Economic Research Department

US

Real Estate and Mortgage Trends

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Are house prices bound to adjust further?

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After eleven years of steady increase, housing prices have shown clear signs of weakness in an environment where population and employment growth remain strong. Is it the response to a change in the fundamentals?. The financial factors are the ones moving the market.

1 Existing data.

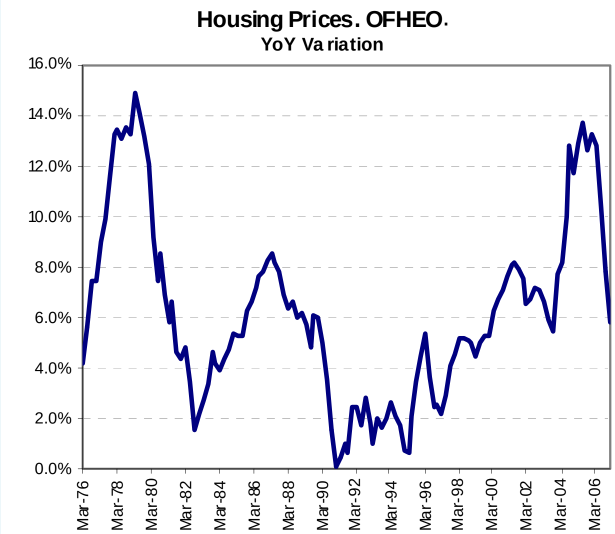
There are several sources of housing prices data in the US, but none of them represent a truly national average for both, new and existing homes that are sold in the market in a certain period of time. Some of these sources refer to existing houses and others to new ones. Prices are measured not only in dollars but also in index numbers and while some sources offer the information on a monthly basis, some others do it on a quarterly or yearly basis. Most data are taken from mortgages but other are taken from transactions. Depending of the source used, analysis of data could lead to different conclusions.

Most important database contributors are:

1 Office of Federal Housing Enterprise Oversight (OFHEO): OFHEO estimates and publishes quarterly house price indexes for single-family detached properties using data on conventional conforming mortgage transactions obtained from the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal National Mortgage Association (Fannie Mae). The house price indexes published by OFHEO are based on a modified version of the weighted-repeat sales (WRS) methodology proposed by Case and Shiller in 1989. The mortgage information is based not only in mortgages for home purchased but also in mortgages for home refinanced.

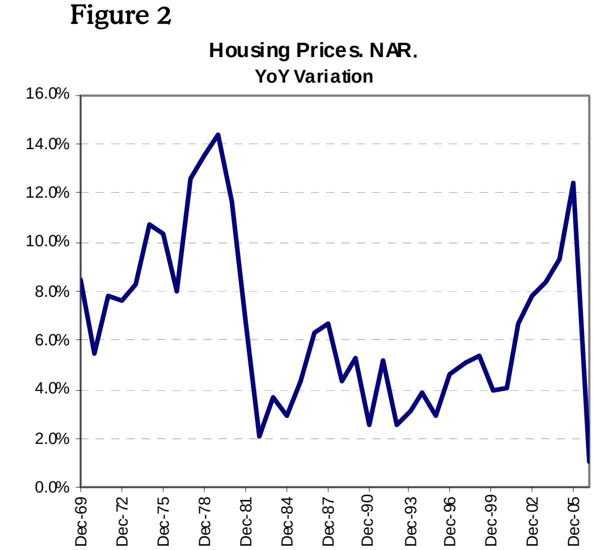
2 National Association of Realtors (NAR): NAR estimates housing prices from a monthly survey on existing home sales from local associations, boards and multiple listen services nationwide. Median and average prices are computed and

Figure 1



Source: OFHEO

Figure 2



Source: NAR

the annual rate of change is seasonally adjusted to gain a greater perspective on how the resale market is performing.

3 Federal Housing Finance Board (FHFB): FHFB conducts a monthly survey that provides information on interest rates, loan terms, and house prices by property type, by loan type, and by lender type. The survey is based on a sample of mortgage lenders and it is carried out in the last five business days of the month. It excludes FHA-insured and VA-guaranteed loans, multifamily loans, mobile home loans, or loans created by refinancing another mortgage.

