

What future for the Spanish housing market?

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Germany excluded, Western Europe has seen its housing market grow rapidly for several years and there have even been signs of tension in some countries. After rocketing in the late 1980s, prices started to correct in 1991-1992. They proceeded to fall over a period of several years before rebounding in the late 1990s and early 2000s. In the eurozone, for example, house prices have gained an average 7% a year since 1999 after annual growth of 1.5% between 1994 and 1998. In the United Kingdom as in Spain, annual house-price inflation was particularly strong from 1998 to 2005, averaging 13.3% and 15.2%⁽¹⁾ respectively. The pace was also strong in Ireland, the Netherlands, Greece and France. Residential property cycles seem to be broadly synchronised at an international level (see Chart 1) but their magnitudes differ. In the third quarter of 2005, inflation-adjusted house prices were 82% higher than their previous peak in Spain (1991), compared with 68% in the United Kingdom (1989) and 55% in France (1991).

As early as 2003, the ECB was expressing concerns about high Spanish property inflation (+17%) in relation to the eurozone average (+7.2%)⁽²⁾. And in its monthly bulletin for February 2006, the Bank reaffirmed that “some regions of the euro area [Spain, Ireland, France and even Italy] might have experienced unsustainable residential property price developments of late”⁽³⁾. Jaime Caruana, governor of the Bank of Spain, has repeatedly called on financial intermediaries to lend more sparingly⁽⁴⁾. For the moment, though, the monetary authorities’ and supervisory bodies’ warnings have gone unheeded. Although annual house-price inflation has slowed since the first quarter of 2004 (18.6%), it remains surprisingly high (12.8% in Q4 2005) given the levels already reached.

This fresh surge raises a number of questions about the possibility of a property bubble, the sustainability of property inflation and the repercussions if the bubble bursts. The issue is probably even more crucial for Spain as the two main drivers of its brazenly healthy economy are consumer spending (itself fuelled by property-generated wealth effects) and the buoyant construction sector.

The property market is close to overheating

Despite the boom in residential construction and reshaping of the age pyramid, the influence of physical supply and demand factors on house prices remains difficult to evaluate, eclipsed by financial considerations.

Volumes, prices and financing

In all since 1995, house prices have risen by an incredible 193% (11.3% a year on average). Within the European Union, only the UK can boast similar growth (210%/12.0%). The rates apply to existing and new homes alike. After tripling in 10 years, the average price of a Spanish home is now close to €1,700 per square metre, rising to nearly €3,000 in Madrid and Barcelona.

Housing starts have been accelerating non-stop since 1996. Almost 800,000 homes sprung up in 2005, which was about double total residential construction in France and Germany. That said, recent trends suggest a gentle slowdown by volume in 2005 (Chart 2).

Since 1998, mortgage debt has been climbing by an average of nearly 20% a year⁽⁵⁾ (Chart 3). This is more due to high issuance rather than a fall in repayments (Chart 4, page 4); mortgage issuance started to accelerate again last summer, reaching 26% y/y in December 2005 vs. 17% y/y in March.

Structural and economic factors are increasing demand

To a large extent, potential demand for homes and supply-side adjustments can have national or local influences but economic and financial factors also set the international backdrop.

Structural factors

In recent years, potential demand for homes has increased with changes that have been both demographic (higher population) and sociological (even swifter rise in the number of households). Spain's attraction for overseas investors, the shortage of land and the limitations of the rental market have also played a role.

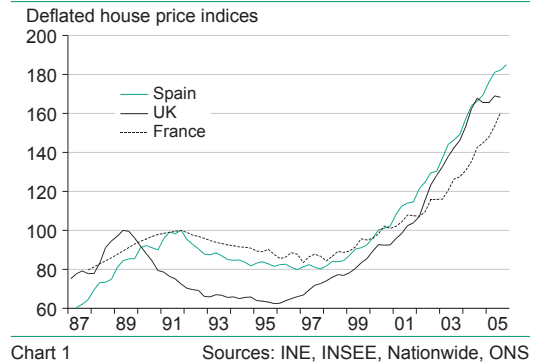
□ Demography, sociology and potential demand for homes

In Spain, demand for homes started to pick up in the latter half of the 1990s due to demographic and economic factors. Over this period, growth in the general population coincided with a distortion of the age pyramid in favour of working adults, who are more likely to buy a home. Whereas the total population grew 3.7% between 1995 and 2001 and the number of 0-25 year olds fell 10.2%, the 25-39 age group swelled 10.2% and the 40-59s 14.2%.

- Different generations no longer live together

The breakdown of the traditional family unit due to young adults leaving home earlier has also contributed to the rise in the number of Spanish households. This increase (+16.1% over 1990-2000) was much higher than that of the population (+3.9%), bringing down the

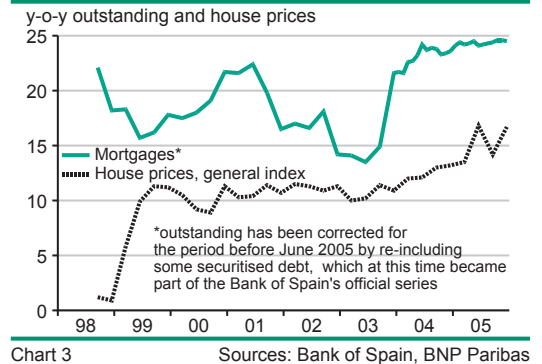
Synchronised cycles



Very high volumes with a gentle slowdown in 2005



Credit outstanding is growing more quickly than house prices



average size of individual households (3.1 people in 2000, vs. 3.4 in 1990 and 3.7 in 1980). Unlike in other countries, young adults have tended to buy rather than rent, mainly due to particularly attractive borrowing conditions.

