BBVA Research

Mexico

Real Estate Outlook

July 2010

Economic Analysis

- 2010, a year of gradual recovery for the housing industry.
- With the housing policy, large metropolitan areas have emerged.
- Institutional coordination and urban planning, the medium-term challenges.

BBVA Bancomer

Contents

Closing date: June 21, 2010

1. Summary

The housing industry recovers in 2010, although gradually and heterogenuous among segments and regions in the country. After a difficult 2009, there are stronger signs in the housing industry that mark the beginning of a new phase of growth, although gradual and heterogeneous, with some regions and segments in the country advancing more rapidly than others. Timely indicators for the industry show a clear rally in this activity compared to 2009, although still below the 2008 levels.

Financing for housing is in a process of normalization, in which defining the future of non-bank intermediaries will be important. The global financial and economic crisis in 2008 and 2009 was transmitted to the housing industry due to a lower capacity of access to financing; risk aversion made funding sources more expensive for intermediaries and housing developers. Nevertheless, it is important to mention that even though the growth rate of financing for housing slowed down, if it is measured in relative terms, that is, as a proportion of GDP or as a proportion of total financing to the private sector, it is seen that housing loans remained stable in 2008 and 2009; that is, the slowdown in financing was not greater in housing than in other economic activities.

In the recession of 2009, there were cities that were severely affected, although others continued to grow. Based on the information relative to the granting of mortgage loans by the Infonavit at the city level and the SHF (the Federal Mortgage Association) Index on housing prices, also at the city level (with coverage on 35 cities) it is seen that among cities where the placing of loans was most affected, some were located along the border areas, and some were located in metropolitan areas that had recorded intense housing construction in recent years. This could reflect the combined effect of the economic cycle and an over supply of housing in some places. Despite the recessive environment, other cities continue in expansion. These are the small cities, which in recent years have shown growth, and new development poles (in the case of tourist areas) or because they are near important urban and production centers.

The boost to the housing industry in the last ten years served to reduce the lag in housing, although it has generated new challenges for the cities. Housing development has had a notable boost in the last decade, which is due to a combination of factors of an institutional nature and others associated with macroeconomic stability. In this process, important advances have been made in reducing the housing deficit and in policies regarding the sector. However, new challenges have also arisen, such as the need for better institutional coordination, that at the same time contributes to a more efficient use of public resources. At the level of the cities, an important challenge going forward will be the management of growth in the regions where more housing has been built. This will require new organization programs (social, political and budget), more at the metropolitan than the municipal level.

The bill to reform the Infonavit Law (the National Workers' Housing Fund Institute) will have important repercussions for the housing industry. The reforms proposed to the Infonavit Law that are currently being discussed in Congress, seek to attend potential reductions in the demand for housing that the housing fund institute could face in future years from its affiliates, to improve workers' conditions of access to financing and at the same time expand their sources of income. Although at different times, these reforms will have important repercussions, both for the operation of the Infonavit as well as for the mortgage market at the national level, some of them will imply the development of new business niches, as well as a greater diversification of the products that currently exist to attend the different financing needs in the Mexican market.

2. Current Situation

2a. Housing: gradual recovery in supply and demand

Introduction

Following a difficult 2009, there appear to be stronger signs in the housing industry marking the start of a new growth stage, although gradual and heterogeneous, with some regions of the country and housing segments advancing more rapidly than others. Housing directed toward the low-income market has remained as the pillar of sales of the industry, although only to the extent that the recovery in economic activity is generalizing, and consumer confidence is returning. Also observed is a better performance in other segments. In this article, we will analyze the evolution through which the housing industry has traversed in the lower part of the cycle and how the bases for recovery are being set. Both supply and demand factors are reviewed, which will help to delineate the exit process in what is left of 2010 and in 2011.

Incipient signs of recovery in the industry

Diverse indicators coincide in pointing out that 2010 is a year of recovery in the housing industry. In the first five months of the year, the loans placed by Infonavit are 21% higher than projected for that date (which supports the expectation that the Institute will close the year meeting its goal of 450,000 to 500,000 loans). However, if it is compared to 2008, it is observed that the placement of housing loans is still 11% lower. Housing construction has a similar history, being that up to the end of the first quarter, the figure of new projects registered before the Sole Housing Registry (RUV for its Spanish initials) marked a 33% increase compared to 2009, although compared to 2008, the result is still 25% lower than in the same period of that year.

That is, it is clear that there is an improvement but it should not be over-dimensioned; the process is gradual and—as it is analyzed further on—unequal among regions and segments. More important, so as to have a better outlook regarding the possible performance of the industry in the short and medium terms, the factors of both supply and demand that have marked the evolution of the industry in the last cycle should be analyzed.