4 US Census: Census statistics on housing prices are estimated from sample surveys and include only new single family residential structures. The price used in the survey is the price agreed upon between purchaser and seller at the time the first sales contract is signed or deposit made. The average sales price is obtained by dividing the sum of all the sales prices reported by the number of houses reporting a sales price.

5 Standards and Poor's/Case-Shiller (S&P). The S&P indices are monthly estimations of price changes between two arms-length sales of the same single-family dwelling. Home price data are gathered after that information becomes publicly available at local recording offices across the country. New housing is excluded.

Table 1: Housing Prices and CPI. YoY Change.

Housing prices. End of the year data
YoY change. Average.

	FHFB Total(1)	NAR Existing	OFHEO P & Rfn	S & P Total (2)	Census Total	CPI Total
1981-2006	6.0%	4.9%	5.4%	5.6%	5.2%	3.2%
St.Dev.	8.5%	2.2%	3.1%	4.7%	4.3%	4.3%
1981-1985		3.3%	4.6%		5.7%	3.3%
1985-1990		5.0%	5.5%	4.1%	7.5%	3.4%
1990-1995	2.1%	3.5%	2.3%	1.3%	1.4%	3.5%
1995-2000	6.0%	4.6%	5.0%	6.3%	5.6%	3.8%
2000-2005	7.9%	8.9%	9.5%	11.6%	6.7%	3.7%
2006	4.9%	1.0%	5.9%	0.4%	2.5%	3.2%

Source: FHFB, NAR, OFHEO, S&P and Census
Notes: (1) data from 1993 to 2006
(2) data from 1987 to 2006

Despite similarities in the total period averages, when year over year changes are estimated, relevant differences are shown among the varied sources due to data gathering divergences. For instance, in 2006, nominal year on year variation ranges from 0.4% increase (S&P) to 5.9% increase (OFHEO).

From the above data, it can be said that at the beginning of the past decade, housing prices underperformed inflation as a consequence of the economic recession that took place in 1991,

Figure 3

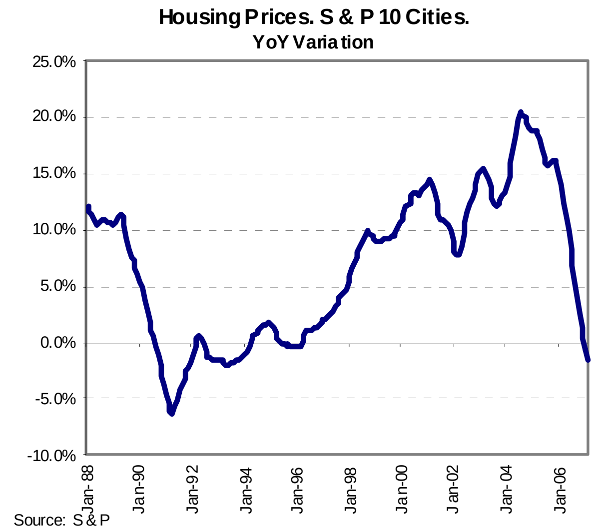


Figure 4

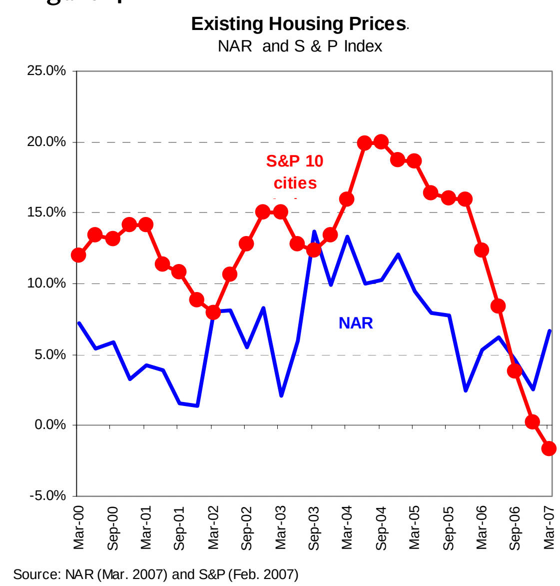
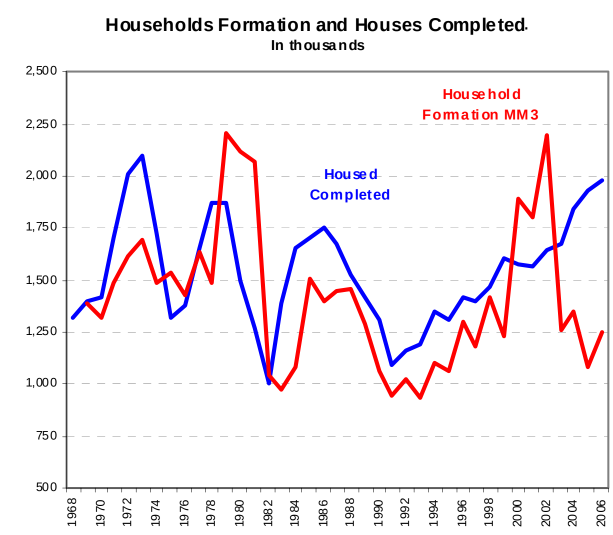