– Rural exodus

The country has experienced significant migration from the countryside and small villages to the cities, concentrating demand on areas where land is scarcest.

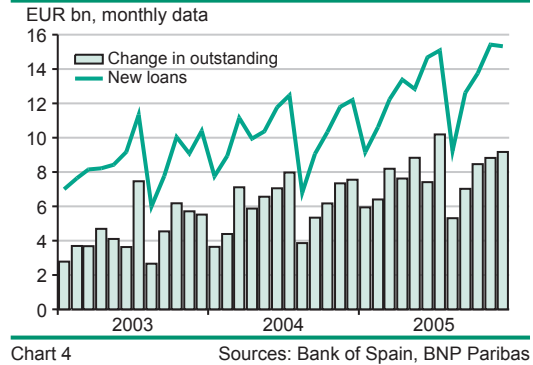
– The role of immigration and foreign investors

Encouraged by legislation that is more relaxed than in the United States and other eurozone countries, immigration has also boosted property transactions. Between 1998 and 2002, the migratory balance increased eightfold, compared with Italy where it was threefold and France where there was a 50% increase. There was actually a 35% decrease in Germany. Although entrance policy has tightened in recent years, immigration flows remain substantial with arrivals from Europe taking over from Latin America.

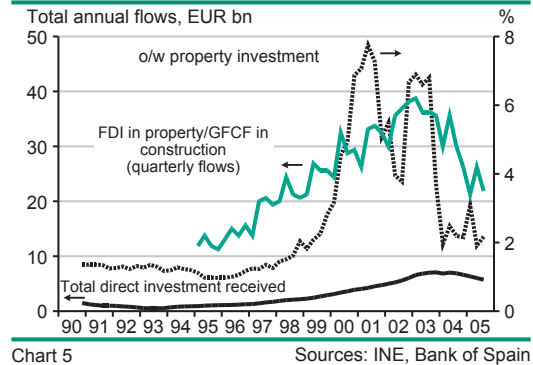
Furthermore, Spain is currently the world's second most popular tourist destination after France. The number of tourists owning their own homes has risen quickly. Non-residents' purchases of holiday homes (15% of the total) – particularly in tourist areas – started to skyrocket in the late 1990s. According to some estimates, 40% of new homes built on the coast are sold to Britons, whose interest is especially due to the high level of UK house prices compared to Spain, the low cost of borrowing and the arrival of low-cost airlines.

According to balance of payments figures, foreign property investment inflows rose nearly eightfold between 1994 and 2003, with the increase constant throughout the period. Non-residents invested another EUR 6.6bn in Spanish property in 2004 after a record of EUR 7.1bn in 2003. In the first 10 months of 2005 inflows amounted to EUR 5.7bn. The impact of this money on house prices is difficult to measure, however, as the information at hand does not distinguish between purchases of homes and business premises.

Household mortgage flows



Spain: Foreign investment in property



In 2003, foreign investment accounted for 5.7% of total GFCF in the construction industry, compared with less than 2% in the mid-1990s (see Chart 5). Since mid-2003, though, the increase in the former has not matched the latter, reducing the percentage to around 3.5% in Q3 2005. FDI in property had reacted fairly quickly to variations in the effective exchange rate of the euro until 2002 but the correlation then loosened. There are two possible explanations for this: a relocation of assets to the financial markets, whose European indices have been picking up since early 2003; and to a lesser extent, the reduced appeal of property following the surge in house-price inflation since 2003.

❑ Limited supply?

The acceleration in housing starts over recent years, which has coincided with an even swifter increase in the number of new homes, has not stopped the ratio from plummeting (change in residential construction/change in the number of households, see Table).

The OECD, which has examined the relative importance of supply- and demand-side influences on house prices, concludes that the rigidity of supply was not the main factor behind the rise in Spanish house prices, unlike the situation in the Netherlands and United Kingdom, even though the increase in supply was insufficient to avoid a sharp increase in prices⁽⁶⁾. The organisation recommends an end to the obligatory resale of 10% of constructible land to local authorities, as specified under the 1990 ground law, reformed in 1998⁽⁷⁾.

❑ A very tight rental market

One important thing to note about the Spanish market is that the rental sector is particularly narrow. The proportion of homes available for rent is no more than 10%. Demand for these mainly comes from single people – more regionally mobile – and non-residents. The reason for this lies with housing policy, which favours buying:

- subsidised borrowing rates on some purchases of new homes (about 50,000 a year),
- mortgage interest relief, exemption from capital gains tax.

Combined with the weakness of the rental market in terms of quantity and quality, these measures encourage a large number of Spanish people to buy their own homes. This means the proportion of owner-occupiers is one of the highest in the European Union. Expressed as a percentage of the total number of primary residences, the figure for 2001 – census year – was 84.8% in Spain compared with 63.4% in France and 43.8% in Germany. In addition, second homes account for 25% of the total stock.