The reactivation of demand, a process in stages

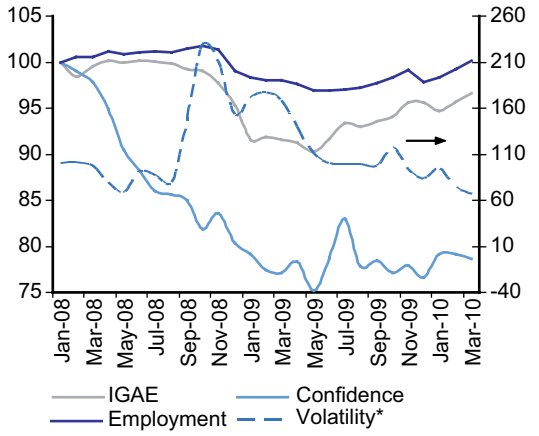
On the side of demand, housing could be classified as a durable consumer good, which, due to its nature, influences in an important manner the confidence of the borrower regarding the future as, for example, stability or even improvement in the source of income, in the financing conditions that will allow him to face the payment of his loans, beyond other typical elements, such as the price, the preferences in the location of the real estate, in its characteristics, etc. Thus, a good part of the contracting of the housing sales in 2008 and 2009 were associated with financial volatility and to contracting in the general level of employment in the country.

Once financial volatility began to diminish in the second quarter of 2009, economic activity also stabilized and reached its minimum level. As of that moment, employment followed the recovery of the economy, gradually although in a sustained manner and with a lag of only one quarter[1]. In turn, the recovery of employment must make way for a gradual return of consumer confidence to the levels prior to the crisis.

If the beginning of 2008 is taken as a reference of the maximum of activity and, therefore, the turning point, it can be observed how financial volatility has returned already to the levels it had prior to the crisis, although with changes in the level of the financial variables, which contrasts with the evolution of the key variables of economic activity, such as the IGAE and employment, which are advancing in a path of gradual recovery, but which tend to come near their recent maximums. However, consumer confidence continues to lag significantly (20% lower than the level observed at the beginning of 2008) and its rally will be important for consolidating the recovery of housing sales, particularly in the medium and high income segments.

Graph 1

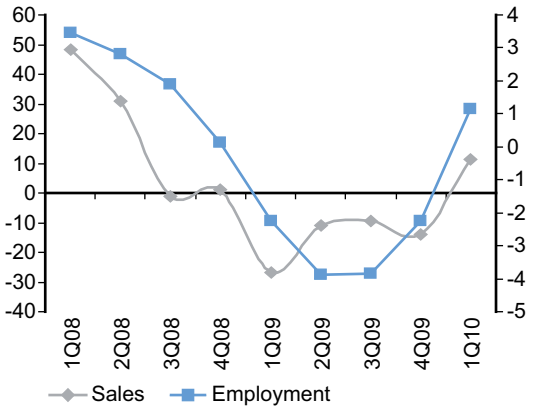
Consumer confidence keeps housing demand depressed (Indices, Jan. 08=100)



* Volatitlity Index (Vix)
Source: BBVA Research with Bloomberg and INEGI data

Graph 2

Housing sales and employment, annual % change

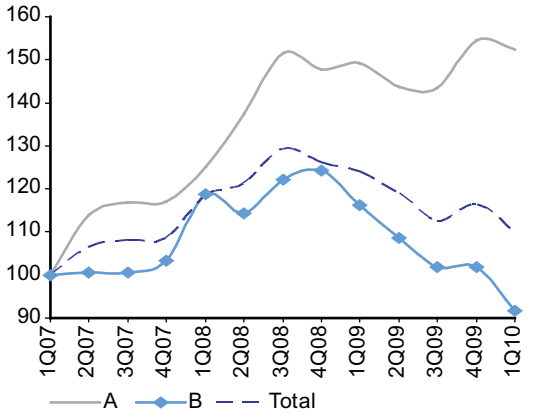


Source: BBVA Research with IMSS and CONAVi data

Despite the fact that confidence has not been fully re-established, the relationship between employment and housing sales is already beginning to be visible, as can be appreciated in the similarity in the recovery trend of both variables. Also, the way in which the recovery process has taken place also helps to explain the nature of the rally in housing sales or the segments and regions where a greater impulse can be seen.

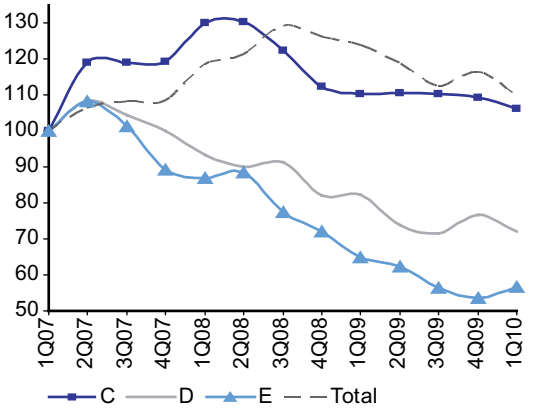
1: Much faster than in the previous recession, when employment took close to three years to recover the level it had at the start of the crisis (although, on that occasion, the recession in the U.S. and the entry of China into the WTO were combined).