Figure 5



but have revaluated considerably since mid nineties to 2006, particularly in the 2000-2005 period. Last year some prices indexes showed a less dynamic evolution than consumer price inflation, with a descending trend that would continue along 2007.

2 Factors driving the market

Housing Production

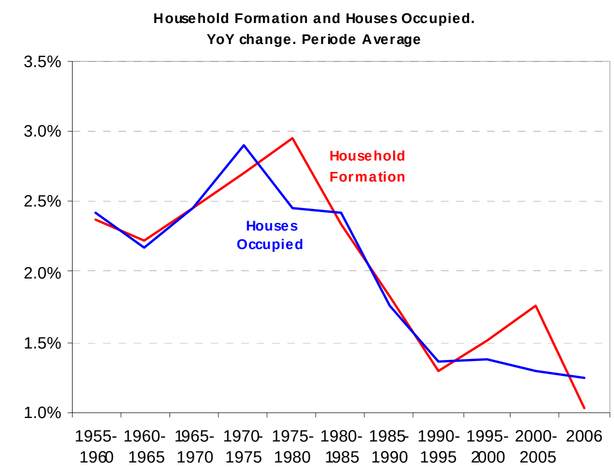
In the long term, housing production is mainly linked to demographic factors such as household creation or immigration arrivals: when a young person fully emancipates, first thing he/she does is to find a house to live. In the short term, economic factors play a more important role than demographic. In most of the developed economies there is still a growing rate of household formation or immigrants arriving, which sustains new housing demand.

From the historical point of view, in the United States, net household creation in the last 40 years averaged 1.4 million new families a year while housing completed averaged 1.5 million units. As can be seen in figure 5, from the seventies to the end of the nineties, household formation and housing construction developed very close. But from the beginning of the present decade, trends have changed following different patterns: while completed housing increased to reach around two millions in year 2006, household formation went down to 1.3 millions. This situation, if permanent, could lead to a housing oversupply.

In general, household formation and the number of houses occupied are closely related. Historical data shows similar trends on household formation and the number of housing occupied growth, figure 6. In the last five years, household formation has increased at an average 1.5% rate a year. Our population forecasts point out that in the present decade demographic factors could contribute to form 15 million of net new households through the year 2010. Smaller size families and 1.3 millions of new immigrants a year would support this trend.

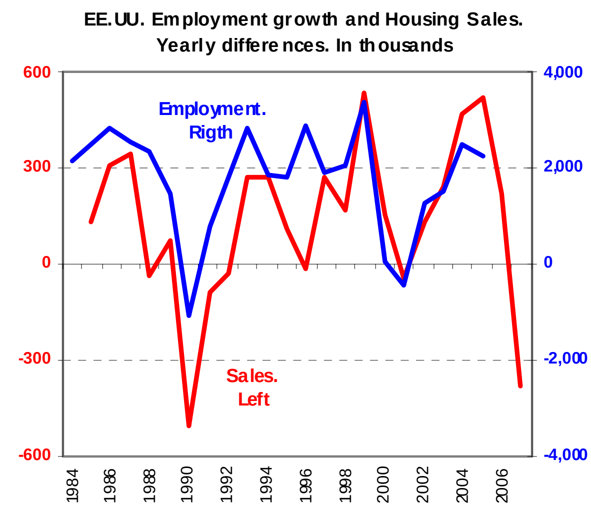
From the economic point of view, housing demand has been closely related with the job market: periods of employment growth are followed by an increase in housing sales (with a year delayed gap) and vice verse, employment destructions affects negatively housing sales a year after, figure 7.