With the tightness of the rental market coinciding with a high number of vacant properties (two million), the government has adopted various measures to encourage owners to put these homes back on the market. The 2003 budget contained a series of incentives

Demographics and residential construction

	Average 1992-1998	Average 1999-2003
Thousands per year		
Change in number of households (a)	254.2	384.8
Residential construction (b)	280.2	546.5
(b) / (a)	1.1	1.4

Source: INE, Bank of Spain, BNP Paribas calculations

to invest in rental properties. However, the OECD has asked the government to do more: gradually withdraw grants to help buy homes; improve legal support for leases in favour of landlords; reduce the minimum contract period (five years since 1995). Another option could be to replace the current system of subsidised housing for the poor (sale of homes below market prices) with an expansion of the assisted rental market.

Economic and financial factors

Demand has swelled on the back of a strong economy and a decrease in the cost of borrowing, due to financial convergence. The abundance of supply (due to stiff competition between establishments) and change in banking conditions (extension of the legal term for mortgages and average lending term) were conducive to credit issuance.

❑ Growth and employment

Various economic factors (strong growth and high job creation, which supports disposable household income; easy credit terms) have also stimulated house purchases. Spain has enjoyed very firm economic growth over the last decade, easily outperforming the rest of the eurozone with average annual GDP growth of 3.2% between 1995 and 2003, compared with 2% in the EMU.

High job creation led to a spectacular drop in the unemployment rate from 20% in 1994 to 8.4% in Q3 2005 (a rate now below the eurozone average). In

addition, the activity rate of women (female population in work/female population of a working age) has improved considerably, rising from 25% in 1990 to 38% in 2004, hence an increase in the proportion of dual-income households.

Positive wealth effects (higher value of household assets following the rise in house prices) have also helped fuel demand for homes.

□ Real interest rates and financial convergence

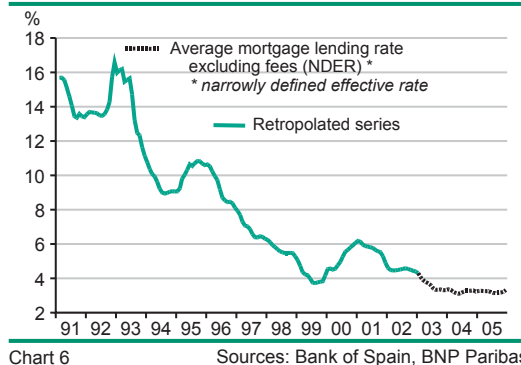
A sharp drop in interest rates due to the convergence process ahead of the EMU supported demand for home loans. Between 1992 and 2003, nominal mortgage lending rates were divided by more than five (Chart 6) and have stood at around 3.5% since 2004. Unlike other European countries, most loans (97.4% of new loans issued in November 2005⁽⁸⁾) are variable rate and their cost therefore largely reflects changes in European monetary policy⁽⁹⁾. Persistently high inflation has meant particularly accommodative monetary conditions and extremely low – or even negative – real interest rates.

□ Extended loan duration and broader range of loans

The extension in the average maturity of mortgages and the introduction of partially deferred loans have gone some way to slowing the increase in the effort rate following the surge in house prices. However, there are limits to this.

From around 15 years in the mid-1990s, the average mortgage term lengthened again in 2005: from 24 years and 10 months in Q1 to 25 years and 6 months in Q3⁽¹⁰⁾. Some establishments have introduced 50 years loans reserved for less than 35 years old customers (BBK since 1st January 2006) or loans with a partial deferment on capital repayments, which are somewhere between a pure loan and traditional financing. In 2003, for example, BBVA offered its customers the option of postponing repayment on up to 20% of the initial amount of the loan until maturity. Although this montage has the advantage of limiting the effort rate during the repayment period, it requires a much greater effort at the end of the loan and

Financial convergence and cost of credit



is primarily aimed at households who expect their income to rise considerably. However, given the weakness of real interest rates in Spain, such a mechanism is surely more appropriate here than in other eurozone countries with low inflation.

□ Arbitrage between the stock markets and property

The slide in stock indices between the spring of 2000 and autumn of 2002 – the IBEX benchmark index lost more than 53%⁽¹¹⁾ – probably redirected some investment into bricks and mortar. From a peak of 18.9% of GDP according to the financial accounts for 2000, investors' annual net acquisitions of equities and other shares plummeted to 6.3% in 2001 and 7.8% in 2002. Since then, they have returned to their levels of the late 1990s (11.2% in 2004).

Households' financial behaviour has been out of synch with that of investors as a whole. Whereas households' net equity purchases reached 8.9% of GDP in 1997, the percentage was just 1.6% in 2004. The financial accounts show that most savings flows have been reallocated to cash investments and, to a lesser extent, life insurance. Households' residential investment has not fully benefited from the reallocation of savings (7.3% of GDP in 2000, 9.0% in 2004) but the increase in liquidity flows has reflected the constitution of funds for use as a deposit with a view to acquiring existing houses. However, we cannot see this as household accounts are consolidated in the national accounts.

What does the future hold?

With so many arguments to suggest house prices are near their cyclical peak, the economic consequences of a downturn merit consideration.