Graph 3
Housing Sales, low segments (Indices, 1Q07=100)



Source: BBVA Research with Softec data

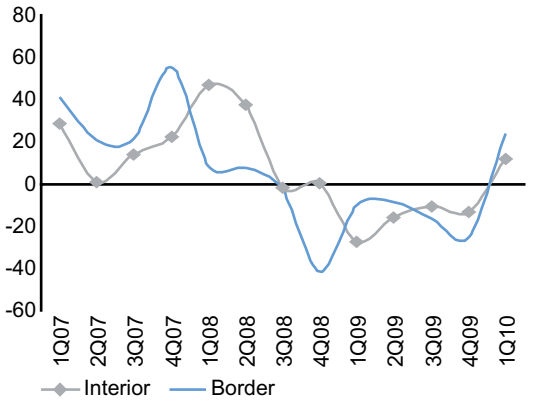
Graph 4
Housing Sales, medium and high segments (Indices, 1Q07=100)



Source: BBVA Research with Softec data

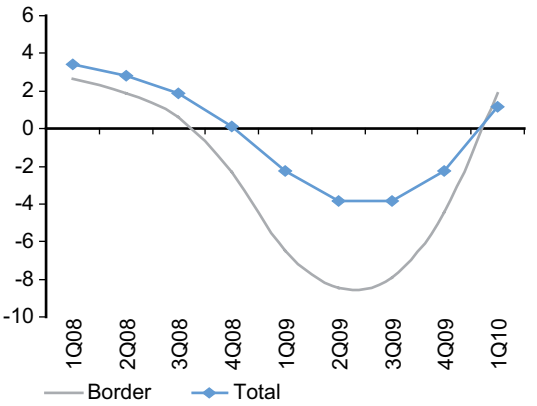
In mid-2009, the Mexican economy began its recovery process, newly boosted as on other occasions by a gradual recovery of external demand, stabilization of consumption in the U.S., on this occasion the reactivation and restructuring of the automobile industry was added, and the real depreciation of the peso. These factors have boosted activity mainly in the border area, which also was the region where the recession was most severe, due to its degree of exposure to the United States. The recovery of employment and of housing sales is advancing, with a trend slightly more favorable in this area compared to the rest of the country.

Graph 5
Housing Sales by regions, annual % change



Source: BBVA Research with IMSS and CONAVI data

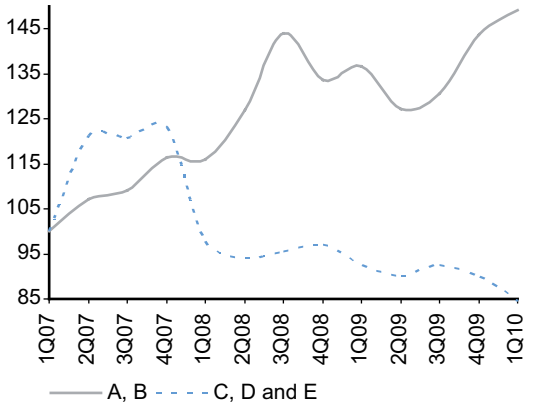
Graph 6
Recovery of employment by regions, annual % change



Source: BBVA Research with IMSS data

The type of homes that are being sold is also indicative and similar to the macro and regional recovery process of the country. When differentiating between segments, a clear contrast can be observed between the evolution of the low-income segment and a significantly more favorable performance (with an upward trend at the border and stability in the cities of the interior) than in the medium- and high-income levels (still downward at the border). This is a reflection of the way in which employment recovers, first that corresponding to the lowest income, temporary and gradually toward the permanent and higher income brackets.

Graph 7
Housing Sales, border 1Q07=100



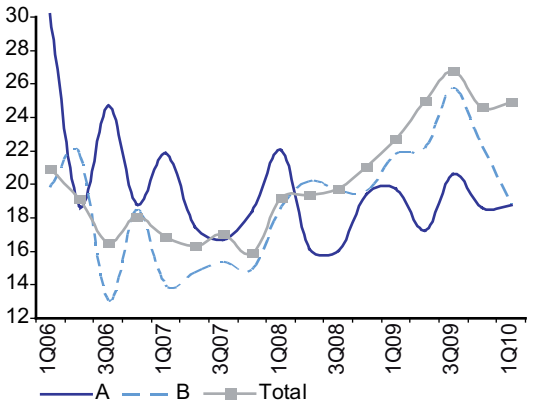
Source: BBVA Research with Softec data

Graph 8
Housing Sales, Interior and beach 1Q07=100

Source: BBVA Research with Softec data

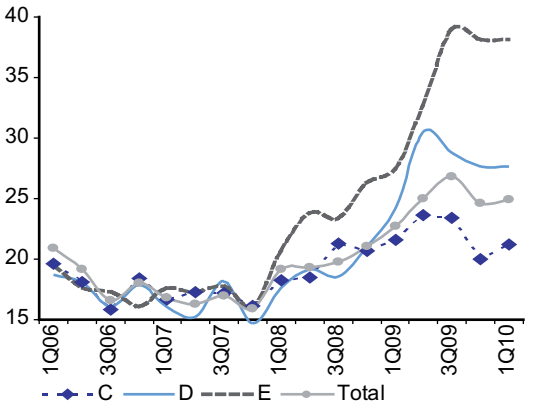
A similar perspective can be obtained based on the indicators on the time required to move the projects or the time the constructions require to place the entire housing inventory at the rate that sales progress. In the higher income segments, the times are still higher than the average registered in recent years (even though already with a certain trend toward stabilization), while in the housing segments for medium and low income workers, the signs of a return to the levels prior to the crisis are more evident.