Figure 6



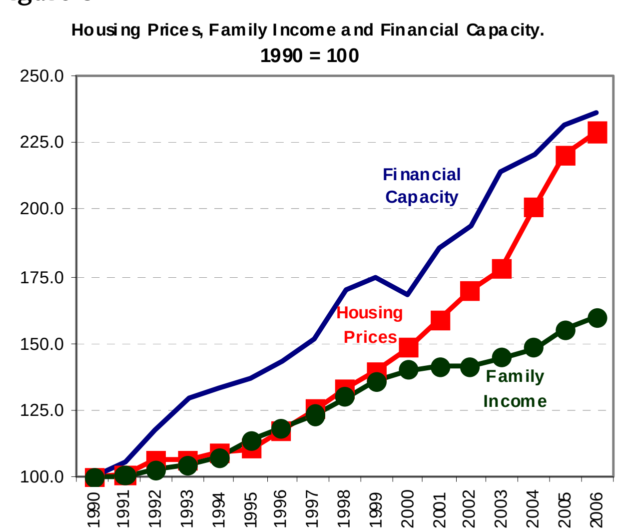
Source: Census and BBVAUSA

Figure 7



Fuente: US Census and BBVA

Figure 8



Source: US Census, OFHEO y BBVA USA

In the last fifteen years, employment growth and better financial conditions have boosted real income and the financial capacity of household, thus backing housing demand. At the same time, new financial schemes have allowed some families to become new homeowners, increasing housing demand. From the beginning of the nineties, the average family income rose 3.0% a year, while the financial capacity did at an average of 6.2% a year. In the same period, housing prices revaluate by an average of 5.8% a year, figure 8.

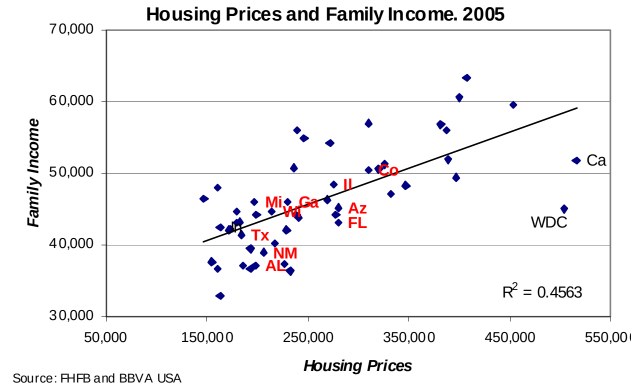
Housing Prices

In general, housing price levels in one area are associated to the income levels of the families living in that area. From the international point of view, housing prices in one country are coupled with income levels of that country: housing prices are higher in US and Japan, where family incomes are higher, than in China or Latin America where average incomes are lower. In that sense, within US, among other factors such as zoning restrictions or land scarcity, housing prices in the different States are related to income and the families' financial capacity of who are living on these States, as can be seen in figures 9 and 10, where average housing prices are plotted against average income and average financial capacity. So, broadly speaking, housing prices are higher in those States where income is higher and lower where income is lower.

Historically, housing price variations have been linked to economic growth: years of strong economic growth have been associated to periods of housing price revaluations while in periods of economic recessions, housing prices grew below inflation or at negative rates. Generally, economic recessions and real home price deceleration have come together, except for the year 2001, when housing prices began to increase to reach the highest revaluation rate in the last 35 years in real terms. Figure 11 shows how periods of strong housing prices acceleration, with growth rates above the historical standard deviation, are followed by periods of prices deflation: it happened at the end of the seventies, in the middle of the eighties and it is happening now. In real terms, in 2006 we have seen the strongest prices deceleration.

