BBVA Research

United States

Real Estate Outlook

Fourth Quarter 2010

Economic Analysis

- Residential sales and prices are stabilizing.
- Commercial real estate will bottom out in 2011.
- Mortgage deleveraging will continue throughout 2011.
- The quality of the mortgage portfolio is improving.

BBVA Compass

Index

Closing date: December 6th 2010

Editorial

According to the latest data, in 3Q10 the ratio of private capital investment in real estate to Gross Domestic Product reached 4.8%, the lowest level since WWII. This implies a drop of 4.4 percentage points from the most recent peak in 2006 and is equivalent to more than half a trillion dollars. The fact that this meltdown sent the economy into its worst recession since the Great Depression reflects on the one hand, the high level of leverage and on the other hand, the lack of sustainable economic fundamentals behind the real estate boom. Low personal saving, low borrowing costs, home equity extraction, weak lending standards and more contributed to the crisis. During the pre-crisis years, private investment in real estate accounted for more than 50% of gross private investment. This strategy seems at odds with high and sustainable growth rates, considering that non-real estate investment tends to have higher productivity rates. Thus, as we move into 2011, it is important to assure that the economy returns to self-sustained private led recovery by investing in the most productive and efficient sectors. The wealth generation process will create positive conditions for the recovery of the real estate market and opportunities for families and homebuyers.

Still, the upturn will take time. Recent trends in the residential market suggest that revitalization is occurring at a slower pace than previously expected. Home buyers remain cautious in an environment of weak job creation and high unemployment. In fact, existing and new home sales have been weaker in the second half of 2010 following the expiration of the Homebuyer Tax Credit. Moreover, despite ongoing economic growth, Federal Reserve's 4Q10 Senior Loan Officer Opinion Survey on Bank Lending Practices indicated that institutions tightened their lending standards for both prime and nontraditional mortgages. Nonetheless, housing activity remained stronger than a year ago while home prices, which have declined for almost four years, appear to have reached bottom. These trends support our baseline scenario for ongoing improvements in 2011, although risks remain tilted to the downside.

In the commercial real estate market conditions continue to deteriorate as the adjustment process has not bottomed out. Vacancy rates remain elevated while both rents and prices continue declining. However, the expected recovery could happen sooner than expected and, we anticipate clearer signs of stabilization in 20011. These trends will be more evident in the apartment segment, as most of the new housing demand has shifted toward rental properties. In the office segment, the recovery is likely to take longer, considering the large excess capacity left by more than 7 million job losses and the slow pace of job creation.

Real estate prices are likely to benefit from the second round of monetary stimulus (QE2) recently announced by the Federal Reserve. In order for this to happen, QE2 must be effective in two key issues: keeping borrowing costs low and revamping secondary markets such as MBS, CMBS, ABS, etc. Lower borrowing costs are positively correlated with home prices and household wealth. If QE2 manages to keep interest rates low and provide solid ground for a recovery in home prices, the improvement in household wealth could in turn generate higher private consumption. However, while QE2 may lower interest rates by affecting the risk premium component, it may also end up generating higher inflation expectations and on net, higher interest rates. In addition, displacing investment out of Treasuries into other securities may not necessarily mean that secondary markets will come to life, if instead investors shift their positions to markets abroad. Thus, our baseline scenario continues to assume a slow recovery process reflecting weak fundamentals. If temporary monetary stimulus proves effective, the pace of this recovery will accelerate somewhat.

We hope that you, our readers, will find this publication useful and valuable.

Sincerely,
Nathaniel Karp
BBVA U.S. Chief Economist

The U.S. economy will slow down

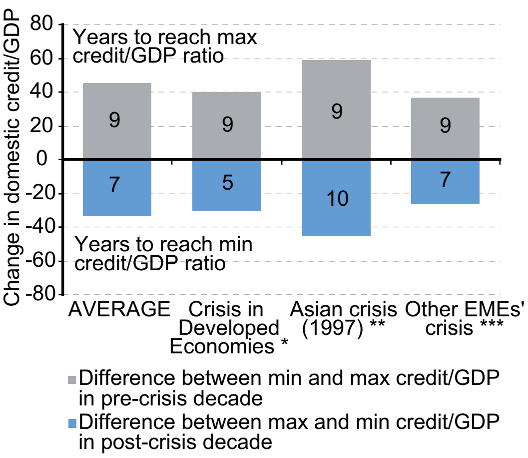
The U.S. economy will slow down as expected, due to ongoing household deleveraging and high unemployment

Strong growth in the U.S. at the beginning of 2010 has lost momentum through the second and third quarters of 2010. The Bureau of Economic Analysis (BEA) advance release estimated that the U.S. economy grew 2.0% (Q-o-Q, annualized) in 3Q10 and recent economic trends indicate that the pace of the recovery remains weak. In our view the current U.S. slowdown is likely to be nothing more than a pause in the pace of gradual recovery. We continue to forecast a moderate recovery due to an underlying deleveraging process that is restraining consumption growth, weak labor markets that are hindering income and employment growth and regulatory and demand uncertainty that is affecting investment. Our baseline scenario assumes the U.S. economy will grow at annual rates of 2.7% and 2.3% in 2010 and 2011, respectively.

The main contributors to GDP growth in 3Q10 were inventory re-stocking, nonresidential investment and personal consumption expenditures (PCE). PCE grew 2.6% in 3Q10 beating market expectations. Although this is the highest increase since 4Q06, PCE growth is expected to remain subdued due to the ongoing deleverage process, high unemployment and tight credit markets. Weak real personal income growth in 3Q10 also implies that the recent increase in PCE is unsustainable and points toward slower growth ahead. Therefore, we expect personal consumption to increase 1.8% in 2011, which is relatively weak compared to previous recovery periods.

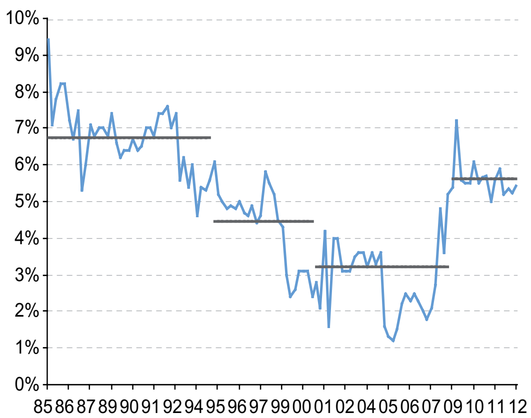
The loss of momentum in private demand is clearly the result of an ongoing household deleveraging process and a weak labor market. Although the deleveraging process evolves broadly in line with expectations, past U.S. and international experiences suggest that it takes a while to unwind previous debt increases (an average of 7 years) and credit ratios tend to drop as much as the fast increase previous to a financial crisis. This is surely longer and deeper than what has been experienced so far. The reduction in debt levels, together with reduced household wealth, weak labor income and increased uncertainty will imply higher saving rates than those observed since the second half of the 1990s Even though this goes in the right direction for the rebalancing of the U.S. growth model, it increases cyclical concerns since consumption (one of the pillars of recovery in past recessions) will remain muted and only partially compensated by stronger investment in equipment by firms and stronger exports.

Chart 1
Domestic bank credit/GDP 10 years before and after severe financial crisis



Source: BBVA Research based on Reinhart and Reinhart (2010)

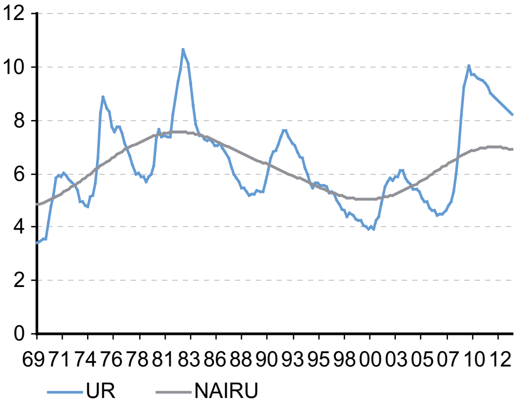
Chart 2
U.S.: Saving rate. (%)



Source: BBVA Research

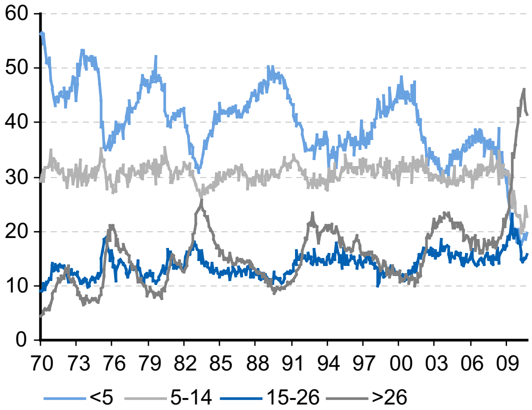
Another factor determining a slow exit from the recession in its own right is the poor performance of the labor market, with weak job creation and a high unemployment rate. The intense debate inside the Fed about what part of the increase in unemployment is structural and which part is due to weak demand highlights the uncertainty surrounding measures of structural unemployment. A number of elements point to an increase in structural unemployment of about 1.5 percentage points relative to pre-crisis levels. First, high long-term unemployment erodes labor skills and rapidly adds to structural unemployment. Second, labor relocation currently is slow given skill and geographical mismatches and the structural change underway in the U.S. economy. Finally, geographical mobility is currently impaired by the weak housing market, which makes it difficult for homeowners to sell their house and relocate, especially if they have negative housing equity. In any case, the cyclical component of unemployment is still very high compared with previous recessions and expected to remain so for quite some time, justifying policies to prop-up aggregate demand if there is space to do so.

Chart 3
Unemployment rate. (%)



Souce: Bureau of Labor Statistics and BBVA Research

Chart 4
Unemployment duration in weeks (% of those unemployed)



Source: Bureau of Labor Statistics

A double dip in U.S. economic activity is highly unlikely

As noted before, the labor market is a sign that aggregate demand is still very weak in the U.S., and the pace of recovery will still be dependent on the room for further policy measures. On the fiscal front, there is not much left to spend from ARRA stimulus and it is unlikely to be extended, as room for further fiscal policy is scant. However, the Fed has become more worried about both activity and deflation risks and pressure to react has increased significantly, as the cost of such scenario is perceived as "unacceptable". As the pace of recovery in output and employment has slowed in recent months, household spending remains constrained and inflation continues to come out lower than originally expected, the Fed embarked on further quantitative easing measures that will keep interest rates low and help sustain private sector demand.

On the other hand, the rebound of external demand and the recovery of the automobile sector have supported a widespread recovery of industrial activity and investment in equipment and software. In this environment, companies carried out mass layoffs that allowed them to increase productivity, reduce labor costs and, defend margins and profits. As sales prospects improve and regulatory uncertainties diminish, private investment will provide support for aggregate demand.

All in all, the drags on consumption and the low probability of further fiscal stimulus –partially outweighed by stronger investment– imply an exit from the crisis in the U.S. at a pace much lower than in previous cycles. But the possibility of a double dip in the U.S. is highly unlikely. Our models indicate a very low probability of a double-dip recession, although our monthly activity indices and models suggest below-par growth for several more quarters. However, we still foresee positive growth in the second half of 2010 (for a yearly growth of 2.7%). From 2011 onwards we project a gradual recovery with a slowdown to 2.3% in 2011 in the context of subdued inflation.