Graph 9
Inventory months in low segments (Annual % change)



Source: BBVA Research with Softec data

Graph 10
Inventory months in medium- and high-income segments (Annual % change)



Source: BBVA Research with Softec data

In synthesis, from the evolution of the different segments and regions, it can be deduced that the incipient recovery boosts home sales, but only to the extent in which said recovery is sustained and generalizes the rest of the economy, the course of the housing industry will be more solid.

Main determinants of housing supply

On the side of supply, there are two main elements that have had a bearing on the industry throughout the last cycle: surplus inventories of previous years and the restrictions to financing for housing construction.

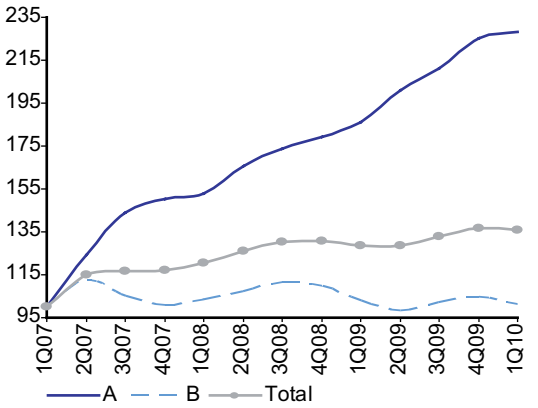
In the middle of the boom of the housing industry, where the generalized perception was that there was such a housing lag and a high demand level that the market had the capacity to absorb the entire supply that it was given (providing there was an availability of loans, and, in some cases, government subsidies), the housing construction volume increased significantly. Taking the start of 2007 as a reference, the new housing for sale supply volume indicators show a marked rise in construction, in all the segments.

In some cases, like that destined to the lowest housing segments, the number of units built had more than doubled within a lapse of just three years. Even when in this segment, building had been supported by the availability of subsidies, which practically guaranteed the sale of the projects, the rate of expansion (that was even maintained in 2009) contrasted with the slowdown process (and later recession) of the economy. Even in the residential segment (D), the rise was of the order of 35% between the first quarter of 2007 and the fourth quarter of 2009. Only in the higher income segment (E) was a sustained process of adjustment registered in the housing supply since the beginning of 2008.

This accelerated growth in the housing supply was seen at a regional level with some spaces showing levels of over-housing supply in 2008. In the September 2008 edition of ***Real Estate Watch México*** this trend was already evident where the unlinking could be seen of the housing supply and the process of a slowdown of the economy, in a more pronounced way in states with a strong link to the United States (via the automobile industry, the in-bond manufacturing industry [*maquiladoras*], the investor market in beach areas and remittances). Thus, at least one part of the marked slowown of the industry was linked with the adjustment itself that should have been done in a timely manner by buildiers to ensure the sale of projects already concluded or started. There was no anticipation of the changes in the trend that were coming, a sign of a certain rigidity in the supply in view of the change in the cycle. It should be emphasized that the excess supply was not a generalized problem, but more a casuistic manifestation, in some places and segments in particular. Nevertheless, it is necessary to recognize that the problem of a housing surplus was present in 2007 and 2008.

Graph 11

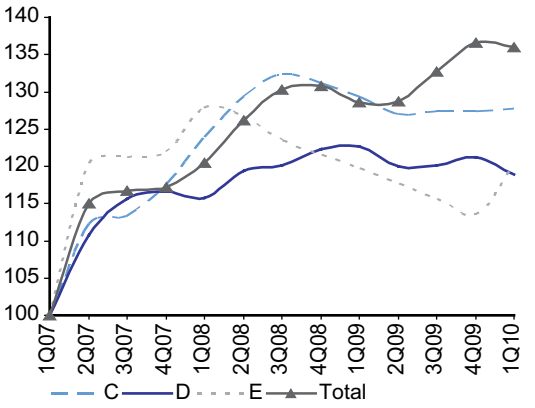
Housing supply in low-income segments (Indices, 1Q07=100)



Note: the housing supply corresponds to the balance of the sum of units in the 40 locations available
Source: BBVA Research with Softec data

Graph 12

Housing Supply in medium- and high-income segments (Indices, 1Q07=100)