An increasing number of factors

The various methods for valuing homes provide similar results concerning the difference between actual prices and fundamental values, while the average surface area a household can afford (borrowing capacity/price per square metre) is close to its critical level.

Theoretical overvaluation of around 30%

When considering property inflation, we need to draw a distinction between the contribution from real fundamentals (demography, construction) or financial factors (household income, interest rates) and that arising from irrational expectations likely to cause a speculative bubble. The Bank of Spain recently estimated that house prices were overvalued by between 24% and 35% in 2004⁽¹²⁾.

□ Structural models illustrate the difficulty in identifying the role of eponymous factors

Unlike a purely financial approach, the macroeconomic approach combines real and financial factors to explain growth in house prices. By transposing the theory of durable goods consumption to housing, the demand of a given household depends on its income and the cost of owning a home, this cost being equal – assuming there are no imperfections on the financial markets – to the opportunity cost⁽¹³⁾ (net of the tax impact) of residential investment, plus the depreciation rate and minus the expected change in house prices. Demand is particularly strong as average household income is itself high and ownership costs low. The latter are especially modest as the cost of borrowing and the return on other investments are low and individuals are expecting house prices to continue rising sharply. Ideally, one or more variables to measure the intensity of

demographic pressure (land shortages) would be brought into the equation. In practice, the cost of use variable⁽¹⁴⁾ and ratio of the number of homes to the number of inhabitants aged over 25 – initially tested by the Bank of Spain – have now been abandoned due to a lack of explanatory ability. This drawback, which is extremely common in so-called structural specifications, tends to confirm the predominant influence of financial variables on house price trends. The advantage of financial variables over real or physical factors also helps to explain the close synchronisation of residential property cycles in developed countries, now that capital markets are more integrated.

The two models ultimately used by the Bank of Spain each boil down to two relationships: the long-term balance and the short-term balance. According to a co-integration relationship, the first identifies a positive correlation between house prices and household income⁽¹⁵⁾; the second interlinks the rate of change in house prices to the same variable delayed by one year, the annual change in nominal interest rates, share dividends, real prices, real income and nominal interest rates delayed by one year. The very close self-correlation of house prices is certainly not unique to Spain but is more generally the result of characteristics intrinsic to the property market: the late adjustment of supply to demand (attributable to the length of time it takes to build new homes), owners' psychological aversion to loss when prices are rising, and the inevitable contraction of credit supply in bad times. These make the property market very inert.

The main difference between the Bank of Spain's models lies in the elasticity of prices to household income over the long term. Free in the first model, it is fairly unrealistic over the long term (2.8). As a result, it has been limited to 1 in the long-term equation of the second model, which has been enhanced by a second explanatory variable – the nominal interest rate – to maintain a satisfactory degree of explanation.

Both models suggested that house prices were overvalued, measuring this by the difference between the average price observed and the long-term equilibrium value: between 8% and 20% in 2002; 14% and 23% in 2003; and 24% and 35% in 2004. In conclusion, the Bank of Spain still allocates a high probability to the gradual re-

absorption of this difference, which is smaller than in the early 1990s, but is highlighting the risk of a collapse if house prices continue rising at the same pace after 2004.

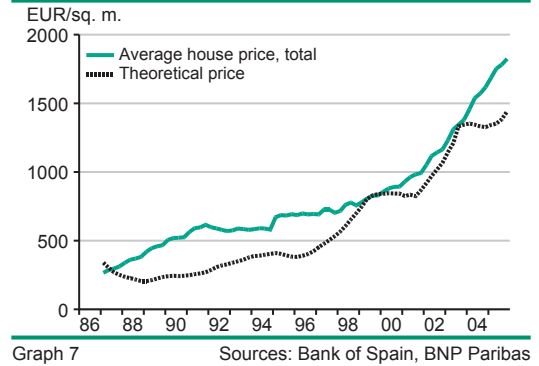
□ Asset valuation formulae

A second approach involves comparing the current ratio of house prices to rental values (property equivalent of the P/E ratio) to its long-term average⁽¹⁶⁾. For Spanish residential property, like many other foreign markets, the ratio appears to have reached a historical high: 60.1% above its 1987-2005 average and 41.9% more than its previous peak (Q4 1991). However, trends in the price of an asset compared with the income it generates are difficult to analyse as several factors influence the equilibrium level. Structural disinflation and the fall in nominal long-term interest rates (nearly 15% in 1990, well under 4% today) and real long-term interest rates (over 8% in 1990, now almost zero) have made much higher prices sustainable.

Our approach, inspired by financial theory, involves estimating the price that is consistent with expectations, or more precisely proxies for expectations. It therefore factors in the effects of expectations of the structural changes mentioned above. Commonly used on the financial markets, the Gordon-Shapiro formula defines the value of an asset to be the net present value of its expected future cash flows. We have taken the core inflation rate⁽¹⁷⁾ as the expected rate of growth in rents and assumed that residential property investors (“pure” or owner-occupiers) would require a 2% premium over the risk-free rate (10-year Spanish government bonds). Interest rates and the expected rate of growth in rents have been smoothed over four quarters to correct high volatility (especially at the period end). Lastly, the rent index has been rebased to offer a net yield, compared with the price index, consistent with average net rental yield for 2001-2004 as published by the Investment Property Databank (IPD) for Spanish residential property.