In any case, the lack of strength of domestic demand will induce the U.S. more and more to press the rest of the world (especially countries with a current account surplus) to increase their demand and contribute to the necessary global rebalancing. The renewed monetary expansion in the U.S. can be interpreted in this context as one way to force part of this adjustment onto the rest of the world.

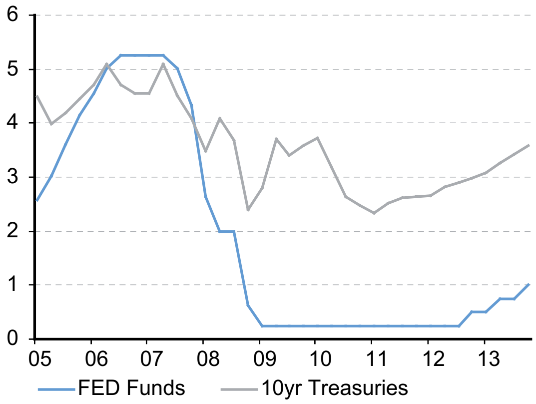
Inflation has surprised the market to the downside in 2010, and has thus heightened the risks of further disinflation (lower but positive inflation). So far, increases in non-shelter prices have compensated the disinflation in shelter prices and have thus contained the risk of deflation (negative inflation). Shelter prices, however, appear to be stabilizing, which should further ease deflationary pressures. Additionally, labor markets remain weak. The current slow pace of economic recovery is limiting large-scale job creation; therefore, the unemployment rate has decreased only 0.1pp in 3Q10 to 9.6% and is likely to remain elevated in 2011. High long term unemployment, weak construction activity and restricted labor mobility heighten concerns about the U.S. labor market. In this environment, inflationary pressures remain contained, and we expect inflation to remain low but positive throughout 2010 and 2011.

A new bout of Quantitative Easing (QE2) in the U.S.

Taken as a whole, the disinflationary trends, low capacity utilization, high unemployment and slower-than-expected growth have raised warning flags at the Federal Reserve. The Fed perceives current conditions as “unacceptable” and therefore, in its November meeting, announced a second round of quantitative easing (QE2). The Fed expects to purchase around $600 billion of longer-term Treasuries (a pace of $75 billion per month) and to continue to reinvest $35 billion of principal payments from agency debt and mortgage-backed securities every month. Thus, total Treasury purchases will reach around $900 billion ($110 billion per month) by the end of 2Q11.

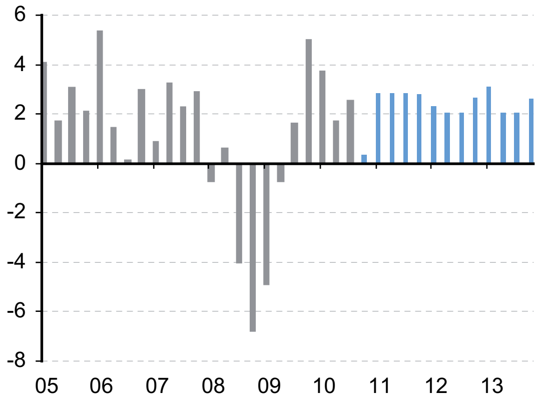
The total impact of QE2, however, is not certain. The success of QE2 will depend on the flow of investments into riskier assets with higher returns from safe havens. In an ideal scenario, this shift would generate higher lending which eases deflationary risks and supports real estate prices and consumption growth. This approach, however, risks generating another asset bubble and/or competitive currency devaluation. Public statements by FOMC members indicate that a majority view the benefits of QE2 as higher than potential costs. These members believe that cyclical influences dominate any structural changes and thus they argue that further monetary easing can stimulate the recovery. In our current baseline scenario, we do not expect the Fed to raise the federal funds target rate until late 2012.

Chart 5
Interest rates (%)



Source: Federal Reserve and BBVA Research

Chart 6
GDP forecast. YoY change (%)



Source: Bureau of Economic Analysis and BBVA Research

Residential sales and prices are stabilizing

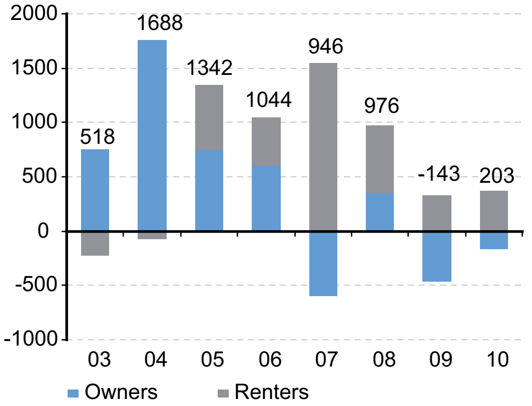
The economic recession has created incentives for principal residence rental as a form of occupancy. Ownership will continue to lose relative importance until the economy recovers strongly and the financial system is restructured and overcomes its current difficulties

In 1994-2004, primary residence ownership increased by 5% to a high of 69%. Beginning in 2004, rising interest rates and high housing prices led to a change in this trend in favor of the growing use of rental of the principal residence. With the arrival of the economic recession in 2008, this trend in favor of rental became more accentuated. Since then, the factors most affecting the choice families have between ownership and rental have been the major crisis in the residential market, the instability of the labor market including the significant increase in unemployment and the gradual toughening of mortgage lending conditions. As a result, the percentage of owner-occupied homes from 2Q10 fell below 67% for the first time since 1999. This figure is 2 points below the high in 2004, although it is still two points above the average for the last 45 years.

From the beginning of the recession at the end of 4Q07 to the end of 3Q10, the total number of occupied homes increased by one million units to a total of 112 million, according to the latest data published by the Census Bureau. This increase in the number of occupied homes has basically been in the segment of rented homes, which over the same period increased by more than 1.3 million units to a total of 37 million. The number of owner-occupied homes fell during this period by 300,000 units to right around 75 million at the end of June 2010.

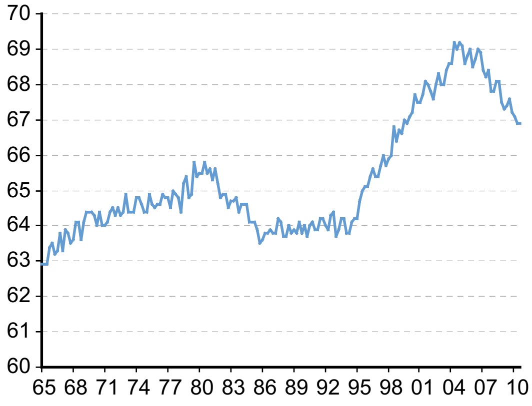
Although it is expected that the number of homes will increase at a rate of around 1.1% over the coming years, the high levels of unemployment and problems in the financial system suggest that ownership as a form of occupancy will continue to lose relative weight in the total of occupied homes until the economic recovery is consolidated and the financial system overcomes its current difficulties.

Chart 7
Occupied houses. yearly variation. number ('000)



Source: Census Bureau and BBVA Research

Chart 8
Homeownership ratio (%)



Source: Census Bureau

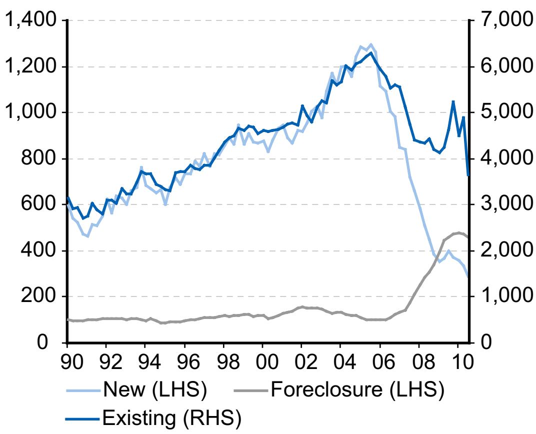
Throughout 2010, the growing number of home auctions and the major adjustment in housing prices resulted in sales being clearly differentiated by segment: while sales of existing homes increased, new home sales continued to moderate

In the first ten months of 2010, seasonally adjusted data for home sales stood at a monthly average of 455,000 units, an increase of 1.4% compared to the first ten months of 2009. By segment, 427,700 homes were in the existing-home segment (an increase of 2.6% compared to 2009) and 27,800 were in the new-construction segment (a year-over-year (YoY) decrease of 14.2%). The end of tax incentives in April and the fall in the cost of home purchase as a proportion of average household income were the two elements that supported increased demand.

The difference in sales between the two segments has its origin in three factors: first, the frequent auctions of foreclosed homes, which are mainly existing homes and concentrated in those states with the highest rate of foreclosures in the country (CA, FL, NY and AZ.) In fact, the sale of homes whose owners had defaulted on payments or that are in the process of foreclosure accounted for more than a quarter of all sales in some months in 2010, according to data from the National Association of Realtors (NAR). The second factor is related to the greater price adjustment in the segment of existing housing, which has led to the cost of these types of homes to fall quicker than that of new homes and thus attracted a greater proportion of demand. Currently the average price of an existing home is 80% of a new one, 10% below the rate in the boom years. Finally, the housing affordability rates have improved more in the existing home segment than in new homes, and thus biased demand towards the former.

Chart 9

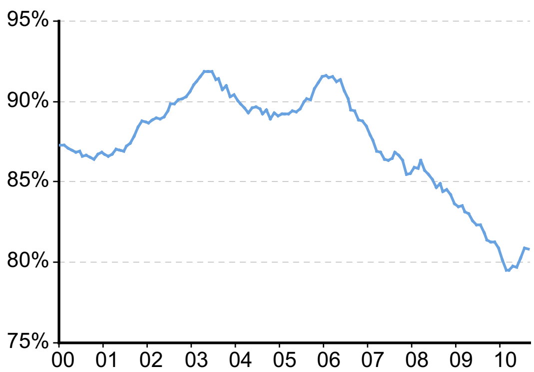
Housing sales and foreclosure ratio. Thousands of units and Index 1Q1990=100



Source: NAR, Census Bureau, MBA and BBVA Research

Chart 10

Existing/New average housing price ratio. (%)

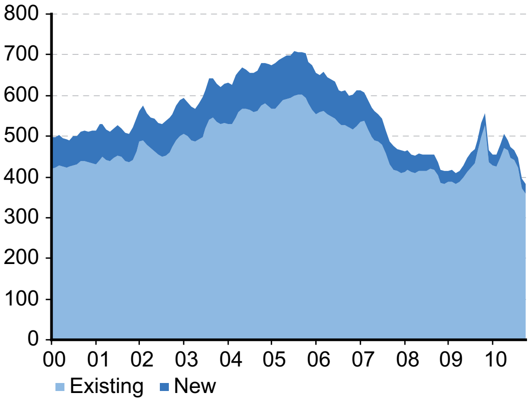


Source: BBVA Research

Moreover, the end of the tax stimuli in 2Q10 led to a decrease in sales throughout the third quarter of the year in both new and existing homes. In fact, in 3Q10 total sales fell by 30% in YoY terms to just over 4.4 million homes as an annualized figure. However, this one-off fall in sales does not mean that the trend will change. Since 2009, the indicator has been pointing to a steady growth in demand throughout 2010 that will also continue in 2011. The increase in demand will likely be oriented towards the existing-home market, for the reasons given above, while the demand for new homes will remain at the current low levels.