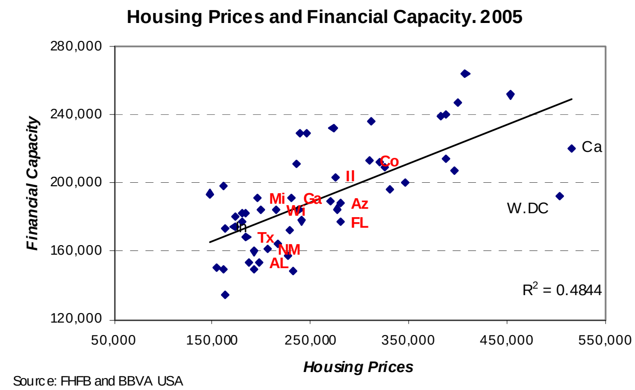
Historically, two factors are said to be the housing price main drivers: employment and mortgage market conditions. From the seventies to the end of the nineties, employment and housing prices were strongly correlated: when employment grew, households had a disposable income increase and they elevated housing investment, expanding housing demand. The market

Figure 9



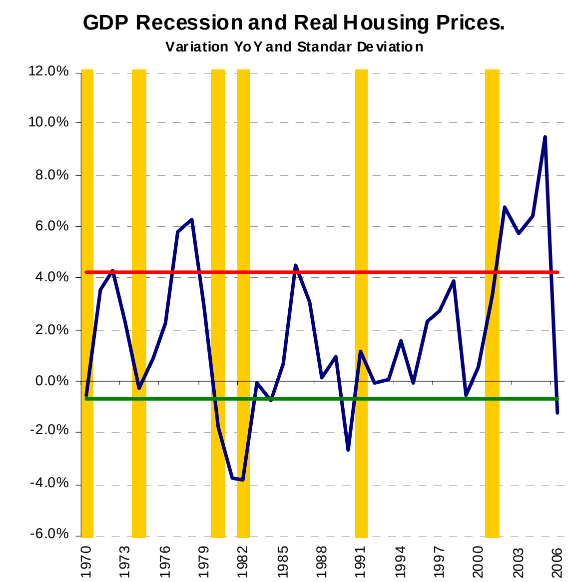
Source: FHFB and BBVA USA

Figure 10



Source: FHFB and BBVA USA

Figure 11



Source: OFHEO, Census and BBVA USA

responded with more housing building and moderate price increases. On the contrary, when employment dropped, families became more aware of economic problems and saved income for future potential economic contingencies instead of investing in housing, oversupply lead to less housing construction and price adjustment. That was the taxonomy of the housing cycles of the past

The existing conditions for housing finance have also been an important driver for housing prices, affecting not only demand but also supply. Availability of financial resources, maturity term of the loans and interest rates are the three main aspects of financial conditions. However, the relationship between financial conditions and housing prices has been not so clear throughout time.

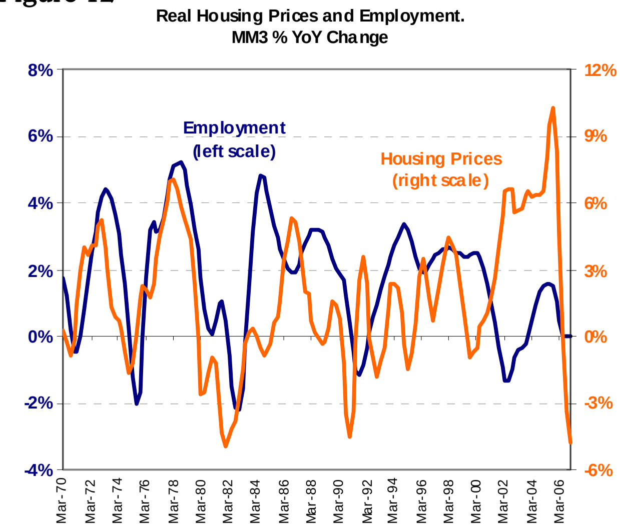
Even though employment was the factor with the highest correlation with housing prices in the last decade in most developed economies; in the present decade, it is the evolution of the financial conditions the factor which is having a major impact on housing prices through out all of them.

At the beginning of the present decade, in spite of weakness in the labor market, housing demand and housing prices increased as never before, clearly breaking precedent links between employment evolution and housing prices. In past economic recessions, monetary police was oriented to tougher monetary conditions: higher interest rates and fewer funds available for consumers. But monetary police was the opposite in the 2001 recession: interest rates dropped to historical minimums, with real interest rates in the negative territory, and there was a very high monetary liquidity.