Source: BBVA Research with CONAVI data

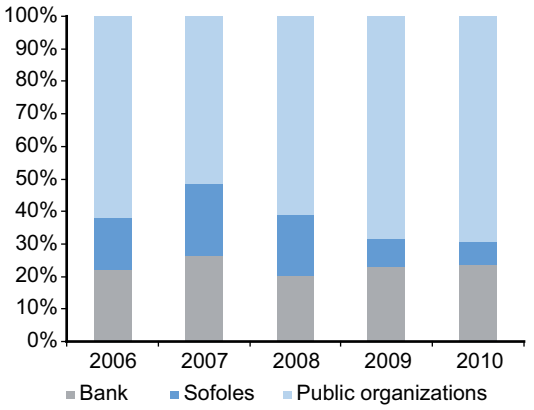
The second element is related to the financing of housing developers. It is known that the financial crisis closed the flow of financing to the *sofoles* and the *sofomes*, which attended both the mortgage loans (particularly to the segments of the population that did not qualify for traditional bank loans) and the construction companies themselves, through bridge loans for the acquisition of land and basic urban infrastructure development. The participation of these intermediaries in mortgage financing dropped from 22% in 2007 to only 7% in 2010. In counterpart, bank credit was affected marginally at the beginning of the crisis and has maintained its loan participation at around 20% with a slightly growing trend.

On the side of the financing to builders, the participation of the *sofoles* and *sofomes* fell from 34% in 2008 to 13.5% in the first quarter of 2010. In view of this, builders faced serious problems in placing their homes on the market. As it was argued in the October edition of ***Real Estate Watch Mexico***, this lack of financing was one of the main reasons that impeded the Infonavit from reaching its goal of placing loans for the acquisition of new homes in 2009.

Indicators of the financing flow show that both the public housing organizations and the banks are acting to replace the absence of the *sofoles* and *sofomes*, as is shown with more detail in the article on financing in this same edition. On the other hand, as commented at the beginning of the article, the relative figures at the beginning of the works reported before the Infonavit point to a gradual rally in construction works that will be available on the market toward the second or third quarter of the year.

Graph 13

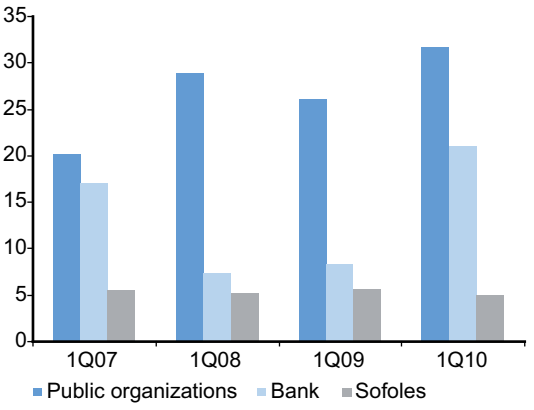
Financing granted to the housing sector, % share



Source: BBVA Research with Infonavit and AHM data

Graph 14

Financing for housing, billions of pesos



Source: BBVA Research with Softec data

Conclusions

2010 is a year of recovery for the housing industry, although in a gradual and heterogeneous process among regions of the country and housing segments. In the border states, economic activity has recovered at a more accelerated rate, which has been reflected in a greater demand for housing by low and medium-income segments (A and B). On the other hand, in the rest of the country, there has been a certain lag in recovery, in part due to the higher weight that social and economic housing has, and because it is directed to the more vulnerable sectors of the population. However, the investment of both the public organizations and the commercial banks is growing in the third quarter, which is why there is the necessary liquidity for reactivating the loan markets and taking advantage of the vacuum that the *sofoles* and *sofomes* left in the market. This undoubtedly will be essential for increasing the coverage of financing both to low- and to medium-income segments. Thus, inventories will tend to drop and there will be incentives for reactivating housing construction, but it will be necessary to wait until 2011 to reach the maximum housing sales reached between 2007 and the beginning of 2008. The risks to these scenarios are due to a delay or a weaker recovery of the U.S. economy, which has not been considered in our base scenario, and the possibility of high global aversion to risk being maintained, which would delay the recovery of the world economy.

Bibliographical References

BBVA Bancomer (2009). *Situación Inmobiliaria México* (Real Estate Watch). BBVA Bancomer. Octuber.

BBVA Bancomer (2010). *Situación Inmobiliaria México* (Real Estate Watch). BBVA Bancomer. January.

AHM (*Asociación Hipotecaria Mexicana*-Mexican Mortgage Association) (2010). *Boletín AHM*. AHM Bulletin. Information as of March 2010. May.

Inset 1: The most and least affected cities in 2009

In this section we identify the cities that were best able to deal with the recession in 2009 and those that faced the greatest difficulties in terms of housing sales and prices. Taking a sample of the 100 municipalities that in 2009 accounted for 85% of the housing loans (for new or used homes) granted by the Infonavit, that year's results will be compared against those of 2008 in relation to housing sales.