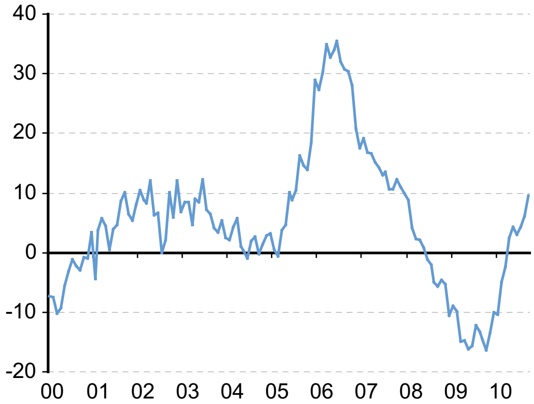
In addition, the improvement in the market in 1H10 provided significant incentive for the entry of existing homes to the market and increased the inventory of these homes to nearly 4.0 million units at the end of September. In the case of new homes, the figure continued at historical lows. As a result, the total supply of available homes was around 4.25 million units, an excess in supply over the historical average of around 2.2 million units. The increase in the number of homes for sale will put added pressure on residential prices and will restrict housing construction in the short and medium term.

Chart 11
Monthly housing sales. units (000's) seasonally adjusted



Source: NAR, Census Bureau and BBVA Research

Chart 12
Housing for sale: Inventory. YoY % change



Source: Census Bureau, NAR and BBVA Research

Home prices are stabilizing and the trend indicates that over the coming quarters there will be increases, although below the level of inflation

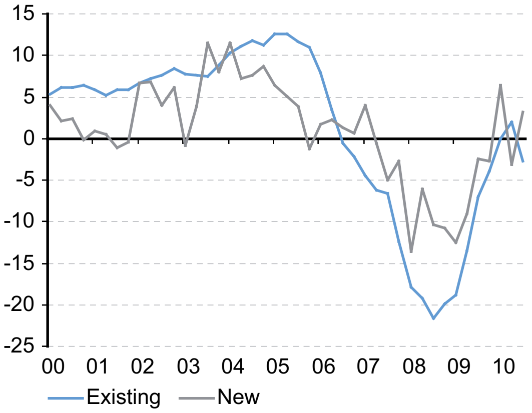
The slowdown in demand in the third quarter of 2010 led to a slight decline of residential prices. In fact, practically all the housing price indicators showed a more negative trend in most markets than in previous quarters. For the segment of existing homes, the Standard & Poors (S&P) indices showed YoY increases in prices of around 0.5% (one percentage point below previous quarter), while those prepared by the Federal Housing Financing Agency (FHFA) showed a decrease of 3.4%,(one and a half point above 2Q10) not only for the purchase index but also for the purchase and refinance index.

An analysis of home prices in real terms (allowing for inflation) reveals that at the end of 3Q10 new homes had gained by 3.2% in YoY terms, while existing homes had lost 2.7%. Prices of new homes have been more volatile than that those of existing homes. This is due to two factors: the weakness of demand for these homes and the greater cost restrictions which new residential developments are subjected to.

In any event, since the beginning of 2007, residential prices have been conditioned to some extent by the auctions of foreclosed homes. This is unavoidable, given the growing importance of these auctions as the residential market entered into deeper crisis. The recovery in 2010 has also been influenced by the same phenomenon. In fact, an analysis of the price indices prepared by CoreLogic (which give home prices both including and excluding foreclosed and auctioned homes) reveals that, excluding auctions, price movements have been more moderate. In fact, at the end of 3Q10, the price index of all homes declined at a YoY rate of 2.7%, while the index excluding auctioned homes was relatively stable, with a YoY decrease of 0.8%.

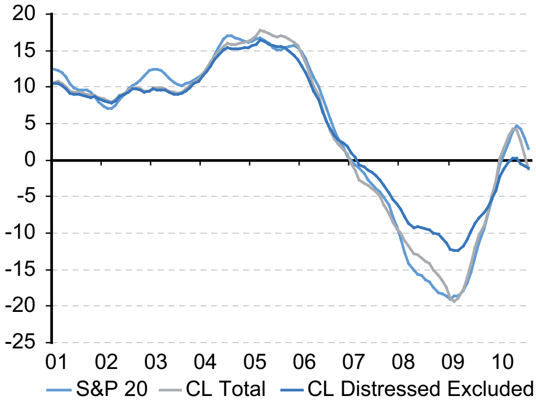
Forecasts for 4Q10 indicate that prices will remain stable at current levels and there will be no upturn until 2011, though they will remain below the rate of inflation. This forecast for residential prices is not without its risks: first, the increase over the first half of the year in the inventory of homes for sale has introduced an element of uncertainty in the market. If this continues in the coming quarters, it will lead to a new price adjustment. In addition, the weak labor market could be a drag on recovery in the residential market in terms of transactions and prices. In general, years in which unemployment has been above average have also been years in which housing prices have grown below average in real terms.

Chart 13
Housing prices (real terms). YoY % change



Source: S&P, Census Bureau and BBVA Research

Chart 14
Housing prices. YoY % change



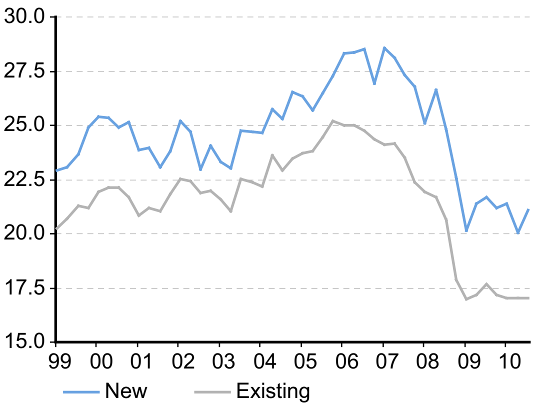
Source: S&P, CoreLogic (CL) and BBVA Research

Housing affordability rates are currently at their best levels since the 1970s, in regards to both the cost of access to housing and the capacity to pay

Throughout 2010, housing affordability rates have improved for both new and existing homes. Increased household incomes and the steady decline in interest rates have led to affordability rates now being at their most attractive levels since the statistical series have been prepared.

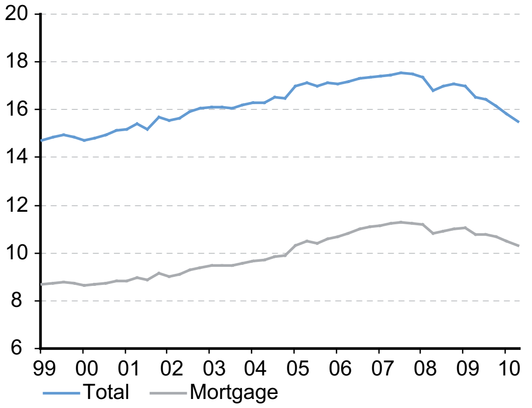
If we consider the monthly cost of paying a mortgage in relation to average household income [1], we see that in 3Q10 this ratio was 21.1% for new homes and 17.1% for existing homes. These ratios represent a fall of 0.6 and 0.7 basis points, respectively, compared with those a year earlier. The ratio has fallen by 7.5 and 8.1 basis points from its highs in this decade. This effect can also be seen in the falling costs of servicing debt, calculated as the ratio between mortgage interest payments by households and their income.

Chart 15
Housing affordability. Mortgage payments / household income (%)



Source: BBVA Research

Chart 16
Homeowner debt service. As % of disposable personal income

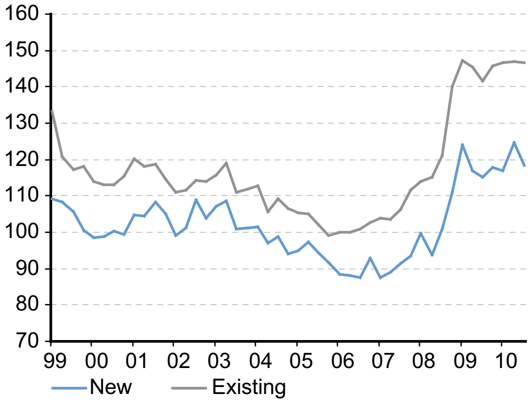


Source: Federal Reserve

The financial capacity of households[2] has also improved in the first three quarters of 2010. In fact, in September 2010, the financial capacity of households was equivalent to 1.18 times the average price of a new home and 1.47 times that of an existing home. These ratios are 0.03 and 0.01 points, respectively, above those a year ago and 0.30 and 0.47 points above their lowest points in this decade. However, the improvement in household borrowing capacity will take time to fully effect residential demand, given the current credit restrictions for mortgage lending.

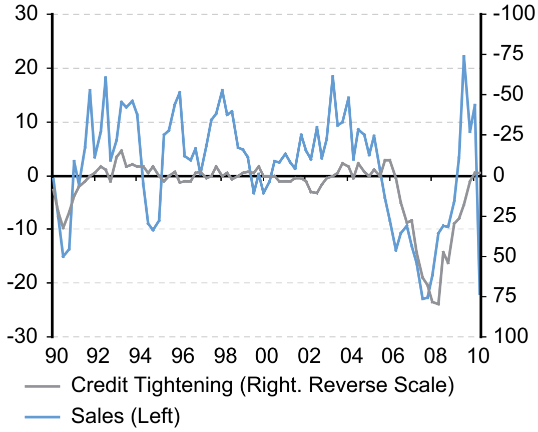
1: This indicator has been constructed by estimating the monthly cost of the mortgage at market conditions in terms of interest rates and repayment periods, for the purchase of an average home and average household income.
2: We measure the financial capacity of households as the borrowing power of the average household in the current mortgage conditions related to housing prices

Chart 17
Housing affordability. Borrowing capacity / house prices



Source: BBVA Research

Chart 18
Housing sales and credit tightening. YoY change (%). % Answer



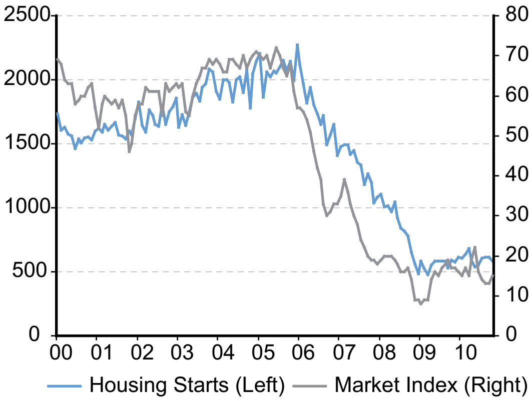
Source: Census, NAR, Federal Reserve and BBVA Research

If there is to be a substantial improvement in the construction of new homes, there must be a boost to sales, fewer foreclosures and continuing price stability

In the first eight months of 2010, the number of single-family home starts averaged 488,000 units, an increase of 17% on the average for the same period in 2009, according to data published by the Census. In the case of multi-family homes, the January-August average fell by 13.8% in YoY terms to 112,000 units. In total, the number of home starts increased by 9.7% in YoY terms. This improvement in home construction has been boosted by demand, as mentioned above. However, in monthly terms, home starts have slowed significantly since April, with the end of the tax incentives for home purchase. Advance indicators for the segment, such as the number of permits for housing projects, or expectations of future sales by the National Association of Home Builders (NAHB) suggest that this slowdown will continue in the last months of the year.