This high monetary liquidity existing in the system was not pushing, for the first time in history, consumer prices up but interest rates down, which made residential investment much more attractive, increased mortgage debt and gave an incentive to housing demand. Thus, in the present decade, financial conditions have been the determinant factor for housing investment, not only in the US but also in most of developed countries.

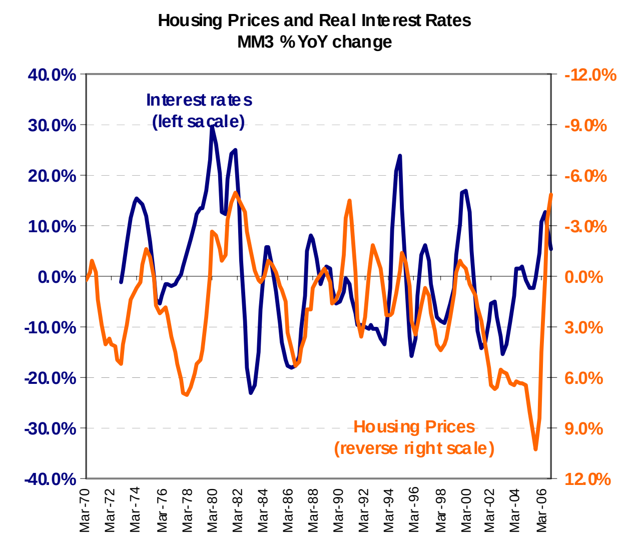
However, with higher interest rates, housing is a less attractive investment for households. When the direction of the monetary police changed to a more neutral scenario, with tougher financial conditions, so did the housing demand, even though other driving factors affecting demand, such as employment or demographics, had a positive evolution.

Figure 12



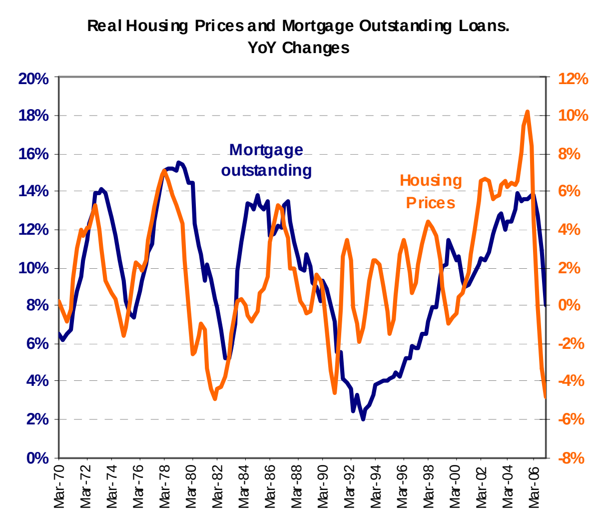
Source: OFHEO and BLS

Figure 13



Source: OFHEO, FED and BBVA USA

Figure 14



Sources: OFHEO, MBA and BBVA USA

A more intense management of portfolio risks and a stronger conventional lending policy by the financial institutions are gradually solving the mortgage debt difficulties. In fact, despite of the increase of the foreclosures in the subprime segment, a test of the solidity of the financial situation of the average household is that the rate of mortgage default did not enlarge significantly, in spite of the change tendency in the market. In this context of economic expansion, with nominal and real interest rates already stabilized, the mortgage market is now in an adjustment process and will be recovering as soon as the actual debt problems are internalized and assumed by the financial system.

3 The Regional Picture

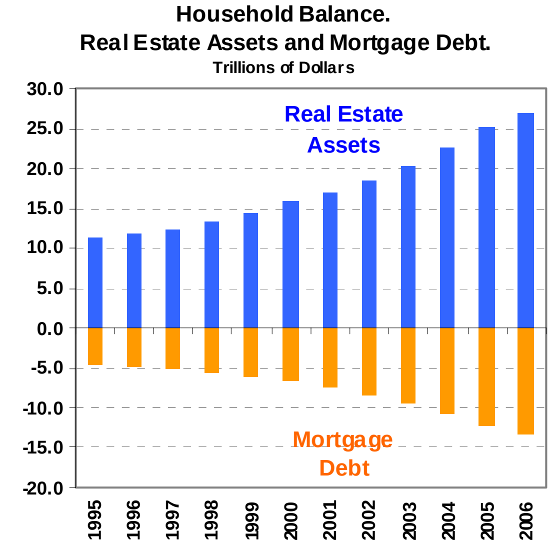
Even though housing prices evolution has been very different from town to town, data shows that in the last ten years price movements by cities can be arranged in three major categories:

1. Those areas where housing prices had followed a decreasing trend in the last five years.
2. Those areas where housing prices had a historical evolution similar to inflation but had very strong increased in 2004 and 2005 and adjusted rapidly in 2006.
3. And those areas where prices increased all over the middle nineties, reaching the highest level in 2005 and adjust since.