On this basis, price dynamics of residential property appear to be consistent with the financial environment up to 2003 when trends in theoretical and actual prices began to diverge. Our model suggests that the Spanish market was overvalued by around 25% in Q3 2005 (Chart 7). The results are quite sensitive to parameter

Spain : actual prices vs. theoretical prices



$$P_t = \sum_{n=1}^{\infty} \frac{L_{n+t}}{(1+r_t+\tau_t)^n} \approx L_t \times \frac{(1+g_t)}{r_t-g_t+\tau_t}$$

P_t = Theoretical price of houses in Spain

L_t = Average rent in Spain

g_t = Expected rate of growth in rents

r_t = Nominal 10 - year government bond rate

τ = Risk premium for residential property normalised at 2%

values and if we normalise the 10-year nominal interest rate at 4%, which is almost certainly closer to long-term economic fundamentals than the current rate, the market is overvalued by 34.5%. The range obtained by our calculations is therefore consistent with the Bank of Spain’s so-called structural model.

Threats to household solvency

Historically high household debt levels worsen the impact of any rise in interest rates on household solvency.

□ Debt is largely owed on homes

The rise in the total household debt rate⁽¹⁸⁾ from 68% of gross disposable income in 2000 to 110% by our estimates at the end of 2005 largely involved an increase in mortgages, while outstanding consumer loans evolved at a similar rate to gross disposable income. According to the central bank, a quarter of Spaniards are currently repaying a mortgage.

Outstanding consumer credit represented around 13.6% of households' gross disposable income at the end of 2005, compared with 11.9% in 2000. Overall, the increase in the overall debt rate seems very sharp. It remains below the level in the United Kingdom (140% at end-2005) but above the rates of Germany (106%) and, in particular, France (67%) and Italy (40.9%).

Within total debt, outstanding mortgages represented 80% of gross disposable income at the end of 2005, compared with 117% in the United Kingdom, 71% in Germany, 48% in France and just 23% in Italy. As a percentage of GDP, mortgage debt has more than tripled since 1990, rising from 14.2% to 46.9% in Q3 2005. From an initially high level at the end of the 1990s (24% in 1999), household debt – measured as a percentage of total assets – has risen quickly since the turn of the century to reach levels around twice as high (around 40% in 2005) as the United States and the United Kingdom (18% and 15% respectively) although it is lower than in Australia (53% in 2005)⁽¹⁹⁾.

The impact of the rise in debt on households' interest rate burden, however, has been largely offset by the lower cost of borrowing. After a temporary lull in 2000 and 2001 when monetary policy tightened, the interest burden eased again in 2002 before stabilising at around 2% of gross disposable income in 2003.

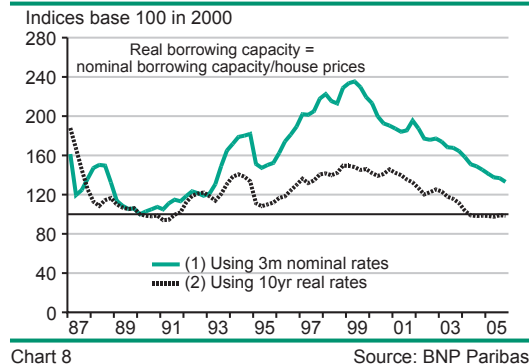
□ Household solvency in the dangerous zone

The first argument in favour of a slowdown in prices is the dangerous erosion of real household solvency since 2000. Measured as the relationship between the maximum amount a representative household can borrow and the average house price, this indicates changes in the average surface area affordable to a household whose disposable income rises in line with the average and which is likely to finance the purchase at the average lending rate. Two additional methods have also been used.

The first, based on nominal short-term interest rates, measures a representative household's immediate borrowing capacity as it would be calculated by a financial intermediary upon application for a variable rate loan.

This method measures borrowing capacity at a given date but does not reflect the actual burden on the

Household solvency in the danger zone



household over the repayment period, which depends on future changes in interest rates and household income.

The second approach, dynamic, assesses the average solvency of a representative household based on inflation and short-term interest rates expectations as implied by the level of long-term interest rates.

While the first method shows that, with an identical interest burden at the inception of the loan, a representative household can still afford more square metres than it could at the previous cycle peak (see Chart 8), the second shows that real household solvency is just as bad as in the early 1990s if we take into account the cost of the transaction over the entire repayment period. Current prices are some 30% higher than the level that would allow a representative household to purchase the same surface area as in 1994 or 2001 (reference years when real solvency matched the 1987-2005 average).

□ The moderating effect of debt and interest rates

With debt high, a hike in short-term interest rates would not only damage the solvency of potential buyers but also households with outstanding mortgages, as the predominance of variable-rate mortgages distinguishes Spain and the United Kingdom from countries in which home loans are primarily fixed-rate. Furthermore, an increase in debt could potentially limit credit demand and weaken private consumption. According to the Bank of Spain, a 1% increase in the level of debt against its estimated theoretical value⁽²⁰⁾ would reduce consumer

spending by 0.09% and credit demand 0.14%. Household savings not targeted for repaying debt has fallen from 8% in 2000 to 2% today. The increase in the proportion of “forced” savings flows heightens the sensitivity of consumer spending to changes in interest rates. Also including wealth effects (see below) in their study, Molina and Restoy (2004)⁽²¹⁾ estimated that a permanent two-point increase in short- and long-term interest rates would have caused GDP to contract by 1.2% of GDP over a three-year period in 1990, but by 1.8% of GDP in 2002.