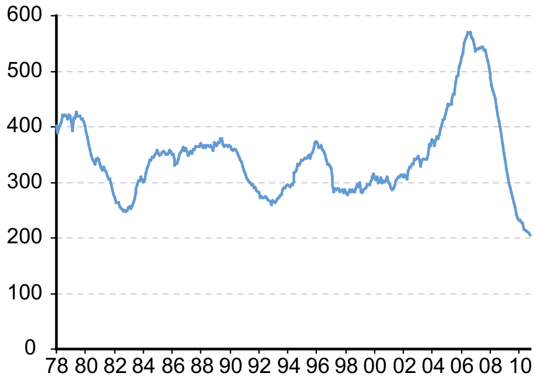
The inventory of new homes for sale was just over 206,000 units in August, a YoY decrease of more than 21%. This volume of supply is at its lowest level ever in the current series. Although there are risks in the short term, the expected increase in demand, the fall in the number of foreclosures and greater residential price stability will help the sector to recover in the medium and long term. In any event, given the high volume of existing homes for sale, the recovery in residential investment will be less marked than in previous occasions.

Chart 19
Housing starts and market index. Units (000) and index



Source: Census, NAR and NAHB

Chart 20
New homes for sale. Thousands



Source: Census Bureau

Housing demand: the process of household formation

In 2010, the population of the United States will reach around 309.5 million, grouped together in about 112.2 million households, with approximately 131 million homes, according to initial estimates based on the data published by the Census Bureau. Of the total housing inventory, just over 112 million units are occupied, while 18 million are empty, used only seasonally or available for sale or rental. Two phenomena have characterized the demographic changes of the last thirty years from the historical point of view: first, the average size of households has remained relatively stable, at around 2.6-2.8 members. And the second has been the steady increase in consumption of square meters of housing per capita. Its average has increased from just over 47 square meters in 1970 to around 81 square meters in 2010. This increase in per capita housing consumption is consistent with the superior nature of housing as goods and the increase in real per-capita income in recent decades.

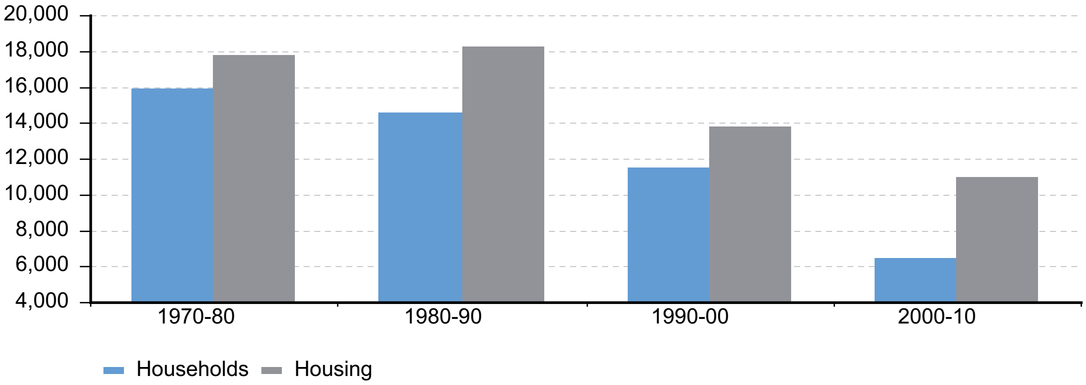
As can be seen from the Census figures, the increase in housing inventory and the process of household formation are closely related, and, in the long term, show very similar rates of growth. In fact, in the 1970s, the number of households and the number of homes both increased by 25%, while in the 1980s this growth fell to 18% in the case of households and 20% in the case of homes. In the 1990s, the number of households grew by 12% and that of homes by 13%. However, in the current decade, while the number of households increased by 6%, the rate of growth in the number of existing homes was 9%. In total, in the last decade the number of households increased by around 6.5 million units, while that of homes increased by 11 million units. This gives us an initial idea of the residential oversupply that has been accumulated in recent years.

Table 1
Population, households and housing

	Population (000's)	Households (000's)	Housing (000's)	People/HH	Housing Sf/capita
1970	204,982	63,692	70,283	3.2	516
1980	227,622	79,637	88,060	2.9	609
1990	250,047	94,224	106,328	2.7	784
2000	282,310	105,721	120,144	2.7	849
2010*	309,500	112,233	131,158	2.8	884

Estimation BBVA Research based on latest data available
Source: Census and BBVA Research

Chart 21
Households and housing net growth 1970-2010. Decade variation (000's)



Source: Census Bureau and BBVA Research

The process of household formation, which is extremely important in gauging potential real-estate demand, and the situation of the labor market are closely linked in two relevant aspects: young people moving out of their family homes and the entry of immigrants. With regard to the first of these, a delay in the age at which young people leave home due to lack of labor prospects means a delay in the demand for homes; in contrast, a major improvement in the employment situation stimulates young people to move out and anticipates their entry into the real-estate market.

The capacity to generate employment in the coming years will also condition the entry of immigrants. This phenomenon will directly affect the process of household formation: when the economy grows above its potential, immigration grows, and vice versa. In fact, in the last ten years, immigration has accounted for half of the demographic growth in the country, according to Census data.

Household formation: the "head of household" model

This estimate of the number of households that will be formed in the U.S. from 2011-2020 uses the age structure of the population in 2009 and calculates the "head of household" rate based on the number of households that year, in relation to the total population, for each age group. This rate is applied to the Census population forecasts for 2010-2020. In this way, we obtain the number of households in each year until 2020 for each age group.

If:

Ti = ni/Ni

Where:

Ti = Head of household rate

ni = Number of heads of household

Ni = Total population

The subscript "i" refers to age. The interval of ages under consideration ranges from 15 to 85, with the heads of household under 15 years of age and those over 85 years of age grouped into the first and last rate, respectively. The head of household rate basically reflects the process of forming household units resulting from matrimonial unions, separations and divorces and the set of single mothers. Married couples represent a significant proportion of potential new households.

The head of household rate for each population group and different moments in time, multiplied by the number of inhabitants, gives the number of households associated with a particular age group:

Nit x Ti = nit / Hit

where the subscript "i" refers to the age of the population and "t" refers to the reference year.

In other words, the head of household rates (Ti) applied to the population of each year classified by ages (Nit) gives the number of heads of household (nit) in year "t" belonging to the "ith" cohort, and thus the number of households that may be projected for this segment of the population in the corresponding year (Hit). This procedure allows us to analyze the number of households existing in a particular period.

The change in the number of households is the result of applying the corresponding head of household rate to the changes in population within each age group. Changes in population and variation in age structure are key variables for the analysis of potential demand for housing due to demographic reasons.

Table 2 shows the head of household rates by age cohorts, using data from the America's Families and Living Arrangements survey of 2009. In that year, 48.8% of the total population was heads of household: 50.7% of men and 47.1% of women. Moving up the age pyramid, the proportion of heads of household increases, with its highest levels in the 60-plus age group. The biggest growth in new households can be seen (as is to be expected) in the group of young people aged between 20 and 34.

Table 2

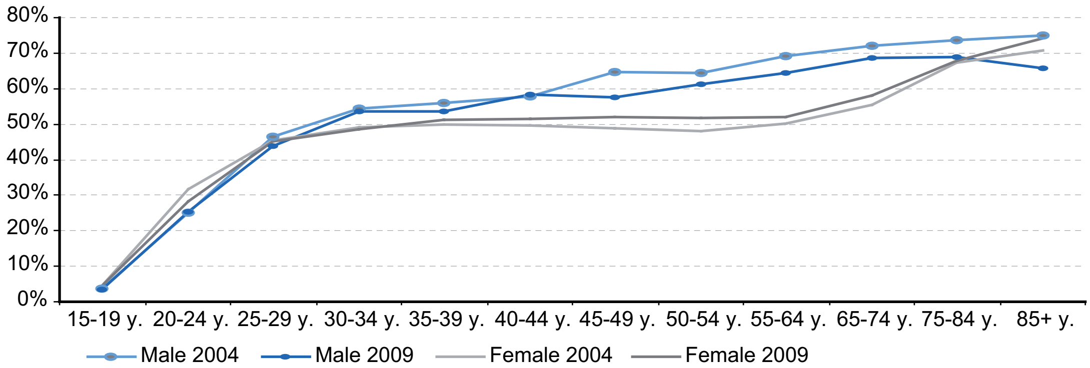
Ratios. 2009

	Total	Male	Female
Total	**48.8%**	**50.7%**	**47.1%**
15-19 Years	4.0%	3.4%	4.6%
20-24 Years	26.8%	25.4%	28.1%
25-29 Years	44.6%	43.9%	45.2%
30-34 Years	51.1%	53.5%	48.7%
35-39 Years	52.4%	53.7%	51.1%
40-44 Years	54.9%	58.4%	51.5%
45-49 Years	54.8%	57.5%	52.1%
50-54 Years	56.3%	61.2%	51.7%
55-64 Years	58.0%	64.5%	52.0%
65-74 Years	62.9%	68.7%	58.0%
75-84 Years	68.2%	68.9%	67.8%
85+ Years	71.4%	65.8%	74.3%

Source: Census Bureau and BBVA Research

Chart 22

Ratios. Male, female 2004-2009



Source: Census Bureau and BBVA Research

An important limitation of this exercise is the use of constant head of household rates for the whole period under analysis (we used the ratios corresponding to 2009). To mitigate this limitation, we can assume a dynamic head of household rate, which will change in the same direction and the same intensity as in the last decade. In this case the results obtained will magnify the phenomenon of household creation estimated under the fixed-rate model. Despite this limitation, this exercise applies head of household rates corresponding to 2009 for the whole period, given the uncertainty regarding whether they will vary in the future.

Results of the model

Based on the age structure in 2009, the Census population growth projections and the assumption that immigration will be similar to the annual average for this decade (estimated at around one million people), the results of the model indicate that over the coming years there will be a net increase of more than 1.26 million new households per year on average. Of this figure, 0.84 million households will come from the currently resident population and 0.42 million from new immigrants. With lower immigration assumptions (500,000 immigrants/year), the net increase in the number of households is reduced to just over one million on average during the period under analysis, of which 200,000 are from the immigrant population.

In the period under analysis, with the assumptions mentioned above, we see that while the population will increase at an annual rate of 0.8%, the rate of increase of households will be slightly above this, at an estimated 1.1%.

Table 3

Population and households. 2010-2020

(Million)	Total Population	Total Households	Households Net Flow	Residents	Inmigrants
2010	309.5	112.2	1.10	0.73	0.37
2011	311.7	113.3	1.10	0.72	0.38
2012	313.9	114.4	1.11	0.73	0.38
2013	316.6	115.5	1.40	0.98	0.42
2014	319.3	116.9	1.39	0.96	0.43
2015	322.1	118.3	1.40	0.96	0.43
2016	324.7	119.7	1.33	0.89	0.44
2017	327.4	121.0	1.30	0.86	0.44
2018	330.0	122.3	1.28	0.83	0.45
2019	332.6	123.6	1.25	0.79	0.46
2020	334.6	124.9	1.24	0.79	0.44
	Y/Y % Growth	**Y/Y % Growth**	**(Million)**	**(Million)**	**(Million)**
Average	**0.8**	**1.1**	**1.26**	**0.84**	**0.42**

Source: BBVA Research

With regard to demand for housing, the household formation data suggest, in simplified terms, two basic implications. The first is that although the level of new household formation we expect over the coming years will be below that currently registered, it will still continue to be significant. The second, which is linked to the first, is that any deviation from the core household formation scenario will be basically determined by the economy's level of stability and potential growth.

