observed elements, the data of the INE index could indicate that most homes included in the index in 2014 are of lower quality (smaller, located in secondary areas, with less services...) and the data of the Ministry's index would only calculate an average per location for all the homes in the sample.