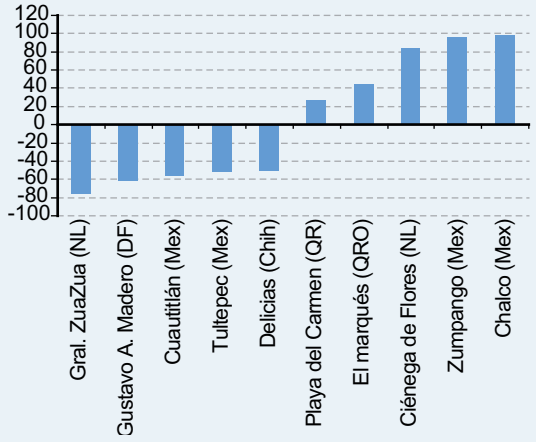
On the price side, we will analyze the 35 municipalities considered by the *Sociedad Hipotecaria Federal (SHF)* Federal Housing Mortgage Association.

Housing Sales

Infonavit loans on a national level diminished an annual 9.7% in 2009. However, there was considerable inequality in terms of cities, given that 63 of the 100 cities that comprise the sample posted above average declines (13% being the average), and on the other hand, there were 11 cities that registered double-digit growth.

Graph 15

Municipalities selection* with the greatest variation in mortgage loans in 2009 vs. 2008, (annual % change)



*100 municipalities with the greatest volume of loans
Source: BBVA Research with Infonavit data

Different reasons explain the behavior of housing sales by city:

1. Most of the municipalities (eight of the ten) are located in metropolitan areas where, moreover, *maquiladora* activity (in-bond manufacturing for export) has a strong presence;
2. Within the states there are municipalities that are clearly experiencing expansion and others where some signs of saturation appear (the case of the State of México and Nuevo León, with municipalities on both extremes in terms of housing sales);
3. There are emerging cities, which despite being small, are experiencing strong growth in housing construction.

Housing prices

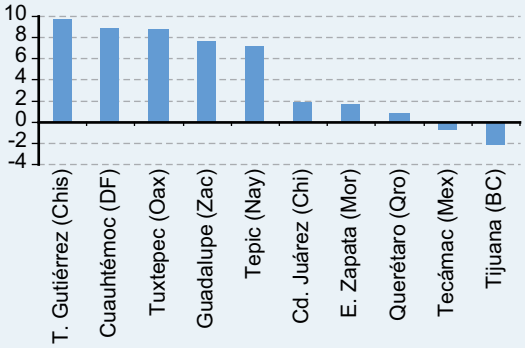
At a national level, between 2008 and 2009 the nominal appreciation was 3.2% for the total of the 35 municipalities that are covered by the SHF price index.

The cities (or municipalities) with the greatest housing price increases were Tuxtla Gutiérrez (Chiapas), Delegación Cuauhtémoc (Federal District), Tuxtepec (Oaxaca), Guadalupe (Zacatecas), and Tepic (Nayarit), with hikes of between 7% and 10%. Those with lower increases or declines were Ciudad Juaréz (Chihuahua), Emiliano Zapata (Morelos), Querétaro (Querétaro), Tecámac (State of Mexico), and Tijuana (Northern Baja California), in ranges of 2% to -2%.

Although the cities differ, the results in terms of prices coincide in indicating that the localities most affected in the 2009 recessive cycle were the border towns and those located in metropolitan areas.

Graph 16

Municipalities selection* with greater or lesser increases in housing prices in 2009 vs. 2008, (annual % change)



*Municipalities considered in SHF Index
Source: BBVA Research with SHF data

Inset 2: Do housing prices reflect the market dynamics?

We know that employment plays a decisive role in demand for housing, and this, in turn, in determining prices. Thus, it is necessary to consider whether, in terms of the country's cities, during the 2009 recession, the variation in housing prices (measured by the *Sociedad Hipotecaria Federal, SHF* [the Federal Mortgage Association] Index), was directly related to changes in the demand for housing (measured by the number of loans granted by the Infonavit).

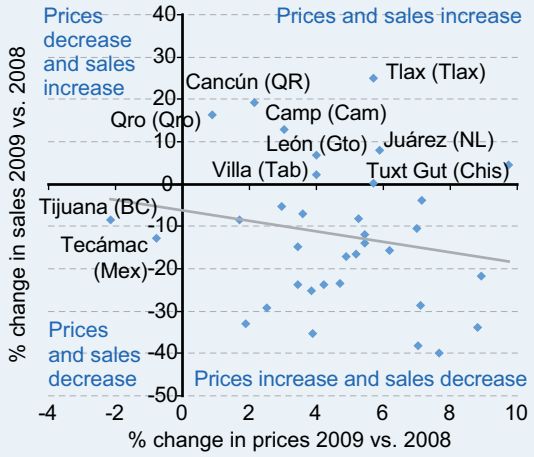
What factors determined housing prices during the 2009 recession?

It could be assumed that, as with any good, with an increase in housing demand (measured by the number of loans placed), prices would tend to rise. This, in fact, occurred in 2009 in different cities around Mexico, such as Iztapalapa (Federal District), Tlaxcala (Tlaxcala), Querétaro (Querétaro), Cancun (Quintana Roo), Campeche (Campeche), León (Guanajuato), Juárez (Nuevo León), Tuxtla Gutierrez (Chiapas), and Villahermosa (Tabasco), which account for 26% of the sample of 35 cities that have a housing price index. On the other end of the spectrum, Tijuana (Northern Baja California) and Tecámac (State of Mexico) posted declines in both prices and sales. However, for the rest of the cities, equivalent to 69% of the SHF sample, the result was not what was expected, since despite the contraction in sales (in some cases of up to 40%), prices continued to rise (nominal variation).