The development of the labor market and conditions for mortgage finance are therefore important, as they determine whether more or less pressure is put on the real estate market at any particular time, and thus affect the expectations of economic agents, which can lead to significant changes in the conditions of demand. Thus greater optimism about the ease of finding a job, job stability and possibilities of future improvement in an environment of easy access to finance increases the likelihood that households will purchase a home. Similar reasoning can be applied to immigration: to the extent that positive job creation expectations are maintained, the attractiveness of coming to the U.S. to work will not change.

Positive signals in commercial real estate

The commercial real estate (CRE) market is showing some positive signs in the second half of 2010, despite weak demand-vacancy ratios have stabilized, effective rents are bottoming out and rental returns are already positive with respect to current prices. Falling yields on long-term bonds will also increase the attractiveness of investment in CRE. The steady improvement of employment and increased household consumption are other elements that support the sector.

However, there remains a high level of excess CRE supply and prices have not bottomed out. The weak economic recovery also suggests that there will be no increased investment in CRE until 2012. In fact, data from the National Accounts showed a renewed fall in investment in CRE in 3Q10 of nearly 12% in Y-o-Y terms. In the first three quarters of 2010, investment in CRE fell by a third compared with the investment level in 2008, when it reached a high for the decade.

The deterioration in the commercial real estate segment is slowing-vacancy ratios and effective rents are stabilizing in offices and commercial property and improving in rented apartments

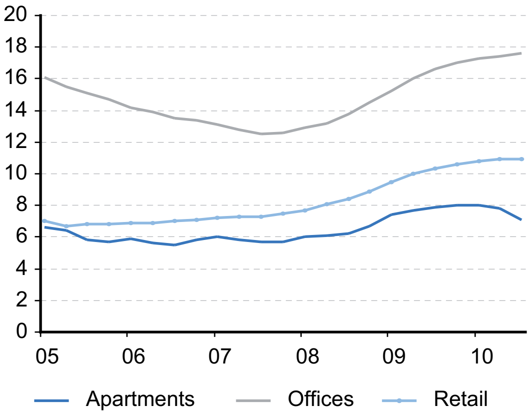
The incipient improvement in employment is stabilizing the vacancy ratio in productive spaces. A total of nearly 1.1 million non-agricultural jobs were created in the first ten months of 2010. Of this figure, 163,000 jobs were in manufacturing industry and nearly 400,000 in services that require office space. Over 310,000 jobs were created in the education and health sectors. This improved household employment situation has also led to an improvement in personal consumption, which grew at a Y-o-Y rate of 1.9% in constant dollar terms in the third quarter of the year, the highest level since the start of the recession.

The improvement in the labor market and household consumption has gradually stabilized the stock of available space in 2010. According to the latest figures from REIS, at the end of 3Q10, the office segment had a vacancy ratio of 17.6%, slightly higher than the previous quarter, while in commercial space it remained steady at 10.9%. For rented apartments, the increase in demand has resulted in the available area falling to 7.1% of the total in the third quarter, from a high of 8.0% in the first quarter of the year.

In the second half of 2010, effective rents have moved in line with vacancies: they have fallen slightly in the office segment, but are stabilizing in the case of shopping malls. Effective rents have risen slightly in the rented apartment segment, according to the latest data published by REIS. However, the high level of available space will restrain any increase in rents in the medium term.

Chart 23

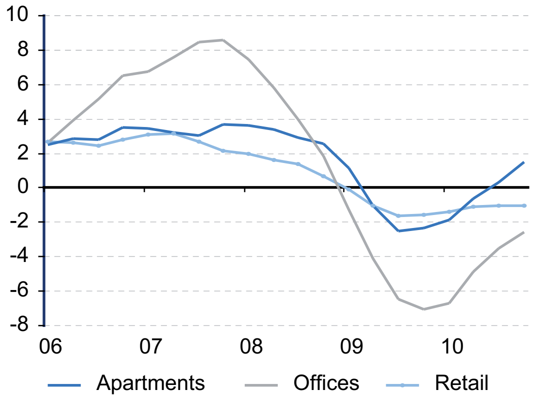
CRE vacancy ratios. As % of supply



Source: REIS

Chart 24

CRE effective rents. YoY % change



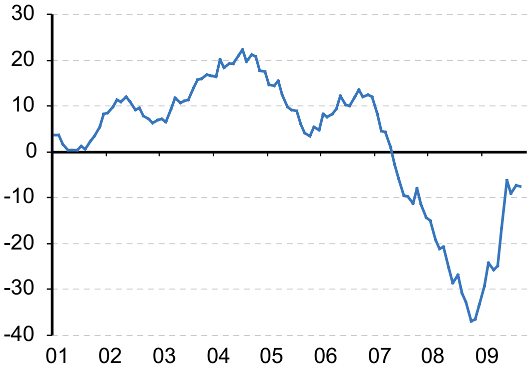
Source: REIS

The fall in commercial real estate prices continues, but at a more moderate rate than in previous quarters

Falling yields on long-term Treasury bonds in the third quarter of the year have increased the risk premium of commercial real estate. This has created incentives for new buyers to enter the market and provided a slight stimulus to demand which, despite these new purchases, is still at very low levels. This new demand is selective and targeted at existing buildings, which have seen substantial price cuts and are rented to solvent tenants. In this situation, although prices have continued to fall in 3Q10, they have done so at a much slower rate than in previous quarters. The trend indicates that prices may bottom out in the first half of 2011.

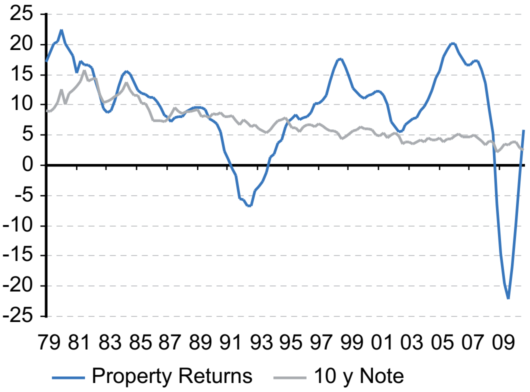
At current prices, rental returns have begun to be positive in nearly all the CRE segments and are beginning to rise above expected returns on long-term debt. This will be a stimulus in the medium and long term. In any event, the difficulties in finding external financing currently limit the attractiveness of investment in commercial real estate.

Chart 25
CRE prices. YoY change (%)



Source: MIT

Chart 26
CRE total returns and treasury yields. %

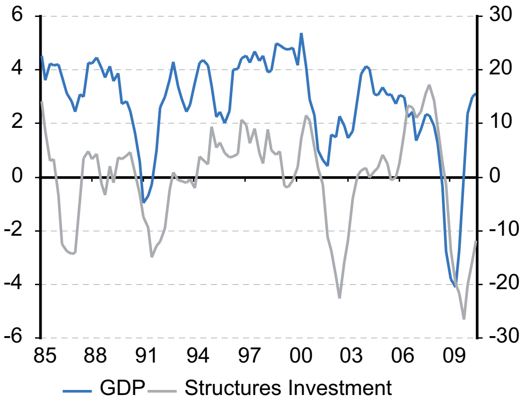


Source: NCREIF, Federal Reserve and BBVA Research

Investment in CRE remains depressed. And can only recover if there is a significant fall in the commercial inventory available

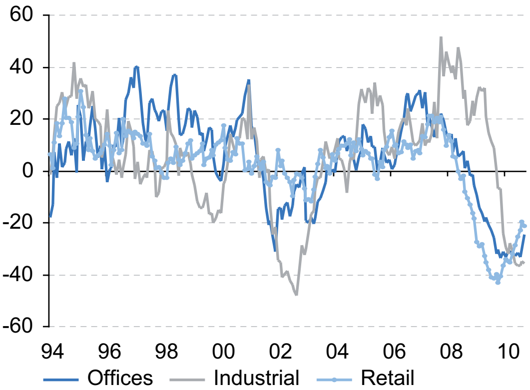
The fall in spending on construction has been general in all segments throughout 2010. Data indicate that investment in structures has still not bottomed out, although the fall has begun to moderate. In September 2010, current spending on commercial structures was around $278 billion, a fall of 24% in Y-o-Y terms. Of this total, a third was in the education segment, and just over a half in hospitals, offices, shopping malls and industrial buildings. As has been the case in previous recoveries, most investment in structures is lagging behind the general economic recovery.

Chart 27
GDP and structures investment. YoY change (%)



Source: Bureau of Economic Analysis

Chart 28
CRE construction expending. YoY change (%)



Source: Census Bureau

Mortgage deleveraging will continue throughout 2011

Commercial banking has recovered gradually in 2010-default rates are declining in virtually all credit categories and losses are falling. However, the weak economic recovery is holding back credit demand growth, and for this reason we believe that the banking system will continue the deleveraging process. Against this backdrop, financial institutions are increasing their capital base and reinforcing their capital ratios, a trend that will continue in the medium-term.

Given the recapitalization and extraordinary liquidity facilities provided by the government, together with clear trends that suggest an improvement in asset quality, over time the balances of commercial banks will return to normal. This means that the main uncertainty surrounding mortgage lending will focus on the factors that affect households, such as employment, income growth and savings.

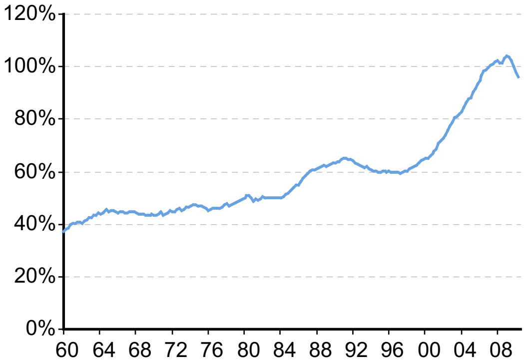
Mortgage lending continued to decline in 2010 due to the high volume of foreclosures and low residential demand

At the end of 3Q10, the mortgage debt of the entire system stood at $13.95 trillion, representing a 3.5% drop in Y-o-Y terms. This is the ninth quarter in a row that the credit balance declined. Since June 2008, when the high was reached, the mortgage debt of the entire system has decreased by 5.1%, according to Federal Reserve data. The adjustment in the residential sector began in mid-2008 and is projected to extend halfway through the second half of 2011 with a forecasted balance of around $10.3 trillion. The adjustment in the commercial real estate segment began later, in 1Q09, and we expect it to extend to mid-2012. In this segment, the total balance is projected to fall to around $3 trillion. Altogether, the mortgage deleveraging process of the system as a whole will be around 10% and should last for just over three years.

At the end of 3Q2010, mortgage lending to the residential segment reached $10.61 billion, with a Y-o-Y decrease of 2.9%, while the accrued adjustment in 3Q10 stood at 5.6%. Two-thirds of residential lending came from insurance companies, pension funds and the securitization organizations (Fannie Mae and Freddy Mac), while slightly more than one quarter came from financial institutions. Commercial banks provided one out of every five dollars. Mortgage lending to the commercial real estate segment stood at $3.20 billion at the end of the third quarter, with a Y-o-Y decrease of 5.4%, representing a total adjustment of 6.2% since its peak. In the commercial segment, slightly more than 50% of the funds came from financial institutions, 40% from insurance companies, pension funds and securitization organizations and the remaining 10% from other agents. In this case, banks provided nearly 45% of total lending.