In the first group cities as Boston, Cleveland, Denver, Detroit or Minneapolis could be included. These areas are characterized for the lost of their relative economic importance; with companies focused on industries with a growth rate lower that whole economy. They are cities that were important in the past but have no a clear role in the future. In some cases, population lost is taking place. In general they are growing below the national trend, figure 16.

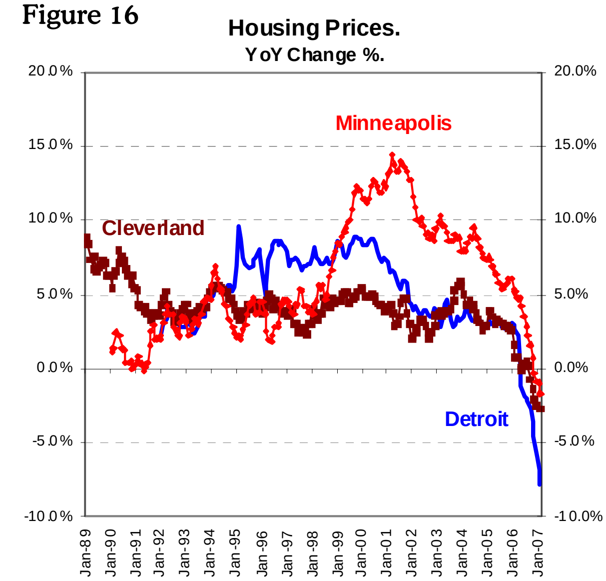
In the second group, cities as Las Vegas, Phoenix, Tampa or Miami can be included. These cities are characterized for economies based on industries which developed latter last century, with household income level below the national average. Housing prices had followed the consumer price indexes in the past and their level was clearly below the national average up to the year 2000. In the recent years, they have attracted a very high level of housing investment, which have pushed home prices to increase at a very high ratio in a very

Figure 15



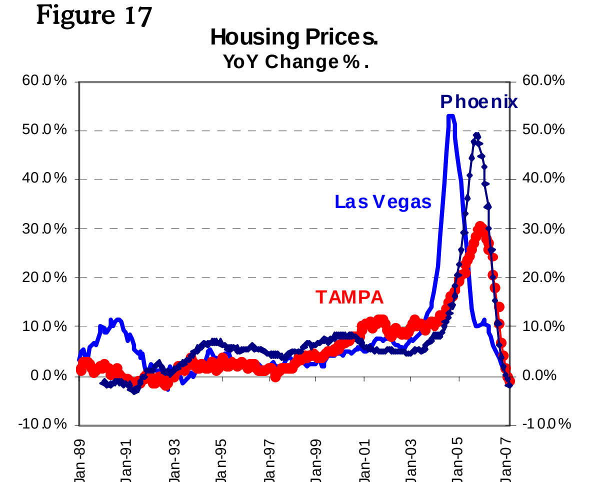
Source: Federal Reserve and Mortgage Bankers Association

Figure 16



Source: S&P

Figure 17



Source: S&P

short period of time. Prices have also shown a fast stabilization process, figure 17.

Finally, a third group could be composed with cities such as New York, Los Angeles, San Diego, San Francisco or Washington. They keep with certain economic dynamism and have focused to the services industries, with population and employment growth, where the housing prices have followed a more cyclical pattern. Home prices in this group have been rising from the middle of the nineties to the middle of the present decade, when they began to adjust, figure 18.

There are also a group of cities which can not be included in either category mentioned above. Cities as Dallas, Charlotte or Seattle do no present any of the trends already exposed and their price evolution could depends on local circumstances.