In general, these results show the downward rigidity in housing prices in response to lower demand. That is, even if demand contracts, home builders do not see sufficient incentives to lower their prices. There are different possible explanations behind this phenomenon. To begin with, there is the volatility in raw material prices; in 2009 for example, the price of steel rods and bars increased 15%. Another explanation involves the amounts of subsidies and credits based on salary levels; since given that they are predetermined, in the final analysis, they are the reference point for home builders and end up representing a "floor" for housing prices. It could also be the case that home builders maintain the idea that potential demand is still high and therefore, the contraction is transitory and short-lived. In any event, the mortgage market does not appear to respond (or does not do so, at least, with sufficient speed) to the signs sent by housing demand or its determining factors (such as employment and credit). For example, in Tijuana, between 2001 and 2009, close to one million housing units were built, when newly created jobs reached 550,000. In Tecámac, close to 40,000 homes were built, but only 6,000 jobs were created. Only in cities such as these (where excess housing was built) did prices respond, albeit belatedly, to the evolution of demand.

Graph 17

Prices and housing demand (annual % change)



Source: BBVA Research with Infonavit and SHF data

In conclusion, even though the exercises commented on here have their limitations; to begin with, due to the coverage of the information, given that the housing price index is only available in a reduced number of cities, the results show some distortions that prevail in the country's mortgage market, in terms of its rigidity to adjust more rapidly to the economic cycle.

The weight of other factors or housing characteristics (such as quality, design, location, security, etc) in price determination remains to be identified, even though thus far they appear to occupy a secondary role. However, as the market matures, housing prices should reflect determining factors in value added, including both the previously described physical attributes as well as the availability of services, location, and even harmony in terms of the social and family environment.

2b. Home financing: toward full normalization

The environment complicates financing for some

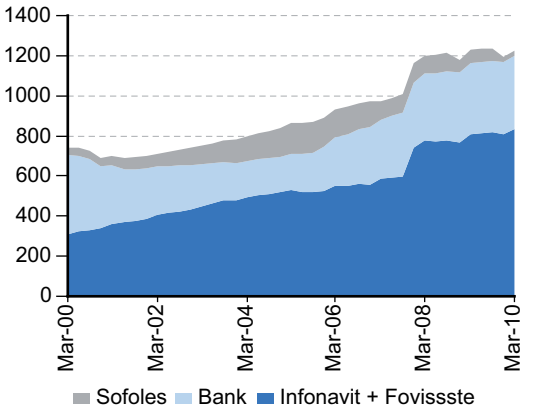
In the difficult environment that the housing industry experienced during 2009, financing played an important role. Although it was not the only factor (the contraction in demand was at least of equal importance), the international financial conditions of risk aversion were rapidly transmitted to the market on two levels. On the one hand, they limited and increased the cost of financial intermediaries' funding sources, and on the other, they decreased the credit lines of home developers, in particular for bridge loans. In this process, the non-bank intermediaries, the *sofoles* and *sofomes*, were the most affected.

Thus, due to its importance in the production chain, the renewal of financing will be key in the reactivation of the housing industry. In this article we will analyze the recent evolution of financing as well as the main factors that will determine its performance in the medium term.

In general, financing has been maintained

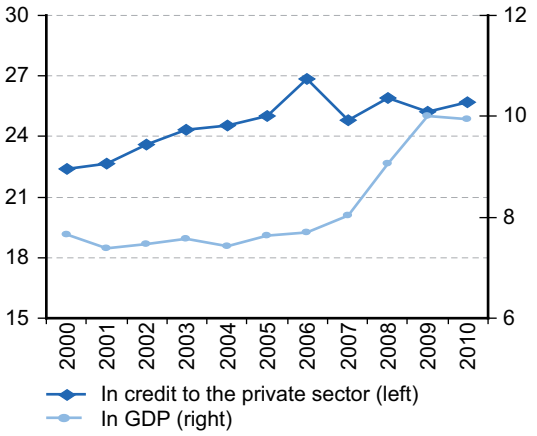
In response to the economic recession and the restrictive international financial environment, home financing declined in 2008 and 2009. After posting real growth rates on the order of 7% to 13% between 2005 and 2007[2], in 2008 and 2009 growth averaged 1.4%. However, if measured in relative terms, for example, as a percentage of credit to the private sector, the mortgage sector's share remained practically unchanged since 2007, at around 25%. Furthermore, measured as a percentage of GDP, its share even increased, from 8% in 2007 to 10% in 2009. The data through the first quarter of 2010 show, if not growth, at least a stabilization in credit flows to industry, and stronger figures will be observed as the economic recovery is consolidated.