Chart 29

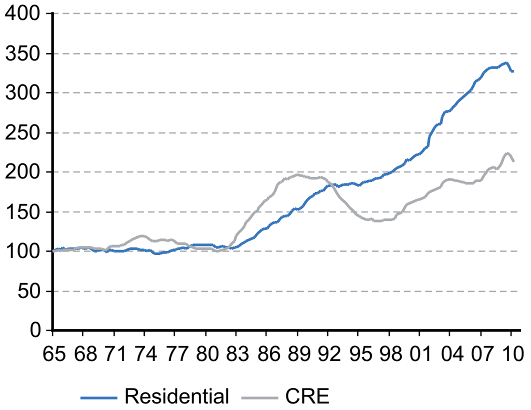
Mortgage lending and GDP. (%)



Source: Bureau of Economic Analysis

Chart 30

Relative importance of mortgage lending. real terms and normalized. Index 1Q65 = 100



Source: Census Bureau

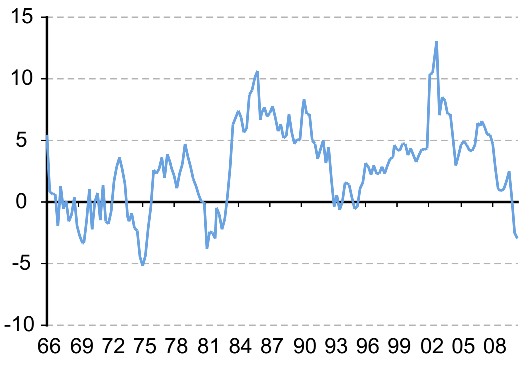
Mortgage lending has gradually grown in importance since the 1980s. In the early years of that decade, a number of regulatory changes, some financial innovation and the boost of the secondary market gave momentum to mortgage lending, which in a few years doubled its relative importance in the system. In the 1990s, the prolonged and almost continuous drop in mortgage interest rates resulted in a major boost for the credit market, especially in the residential segment. Today, mortgage lending is equivalent to 94.6% of GDP, nine percentage points below the peak observed in the first quarter of 2009.

The mortgage deleveraging process will continue throughout 2011, especially in the commercial segment

As can be inferred from the Federal Reserve's data, the deleveraging process has been widespread in the mortgage market as a whole over the last two years. Setting a lower limit, or floor, for this process is difficult. In the case of the residential market, from the historical point of view, only two episodes have occurred in which mortgage lending (measured in real terms and standardized by the number of homes) has undergone a significant drop the first was observed in the late 1960s and early 1970s, when the correction of residential mortgage lending reached 7.2% in real terms. The second, in the early 1980s, saw a 4.8% correction. Should the current deleveraging process be similar to the one that took place in the 1970s, the mortgage balance should fall by another 5%, which would result in a minimum balance, in nominal terms, of $10.10 trillion. If it were similar to the deleveraging in the early 1980s, it would drop by an additional $200,000 million to a minimum of $10.45 trillion.

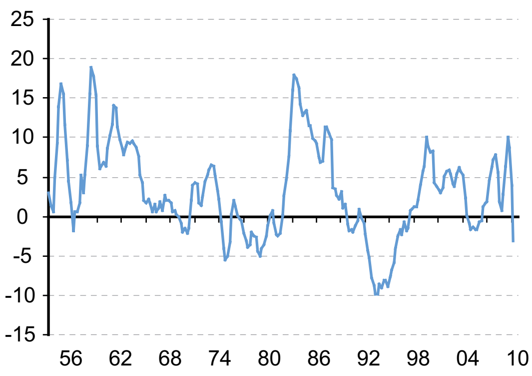
In commercial mortgage lending, historical data (considered in real terms and standardized by non-agricultural employment) show four relevant deleveraging episodes since the early 1950s the first at the end of the 1970s, the second in the mid-1970s, the third in the late 1970s and the fourth in the early 1990s. The drop in credit ranged from 3.3% in the first episode to 29% in the last one. Today, the correction has been 5.5%, but it has not yet bottomed out. If the current deleveraging process is similar to the one that took place in the 1990s, commercial mortgage lending would fall below $2.85 trillion.

Chart 31
Normalized residential mortgage lending. YoY change (%)



Source: BBVA Research

Chart 32
Normalized CRE mortgage lending. YoY Change (%)



Source: BBVA Research

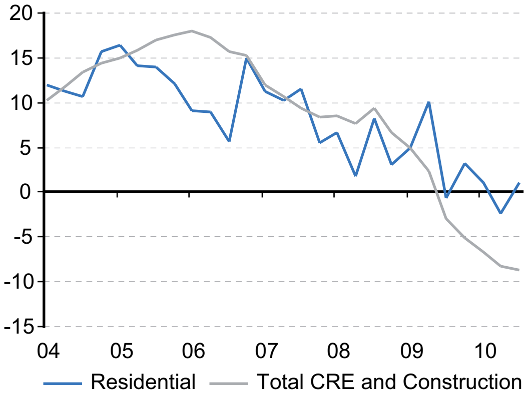
Two elements would enable the current level of mortgage debt to be reduced not recognizing unpaid credits from the balance sheet, which would represent an estimated amount of between $300,000 and $400,000 million in the residential segment and around $200,000 million in the commercial segment, and an inflow of new credits lower than the volume of repayments of existing loans.

Commercial banking is growing in importance in mortgage lending

Since the beginning of the mortgage deleveraging process, the relative importance of commercial banking has grown in total mortgage lending, due to difficulties of transferring credit to other agents. In the past, this process was carried out through the securitization of mortgage assets. This type of issue has been reduced drastically since the end of 2007. As long as as this process is not restored, the importance of commercial banking in this credit segment will continue to grow.

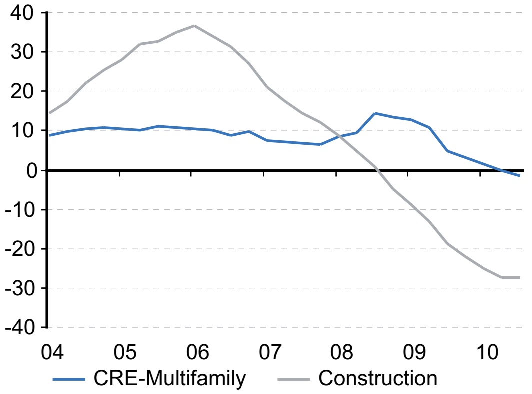
In line with the foregoing observations, the data for 3Q10 corresponding to commercial banking show that, although total assets increased slightly, mortgage lending continued to drop, although at a lower rate than in previous quarters. However, the evolution by segments is very different: while residential mortgage lending picked up slightly compared to the second quarter, the drop in the commercial segment continued to be more intense. Within the commercial lending segment, the greatest adjustment is taking place in the construction sector.

Chart 33
Mortgage lending. Commercial banks. YoY change (%)



Source: FDIC

Chart 34
CRE mortgage lending. Commercial banks. YoY change (%)



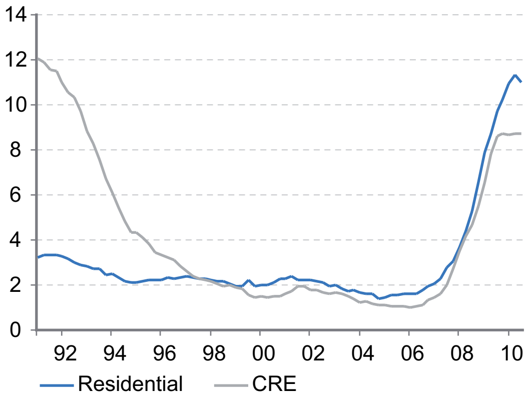
Source: FDIC

Improved prospects on the quality of the mortgage portfolio

Given the high rates of default today, one of the key factors for ensuring the solid development of the mortgage market is the improvement in the quality of the mortgage portfolio. The first positive signals have been seen in 2010 both mortgage delinquency and net losses of commercial banks are slightly declining. In any case, the forecasts show that in 2011 both default ratios and net losses will remain at high levels, which will somewhat limit mortgage lending growth.

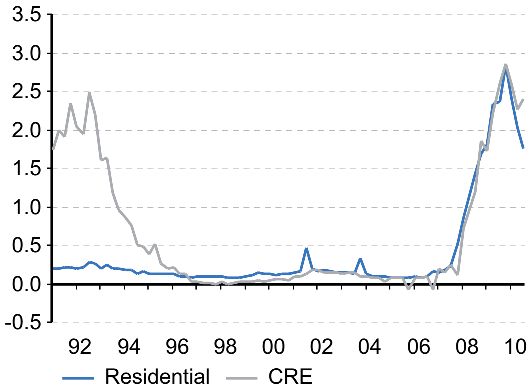
At the end of 3Q10, commercial banking's mortgage delinquency rate stood at 9.8%, almost 20 basis points below the figure recorded in the previous quarter, according to the latest data released by the Federal Reserve. Delinquency in the residential segment was nearly 11% of the portfolio, while in the commercial segment it reached 8.7%. Net losses in the mortgage portfolio fell to 2.1% of the total portfolio, over 50 basis points below the ratio recorded in late 2009. In the residential segment, net losses represented 1.7% of the portfolio, over 100 basis points below those recorded at the end of 2009, while in the commercial segment this ratio was 2.4%, nearly 50 basis points below the maximum level.

Chart 35
Delinquency by segment. (%)



Source: Federal Reserve

Chart 36
Charge-offs by segment. (%)



Source: Federal Reserve

Underwater households and strategic default

Housing prices and strategic default

Excess of housing supply at the end of 2010, is estimated at two million homes, one million below the peak reached in mid-2007. This adjustment allowed housing prices to stabilize during 2010. However, a sudden increase of this inventory could put pressure on residential prices again and lead to a further decline.

Some analysts believe that a large share of households “underwater” will go through “strategic default”, thereby significantly increasing inventory levels. This is a recurrent issue in economic circles since the end of the housing tax credit, generating an element of uncertainty in the residential market. A household is underwater when mortgage debt is above the current price of the house used as collateral of the loan. A strategic default is when the borrower decides to default on the mortgage even if it can continue making the payment. This potential increase in homes for sale and further price depreciation would have a negative effect on both household wealth and consumption. It could also increase the risk of deflation. In addition, it could deteriorate the loan portfolio of financial institutions, increasing the bankruptcy risk for commercial banks. In this environment, an economic double-dip would be very likely.

In this brief we a take close look at the elements behind mortgage default and find that the risks of massive strategic defaults are overblown as households rationally consider many other factors besides financial before defaulting.