The current weakness of interest rates and the accommodative nature of monetary policy imply short-term interest rates will go up. However, we can probably rule out rapid monetary tightening. Using the average of the variable rates of interest currently practiced (3.35%), a 50bp rate increase over the whole of 2006 (our scenario) would, all other things being equal, reduce households’ borrowing capacity by 3.6% (whereas this was virtually stable in 2005). Full-year and excluding any volume effect (i.e. contraction of mortgage demand), such a change in interest rates would increase the household interest rate burden by around EUR 3bn, which is equivalent to 0.6pts of annual consumer spending.

The positive influence of demography could fade in the long term

Several factors underpinning demand could continue to play a role over the coming years, such as the purchase of holiday homes by non-residents, the expected rise in employment, immigration and the number of households (Pareja and San Martin, 2003)⁽²²⁾. In the longer term, however, demographic changes could be of less benefit to demand for homes (drop in the percentage of adults of a working age). Indeed, the Spanish birth rate has been falling since the 1970s and is now one of the lowest in Europe at close to 1.3 children per woman, which is well below the 2.1 needed to renew each generation.

The economic consequences of a downturn

Beyond the global economic consequences of a downturn in the residential property market, financial intermediaries’ exposure varies quite significantly from one type of establishment to the next.

Construction: One of the Spanish growth drivers

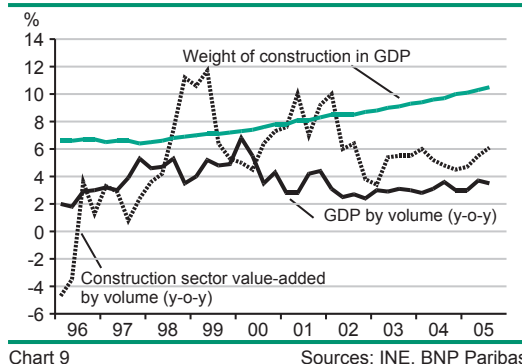


Chart 9

Sources: INE, BNP Paribas

□ A price correction would weaken consumer spending and real estate activity

At the end of November 2005, Standard & Poor’s warned of risks of a correction to house prices, which could seriously damage economic growth. The effects could be felt through two distinct channels: a moderation of consumer spending (via a negative wealth effect) and weaker construction activity.

Activity in the building and public works sector has been particularly strong over the last 10 years. Value-added climbed swiftly between 1995 and 2005 (+1.2% on average at constant prices, compared with +0.9% for the economy as a whole). Its weight in GDP duly rose from 6.9% in 1995 to 10.3% in 2005 (see Chart 9), which is fairly high in relation to most other OECD countries. The number of building permits also rose sharply (+9% per year on average between 1997 and 2004).

The strength of the construction industry brought a huge increase in sector employment from the mid-1990s (+7.3% per year on average, compared with +3.9% for the economy as a whole). In 2005, construction accounted for nearly 12% of total employment and more than half of productive investment.

The construction sector has, along with services, been one of the main growth drivers for several years.

According to Farré and Raymond (2002)⁽²³⁾, the potential effect of a drop in house prices on consumer spending would be about the same as in other OECD countries.

Obviously property assets account for a high percentage of household assets, estimated at 73% in 2001. However, mortgage equity withdrawal is less developed than in other countries (Marques and Nieto, 2003)⁽²⁴⁾. Nevertheless, a weakening of consumer spending would not go unnoticed in terms of total activity, as it accounts for 60% of GDP and has been a strong source of support for domestic demand in recent times.

□ Property and the banking sector

Thus far, Spanish credit institutions have greatly benefited from the surge in prices and growth in outstanding loans. These developments have directly supported intermediation revenues and generated significant cross-sales. However, a reversal of trend could harm some establishments's income statements and balance sheets.

Outstanding mortgage debt accounts for a relatively high proportion of Spanish banks' balance sheets, with only their Danish, Swedish and UK counterparts recording higher assets from this activity⁽²⁵⁾. As in Germany and Switzerland, savings banks have traditionally held an important role. In December 2005, outstanding home loans amounted to EUR 446bn (85% of GDP), 55.1% of which was issued by savings banks, 37.7% by commercial banks and 5.5% by building societies⁽²⁶⁾. Moreover, mortgages represent a substantial percentage of assets for the savings banks and building societies (29.4% and 30.3%) compared with commercial banks (14.2%).

As outstanding customer deposits has not followed the same growth rate as outstanding loans, establishments have called on the market more and securitised a higher proportion of their lending portfolios, reducing their risk exposure (see Charts 10 and 11).