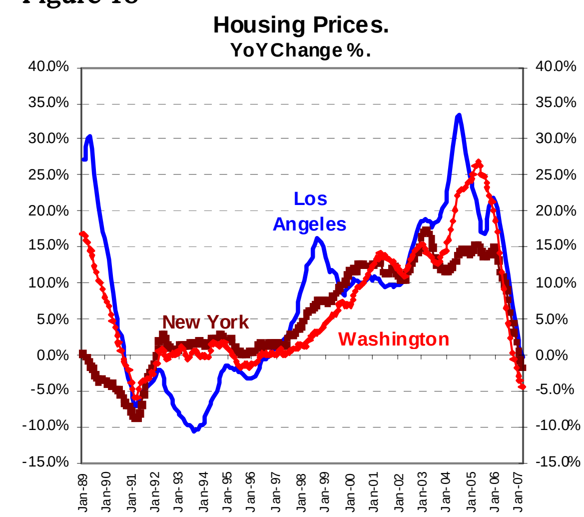
4 A price forecast and housing futures.

Considering the diminishing housing demand and the current excess of supply, in the short term, housing prices will follow the actual decreasing trend during several more quarters. Trend analysis shows a decreasing evolution trough 2007 to finish the year with a -4.7% drop in housing prices in real terms as a national average, figure 19.

Indeed, the housing price futures at the Chicago Mercantile Exchange points out to a further decline in home prices that could reach -5% year over year change in the first quarter of 2008, figure 20. Even though the lack of meaningful contracts in this market suggests not considering these futures too deeply. The fact is that there are not market operators that show optimist in prices recovering in the next quarters, based in the actual data.

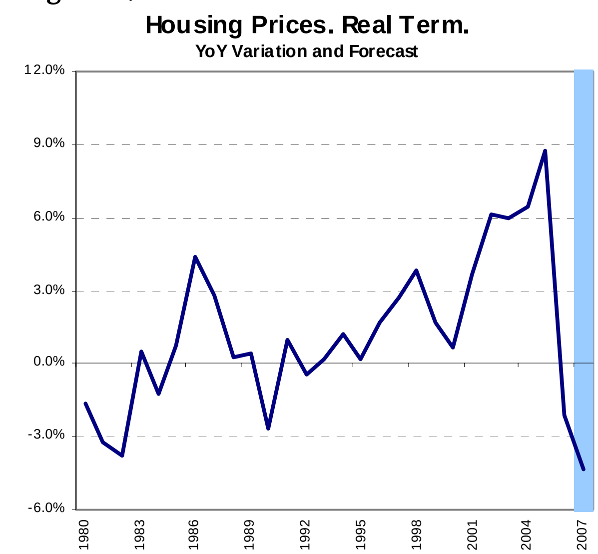
However, in the medium and long term, demographic factors, employment increase and households real income growth will support residential demand. Besides, the expected downward evolution of the mortgage interest rates will permit an enlargement of the financial capacity of the families and improve housing affordability. Housing demand will re-equilibrate and adapt to the new financial conditions and historical factors will be at work again in the housing market.

Figure 18



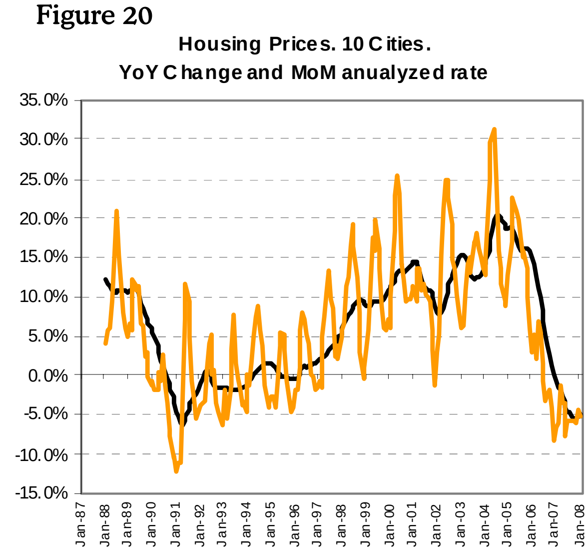
Source: S&P

Figure 19



Source: NAR and BBVA USA

Figure 20



Source: S&P and BBVA USA