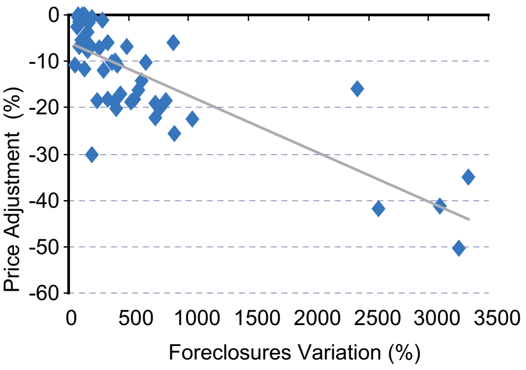
Negative equity is a necessary condition for default, but not a sufficient one

From a theoretical point of view, negative equity is a necessary condition for default; otherwise the borrower could sell the house and pay off the mortgage. But it is not a sufficient condition. Negative equity, as a result of declining housing prices, when it occurs in combination with increasing unemployment rate can explain a large proportion of the increase in residential mortgage default ratios observed since the economic recession began. The intensity of the blow will also depend on: a) type of mortgage amortization scheme (conventional, interest only, etc.); b) type of interest rate (fixed or adjustable); c) borrower’s credit quality (prime or subprime); and d) purpose of the housing tenure (investor occupied or owner occupied).

As data confirms, declining housing prices and unemployment growth are both highly correlated with an increase in default ratios when compared at the state level. Declining home prices by state (measured as the price difference from peak to bottom) has a negative correlation of 80% with foreclosure variation (measured as the percentage change from the minimum to the maximum level). Unemployment growth (measured as the percentage change from the minimum to the maximum rate) has almost a 60% correlation with the increase of the mortgage loan foreclosure variation when considered by state.

Chart 37

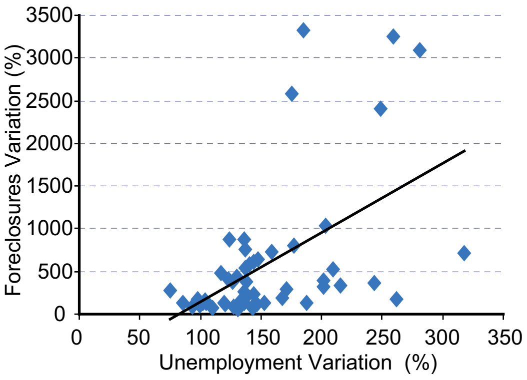
Housing price adjustment and foreclosure growth by state. %



Source: BBVA Research

Chart 38

Unemployment and foreclosure growth by state. %



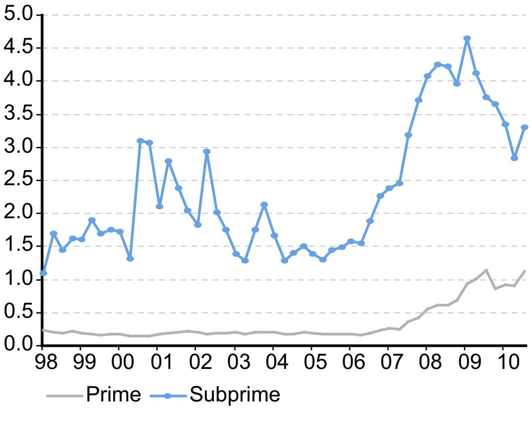
Source: BBVA Research

Some mortgage types are more likely to end up in negative equity than others (Ellis, 2008). Regarding the amortization scheme, repayment of conventional mortgages depends on the initial amount borrowed, the maturity period and the interest rate. Interest-only and negative amortization mortgage schemes do not necessarily involve the repayment of principal in the early years of the life of the loan; thus, the total debt remains constant or increases over time. In an environment of declining residential prices and unemployment growth, the latter two mortgage types are more likely to enter into negative equity than conventional mortgages.

Taking into account the type of interest rate of the mortgage, data from the Mortgage Bankers Association (MBA) suggest that in the recent housing meltdown adjustable-rate mortgages (ARM) have a higher probability of default than fixed-rate mortgages (FRM). Regarding the credit quality of the borrower, data indicates that the lower the credit score, the higher the probability of default (Haughwout and Okah, 2009). Therefore, a subprime borrower with an interest-only amortization scheme and an adjustable interest rate would have a higher risk of default than a prime borrower with a conventional fixed interest rate mortgage. In addition, it is important to note that the investor occupied housing foreclosure ratio is two percentage points higher than the owner occupied foreclosure ratio, according to First American CoreLogic data.

Chart 39

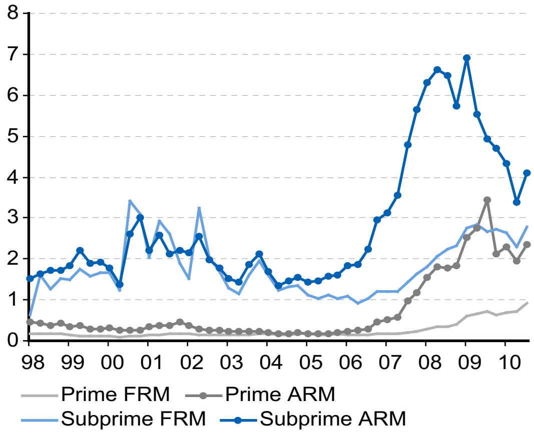
Mortgage foreclosures started in the quarter. As % of portfolio



Source: MBA

Chart 40

Mortgage foreclosures started in the quarter. As % of portfolio



Source: MBA

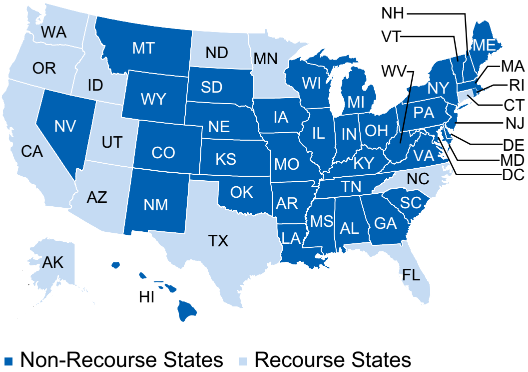
In most states, there are ways lenders can recover the mortgage debt. In those states, strategic default does not make financial sense

According to First American CoreLogic, at the end of the second quarter of 2010, there were almost 11 million households whose mortgages had a higher outstanding balance than the property's current value. These families represented almost 23% of all families with mortgage debt. More than half of these households (about 6 million) were concentrated in five states: NV, AZ, FL, CA and MI. In NV, almost 70% of properties with a mortgage outstanding were underwater. In AZ and FL this ratio was around 50% while in CA and MI it was just below 40%.

For underwater households, strategic default could carry legal consequences. According to mortgage legislation, in most states there are several ways lenders can recover the total amount of the mortgage debt. One potential way is mortgage recourse; which is possible in 36 out of 50 states plus Washington, DC. Recourse basically means that the lender can come after the borrower if the property sold at auction or through a short sale is for less than the amount owed the lender. Another legal method is mortgage deficiency, which is applied in different degrees in 43 out of 50 states plus the District of Columbia. When available, deficiency judgment is a court order permitting the lender to collect the amount of debt which is still left unpaid by the mortgagor even after foreclosure of the property or any type of security put against the loan.

Chart 41

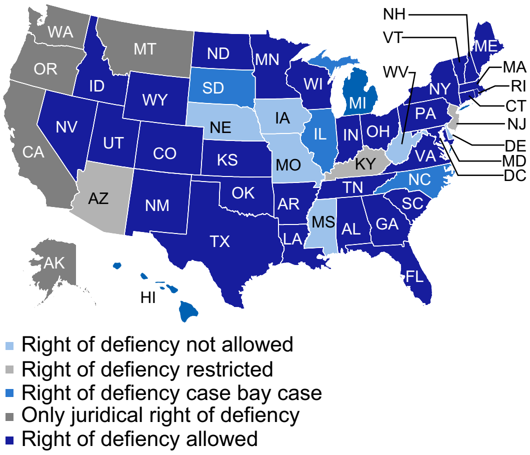
Recourse and non-recourse states



Source: BBVA Research

Chart 42

Right of deficiency by state

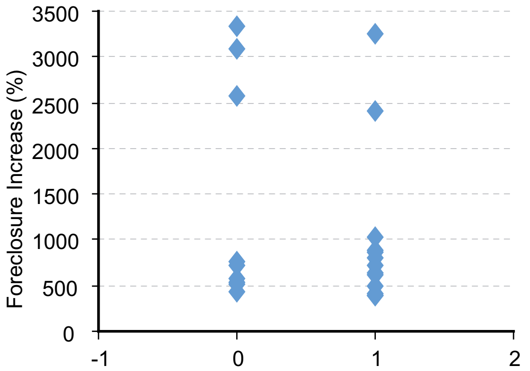


Source: BBVA Research

Current data show that there are no significant differences in foreclosure growth between those states that allow the lender to recover the total amount of mortgage debt and those which limit the legal action of the lender. This confirms that states with high underwater ratios and a weak legal framework will not necessarily experience a significant increase in default ratios. Likewise, states with strong legal framework and low underwater shares could have a high increase in delinquencies.

Chart 43

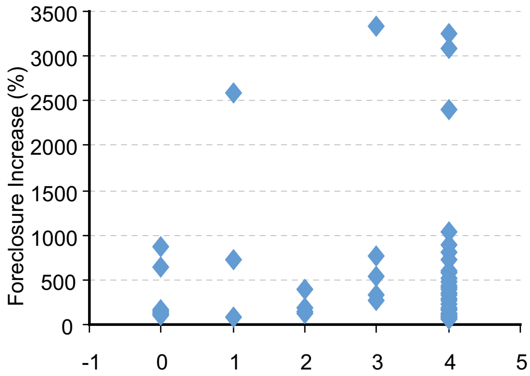
Recourse and foreclosure growth by state. (%)



Note: Recourse: 0=not allowed; 1=allowed
Source: BBVA Research

Chart 44

Right of deficiency and foreclosure growth by state. (%)



Note: Deficiency: 0=not allowed; 1=restricted; 2=case by case; 3=only juridical; 4=allowed
Source: BBVA Research

Sociological aspects have a significant influence on borrower behavior regarding negative equity and strategic foreclosures

A recent survey (Fannie Mae, 2010) reveals several sociological aspects of the underwater households that help to understand their position on strategic default. It also reveals that at the end of the first half of 2010, the households had better perspectives than at the end of 2009. According to July 2010 survey, the percentage of underwater homeowners who were somewhat or very stressed decreased to 35% from 48% observed in the December 2009 survey.

Other interesting survey findings are that 69% of underwater borrowers say owning a home is a safe investment. Also, underwater borrowers increasingly feel that if they were to stop paying their mortgages, their lenders would pursue their assets (9 points above from December 2009). Finally, the vast majority of respondents still disapproved of borrowers stopping their mortgage payments; 91% of underwater borrowers said they would not stop their mortgage payments.

Although surveys have potential biases that limit the analysis and conclusions, they help to understand borrower behavior. In general, in the mentioned survey, underwater borrowers responded more like the general mortgage population than delinquent borrowers.

This confirms that the economic value of owning a house is not only the equity of the asset but also the value attached to other elements such as quality of education, safety, living space and control to modify it, location, symbol of success, community involvement, and ethical values. Therefore, an underwater borrower could not fall into strategic default if the sum of the economic value of all these elements more than compensates the financial gap.