The proportion of securitised mortgages had reached 8.8% of total outstanding in June 2005 compared with a little over 3% in 1999. Meanwhile, the percentage of mortgages used as collateral on bonds doubled from 5.4% to 11.6%. More relaxed eligibility conditions for than in France – maximum loan-to-value ratio of 80%, vs. 60% in France – have encouraged subscriptions to Cédulas (Spanish covered bonds). And the proportion of mortgage-backed securities in their broader sense (i.e. including Cédulas) rose from around 8.5% in June 1999

**Spain :
Securitized assets and covered bonds**

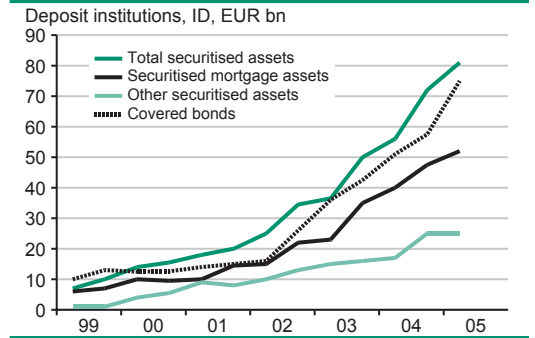


Chart 10 Source: Bank of Spain

Spain: ratio of securitized assets and covered bonds to the related loans

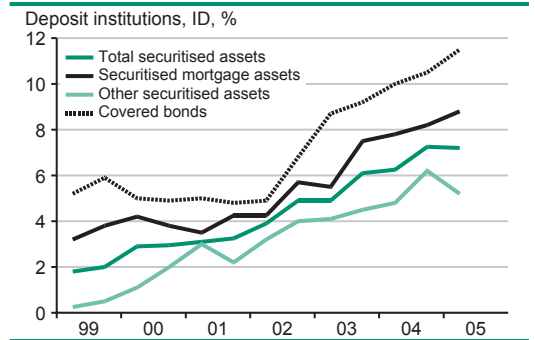


Chart 11 Source: Bank of Spain

to 20.4% in June 2005. The main subscribers were foreign investors (62% of the total in 2004) and financial institutions (34%)⁽²⁷⁾.

The quality of Spanish banks' assets is highly satisfactory and the ratio of non-performing loans is now particularly low. In all probability, a gradual erosion of the value of bricks and mortar would have a limited impact on the cost of risk. For the most part, portfolios include loans taken out before 2003. As their subscribers have fully benefited from the cumulative rise in house prices, a reduction therein would have no major impact on the cost of risk. The most recent loans represent a smaller fraction of outstanding but raise greater concerns. Given that interest rates were exceptionally low when the mortgages were issued, borrowers' repayment capacity could reach a critical level more quickly if interest rates

climb. Also, the ratio of outstanding capital to the value of collateral could reach fairly high levels and reduce the recovery rate of doubtful loans.

Ultimately, a contraction in the volume of real estate activity would doubtless have a different impact depending on the type of lending institution. The structure of outstanding loans to the productive sector has changed significantly in favour of property activity, whose weight has almost doubled in the space of seven years. In the third quarter of 2005, the real estate sector absorbed 42.9% of financial assistance to the productive sector (against 21.5% in 1998), of which 16.7% went on construction (residential or otherwise) and 26.2% on property services. Savings banks' market share totalled 49.9% of this outstanding, while they issued 40.4% of all loans to the productive sector. Distributing more than half of loans to the productive sector (50.4% of outstanding), commercial banks held a market share of 42.2% and generally seemed less exposed than savings banks or building societies (9.4%, 15.5% and 13.2% of assets respectively).

Adding together home loans and the financing of real estate activity, savings banks (44.9% of assets) and building societies (43.5%) are almost twice as exposed as commercial banks (23.7%).

□ What is the most likely scenario for the property market?

Empirically, house prices are notable for being very highly self-correlated (expectations feed reality and vice versa), making it hard to identify turning points.

Although few would dispute that property is overvalued, it remains to be seen when the property market will adjust and whether it will take the form of a bubble suddenly bursting or a soft landing. The price slowdown seems to be happening already, with the year-on-year rate steadily declining since the end of 2003. Peaking at that time at 18.7%, it was 12.8% in Q4 2005. Like, some Spanish banking establishments, we foresee a marked slowdown this year.

Monetary erosion and nominal prices

If prices were to merely stabilise they would return to their fundamental values more quickly than in other

countries in which house prices are overvalued to a similar extent (around nine years with average inflation of 3%, versus 13 years in a country with average annual inflation of 2%). Although house prices stabilised between 1991 and 1997, values dropped 19.8% in real terms. Meanwhile, French house prices fell 5% nominally and 11% in real terms. Between comparable points of the 1989-1995 property cycle, UK house prices lost 14.5% in nominal terms and 35.6% in real terms.

The fact remains that cyclical downturns for residential property last less than nine years with an average of five to seven years, suggesting a slight adjustment to nominal prices during this time.

Our scenario is that of a soft landing with a limited drop in nominal prices. However, further price growth – still likely in 2006 if the ECB raises its key interest rate very moderately – heightens the risk of a subsequent correction.



The surprising strength of the Spanish residential property market from the second half of the 1990s has understandably raised fears about the possibility of a bubble. Our analysis suggests house prices were overvalued by around 30% in 2005, which is close to the Bank of Spain's estimate for 2004. Although the necessary reduction in real house prices seems likely to materialise through a gradual normalisation rather than a doomsday scenario, we still think the market will come to its senses quickly. However, the global nature of the current property cycle would tend to limit the relative influence of specific national factors, meaning we cannot rule out the possibility of a more drastic adjustment, particularly if foreign benchmark property markets take a turn for the worse (United Kingdom, United States).

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NOTES

- (1) By way of comparison, French house-price inflation (also strong, just less so) was 10.1% over the same period.
- (2) "Structural factors in the EU housing market", European Central Bank, 2003.
- (3) "Assessing price development in the Euro area", European Central Bank, Monthly Bulletin, February 2006.
- (4) "Banks and savings banks turn their back on the recommendations of the Bank of Spain governor", Les Echos, 11 January 2006.
- (5) Calculations made after neutralising securitised lines.
- (6) The specification used by the OECD in its study is based on a suggestion by Meen (2002), which set a positive correlation between real house prices and disposable household income, and a negative correlation between real house prices, the supply of houses and real interest rates. The supply of homes is measured using a variable of the physical stock of homes according to the Bank of Spain. Incorporating this supply variable into the error correction model removes a negative bias on the elasticity of house prices to demand, while a wider supply encourages the expression of demand.
I.e. $Dln(\text{real house prices}) = f(Dln(\text{real disposable income}), Dln(\text{population}), Dln(\text{stock of homes}))$.
- see Meen G. (2002): "The time-series behaviour of house prices: a transatlantic divide?", Journal of housing economics, n° 11, Elsevier, March.
- (7) In particular, the reform reduced the percentage sold to local authorities from 15% to 10%.
- (8) Notas de prensa – Instituto Nacional de Estadística – 1 February 2006 – Datos provisionales.
- (9) Most loans are variable rate in the United Kingdom, Italy, Greece, Finland, Portugal and Ireland. There is a majority of fixed-rate loans in the United States, Germany, France and the Netherlands.
- (10) Estadística Registral Inmobiliaria, informe trimestral de coyuntura, Q3 2005.
- (11) According to Tinsa, two thirds of demand for homes – i.e. around 350,000 – comes from the occupiers, while pure investors accounted for 150,000 new homes in 2002.
- (12) Bank of Spain, Annual report 2004, p. 38-39. The same specifications suggest house prices were overvalued by between 8% and 20% in mid-2002 (Cf. Ayuso, Martínez, Maza and Restoy (2003), "House prices in Spain", Economic Bulletin, Bank of Spain, October).
- (13) The opportunity cost denotes the cost of fore going the most valuable alternative investment. It depends on other investment and financing possibilities.
- (14) The use cost of a home is measured as the difference between the nominal interest rate and the expected change in house prices, which we assume to be equal to the last rate observed.
- (15) Co integración relations:
 $\log(\text{ph}) = 2,78 \times \log(y) + \text{constant}$ (unrestricted elasticity model)
 $\log(\text{ph}) = \log(y) - 4,5 \times I + \text{constant}$ (restricted elasticity model)
where: ph = houses prices in real term; y = real household income/population aged over 25; I = Nominal interest rate on bank loans for house purchases.
- (16) The Bank of Spain had already used the financial approach. "House prices and rents: an equilibrium asset pricing approach", Documento de Trabajo n° 304, Ayuso J. and Restoy F., Banco de España 2003.
- (17) Core inflation is a good indicator of future long-term inflation (J. Smith "Inflation targeting and core inflation", Canadian Journal of Economics, August 2005) and is a better base for determining expectations than the global HICP as it is less volatile (see J-S Messonnier et J-P Renne, "The Taylor rule and monetary policy in the eurozone", study notes and research, Banque de France, October 2004).
- (18) This calculation of the debt rate includes mortgages, consumer loans and other forms of assistance.
- (19) "Housing finance in the global financial market", CGFS Papers N° 26, Bank for International Settlements, January 2006.
- (20) Martínez-Carrascal C., de Río A. (2004), "Household Borrowing and Consumption in Spain", Documentos de Trabajo N° 0421, Bank of Spain. These results are obtained from an error correction vector model tested over the 1984-2003 period using quarterly data. The equilibrium level of real household debt over the long term is determined by consumer spending (indicator of permanent income), the value of household assets in held in property and the nominal cost of credit.
- (21) Molina, J.L. and Restoy F. (2004): "Recent trends in corporate and household balance sheets in Spain: macroeconomic implications", Occasional Paper, n°0402, Bank of Spain, Madrid.
- (22) Pareja M. and San Martín I. (2003): "El sistema de vivienda en España", Situación inmobiliaria, Banco Bilbao Vizcaya Argentaria, Bilbao, October.
- (23) Farré L. and Raymond J.L. (2002), "Riqueza y ahorro", Cuadernos de Información Económica, n° 170, Fundación de las Cajas de Ahorros Confederadas, Madrid, September/October.
- (24) Marques, J.M. and Nieto F. (2003): "Aprovechan los hogares la revalorización de su riqueza inmobiliaria para financiar un aumento del consumo?", Economic Bulletin, Bank of Spain, Madrid, March.
- (25) See Risk and Funding in European Residential Mortgages, Mercer Oliver Wyman, April 2005.
- (26) Market share is calculated on the basis of outstanding at 30 September 2005. Source: Bank of Spain.
- (27) See BRI, CGFS Paper n° 26, "Housing finance in the global financial market", January 2006.

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