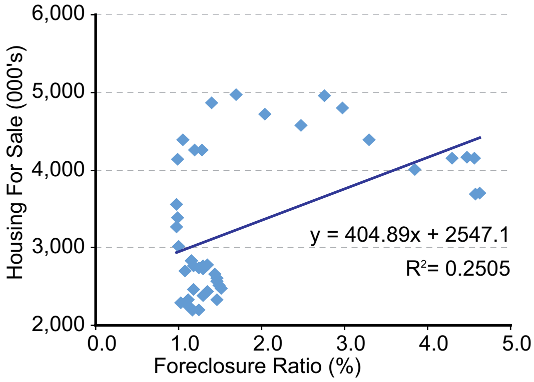
What if households strategically default?

Housing is not only an investment asset with uncertain potential to generate capital gains but also a consumption good. As an investment, it could have either positive or negative capital gains through time. As a consumption good it has two particular characteristics: it is a basic necessity and it has no substitute.

Let's assume that the 11 million underwater households decide to strategically default. Delinquency and foreclosure rates would skyrocket. On the one hand, a rise in delinquency rates generally will lead to an increase in housing supply, either for sale or for rent (around 11 million). The distribution will depend on the inventory level and the initial foreclosure rate. In fact, data show that once the inventory of housing for sale reaches a certain level, an increase in foreclosures does not add further to the supply of homes for sale but rather homes for rent. This could reflect that a large share of foreclosed properties is removed to the rental market. On the other hand, the housing demand would increase roughly 11 million of units; equivalent to the number of households that strategically defaulted mainly covered by the rental housing segment. As a consequence, rents would increase and attract investors to the market, resulting in higher housing prices.

Chart 45

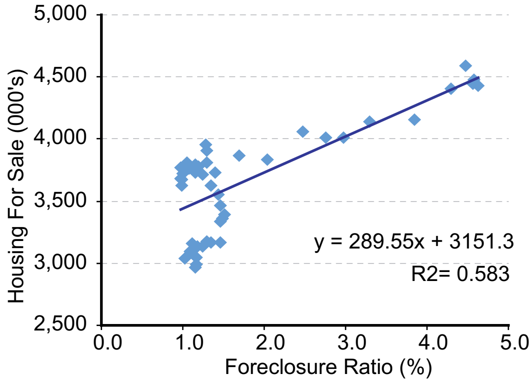
Foreclosure ratio and inventory of homes for sale (%)



Source: BBVA Research

Chart 46

Foreclosure ratio and inventory of homes for rent (%)



Source: BBVA Research

The final result on prices would depend on the cross effects of supply and demand. Rental houses and apartments would see an increase in their prices (most of the underwater households would not be able to buy a house and, therefore, they would need to rent). Meanwhile, inventory of homes for sale will increase and prices would depreciate. The net effect on housing demand would be negligible, unless underwater families decide to become homeless or live with their in-laws. In any case, what is clear is that the share of the rental segment would increase while that of the owner occupied would decrease. In addition, underwater households would have to assume capital losses and they would also see their credit score deteriorate, compromising future consumption. This environment could be more harmful if financial institutions increase their write-downs and tighten credit conditions again.

Conclusion

According to our analysis further home price declines cannot be ruled out. However, this is only likely to happen if delinquencies and foreclosures rise in combination with an increase in unemployment. The fears of higher delinquencies and foreclosures stemming from strategic defaults from underwater households seem flawed. In the case of households that live in their own houses, a question arises when they have negative equity: Will they rationally default as soon as they fall underwater on their mortgages or will they stay in their houses and pay their mortgages? In fact, "negative equity only becomes a financial liability if and when the home owner sells: up until that point it is a matter of opinion rather than fact". Massive strategic defaults are not going to occur. If this hasn't happen with higher ratios of underwater borrowers and worse economic expectations, why should it happen so suddenly?

Our outlook for home prices is not dazzling. However, economic fundamentals limit downside risks and our baseline scenario indicates moderate price appreciation. Additional monetary policy easing will support the secondary mortgage market and, therefore, the primary market. Most importantly, the higher quality of 2009-2010 mortgage vintages, with less ARM and subprime loans, will help to limit delinquency and foreclosure ratios.

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Forecast

Table 4
Residential Real Estate: indicators and forecast

Population (million)	US	AL	AZ	CA	CO	FL	NM	TX	BBVA Compass Footprint
2008	304,1	4,7	6,5	36,6	4,9	18,4	2,0	24,3	97,4
2009	307,0	4,7	6,6	37,0	5,0	18,5	2,0	24,8	98,6
2010	310,3	4,8	6,8	37,3	5,1	18,7	2,0	25,3	100,0
2011	313,2	4,8	6,9	37,6	5,2	18,9	2,1	25,8	101,2
2012	316,0	4,8	6,9	37,9	5,3	19,1	2,1	26,3	102,5
Households (million)									
2008	117,2	1,9	2,3	12,4	1,8	7,2	0,8	8,5	34,8
2009	117,3	1,9	2,3	12,5	1,9	7,3	0,8	8,8	35,6
2010	118,4	1,9	2,4	12,6	2,0	7,4	0,8	9,0	36,0
2011	119,5	1,9	2,4	12,7	2,0	7,4	0,8	9,2	36,5
2012	120,6	1,9	2,5	12,9	2,0	7,5	0,8	9,3	36,9

Source: US Census Bureau & BBVA Research

Table 5
Residential Real Estate: indicators and forecast

Housing Prices (Existing) YoY % Change	US	AL	AZ	CA	CO	FL	NM	TX
2008	-6,1	-1,5	-17,1	-24,8	-2,9	3,3	-1,3	1,0
2009	-4,7	-1,2	-18,0	-12,3	0,0	2,8	-4,8	0,1
2010	-2,8	-3,8	-9,3	0,5	-0,9	2,5	-3,0	1,6
2011	0,6	1,8	-0,1	1,0	0,3	2,5	0,3	2,4
2012	2,2	2,5	2,3	2,7	2,5	2,5	2,1	1,9
Housing Affordability. House Price/Family Income								
2008	4,3	3,3	3,7	5,5	3,5	3,3	4,2	1,0
2009	3,9	3,2	3,1	4,8	3,4	2,8	4,0	2,6
2010	3,9	3,1	2,7	4,7	3,2	2,5	3,8	2,6
2011	3,8	3,0	2,6	4,6	3,2	2,5	3,8	2,6
2012	3,8	3,0	2,6	4,6	3,2	2,5	3,8	2,6

Source: FHFA & BBVA Research

Table 6
Commercial Real Estate: indicators and forecast

Commercial Real Estate	Data	Forecast		
YoY % Change	**2009**	**2010**	**2011**	**2012**
Albuquerque (NM)				
Offices Effective Rent	-2.1	-2.6	2.9	3.8
Price	-9.8	-9.0	0.2	1.3
Retail Effective Rent	-2.0	-1.8	1.7	2.2
Price	-10.4	-6.0	-1.1	-0.4
Apartments Effective Rent	1.0	0.4	2.5	2.2
Price	-7.6	-3.9	-0.3	-0.5
Birmingham (AL)				
Offices Effective Rent	0.1	-1.3	1.2	2.4
Price	-7.7	-7.9	0.5	1.8
Retail Effective Rent	-2.6	-1.2	2.0	2.5
Price	-10.9	-5.5	-0.8	-0.1
Apartments Effective Rent	-0.5	-0.5	2.7	2.6
Price	-9.0	-4.7	0.1	0.1
Dallas (TX)				
Offices Effective Rent	-5.3	-5.4	-0.6	0.0
Price	-12.6	-11.7	-3.2	-2.5
Retail Effective Rent	-1.2	-1.7	0.1	1.3
Price	-9.6	-5.9	-1.2	-0.7
Apartments Effective Rent	0.8	0.3	0.2	1.9
Price	-7.8	-4.0	-1.6	-0.7
Denver (CO)				
Offices Effective Rent	-4.9	-5.2	1.7	2.3
Price	-12.3	-11.6	-0.8	0.7
Retail Effective Rent	-2.9	0.0	0.5	1.5
Price	-11.2	-4.3	-1.6	-0.8
Apartments Effective Rent	-0.7	1.9	2.2	1.5
Price	-9.2	-2.5	-0.5	-1.2
Houston (TX)				
Offices Effective Rent	0.8	-2.4	0.6	1.6
Price	-7.0	-8.9	-1.8	0.1
Retail Effective Rent	-1.5	-1.3	1.6	2.0
Price	-9.9	-5.5	-1.1	-0.6
Apartments Effective Rent	1.3	1.0	1.5	1.3
Price	-7.4	-3.3	-1.3	-1.4
Jacksonville (FL)				
Offices Effective Rent	-4.3	-1.7	0.9	1.1
Price	-11.8	-8.3	-1.1	-0.5
Retail Effective Rent	-5.7	-2.8	0.0	1.1
Price	-13.7	-7.0	-2.2	-0.4
Apartments Effective Rent	-0.3	-0.5	1.2	1.2
Price	-8.9	-4.7	-1.5	-1.4

Source: REIS & BBVA Research

Commercial Real Estate	Data	Forecast		
YoY % Change	**2009**	**2010**	**2011**	**2012**
Los Angeles (CA)				
Offices Effective Rent	-6.1	-5.0	1.6	2.0
Price	-13.4	-11.4	-1.8	-0.3
Retail Effective Rent	-4.2	-2.9	0.4	1.2
Price	-12.4	-7.1	-1.6	-0.5
Apartments Effective Rent	-3.3	-1.4	2.7	2.8
Price	-11.6	-5.7	-0.1	0.1
Miami (FL)				
Offices Effective Rent	-3.0	-3.1	0.3	1.5
Price	-10.6	-9.5	-2.4	-0.7
Retail Effective Rent	-2.3	-1.1	0.1	1.2
Price	-10.6	-5.3	-1.3	-0.5
Apartments Effective Rent	-3.8	0.0	1.6	1.6
Price	-12.0	-4.3	-1.2	-1.0
Phoenix (CO)				
Offices Effective Rent	-9.0	-5.7	0.0	1.1
Price	-16.0	-12.0	-2.2	-0.5
Retail Effective Rent	-4.1	-2.5	0.1	0.9
Price	-12.3	-6.7	-2.2	-0.1
Apartments Effective Rent	-3.3	-1.9	3.1	3.0
Price	-11.6	-6.1	0.3	0.4
San Francisco (CA)				
Offices Effective Rent	-12.8	-3.9	0.2	1.5
Price	-19.6	-12.1	-1.3	0.9
Retail Effective Rent	-1.1	-3.7	0.8	2.5
Price	-9.5	-6.5	-1.2	0.5
Apartments Effective Rent	-4.2	-0.2	3.6	3.5
Price	-12.4	-3.1	3.0	3.5
San Bernardino (CA)				
Offices Effective Rent	-6.0	-3.3	-0.5	0.4
Price	-13.3	-11.4	-2.6	-0.7
Retail Effective Rent	-5.5	-2.8	0.6	1.8
Price	-13.5	-5.6	-2.0	0.8
Apartments Effective Rent	-3.2	-0.8	2.7	2.8
Price	-11.5	-3.6	2.1	2.8
Tampa (FL)				
Offices Effective Rent	-6.0	-3.9	0.9	1.5
Price	-13.3	-10.3	-2.0	-0.7
Retail Effective Rent	-4.7	-4.1	3.7	4.7
Price	-12.8	-8.3	0.8	2.0
Apartments Effective Rent	-0.9	0.0	2.9	2.8
Price	-9.4	-4.3	0.1	0.1

Source: REIS & BBVA Research

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