Graph 18
Home financing. Balances in billions of pesos at 2010 prices



Source: BBVA Research with Banco de México data

Graph 19
Housing loans. % share



Source: BBVA Research with Banco de México and INEGI data

2: In the figures published by the Banco de México (the central bank), as of 2007 the Fovissste portfolio is included, which brings the growth rate to levels of 20% in real terms. However, if this item is excluded, growth dips to 13.4%, according to the statistics published by Conavi.

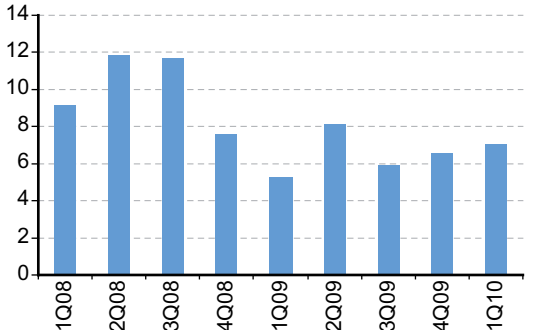
In this sense, it is important to note that, except for the cases of the *sofoles* and *sofomes*, financing was not interrupted, since both the public housing agencies and institutes as well as the banks maintained their credit channels open (albeit by being more selective in granting loans). In both cases, the decline in financing came from the demand side of the equation (more cautious buyers who postponed their decision to purchase a home in response to conditions of economic and financial uncertainty) rather than in relation to the availability of credit.

However, it is necessary to recognize that financing via bridge loans slowed. In 2008, close to 40 billion pesos were granted in such loans (at first quarter 2010 prices), while in 2009 the corresponding figure was 26 billion pesos. For 2010, however, the signs now point toward a more favorable panorama, given that credits granted, for 7 billion pesos, represent an increase of 34% in real terms over the previous year. At this rate, the amount of financing granted in 2008 could again be reached in 2011.

The *sofoles* and *sofomes* were the financial institutions that most reduced their share of financing to the housing industry. according to figures from the Banco de México. Measured in 2010 prices, the mortgage loan portfolio fell from 131 billion pesos at the end of 2006, to 60 billion pesos on average during 2009, and at the beginning of 2010 (first quarter) it was 25 billion pesos.

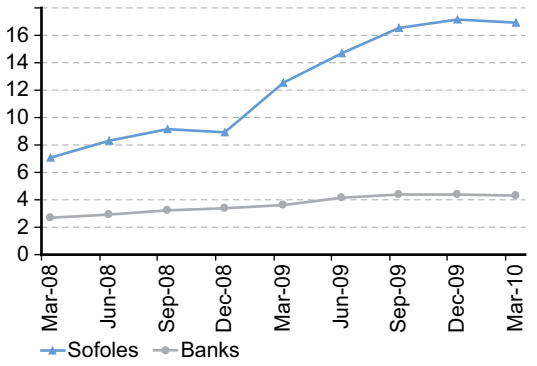
In housing construction credit, or bridge loans, the other market in which these financial institutions actively participate, the *sofoles* and *sofomes* were also the most affected. In 2006 they held around 54 billion pesos in such loans, while toward the end of 2009 the corresponding figure was 29 billion pesos.

Graph 20
Total Bridge Loans.
Flows in billions of pesos at 2010 prices



Source: BBVA Research with AHM data

Graph 21
Loan delinquency: banks vs. *sofoles* (%)



Source: BBVA Research with AHM and AMFE data

The past-due loan portfolio has stabilized

The past-due loan portfolio posted a strong increase in 2009, both in loans corresponding to private intermediaries as well as in the public housing institutes. From representing 4.1% of the total in 2007, in 2009 it increased to 5.8%, although with significant differences among intermediaries. In the period under discussion, loan delinquency in the case of the banks rose from 2.2% to 3.7% and for the Infonavit housing agency from 4.7% to 5.8%, while for the *sofoles* and *sofomes*, it rose from 4% to 7.9%. In addition, some positive signs are now being seen in this indicator, since in April 2010, past-due loans accounted for 6.3% of the total, which although higher than at the close of 2009 (5.8%), they grew at a more modest rate than in the previous quarters[3].

3: For the bank's loan portfolio, the delinquency index even decreased in this past period: 3.6% in April vs. 3.7% at the close of 2009.

For bridge loans, it is also important to distinguish between the banks' and the *sofoles*' and *sofomes*' loan portfolios. While in April 2010 the banks' past-due loans index was 3.1%, in the case of the *sofoles* and *sofomes* the corresponding figure was considerably higher, at levels of 17%. As pointed in the October 2008 issue of ***Mexico Real Estate Watch***, due to its structure and functioning, the bridge loan portfolio in the case of the *sofoles* and *sofomes* is highly sensitive to conditions of financial volatility, the economic cycle, and fluctuations in demand for housing.

Loan portfolio placements, spurred by public housing agencies

Financing for the housing industry through loan portfolio placements, or securitizations, was also strongly impacted by the effects of the financial difficulties of 2009. The last placement of these instruments by non-bank intermediaries occurred in mid- 2008. In 2009 and 2010, loan placements have corresponded to public housing agencies, Hipotecaria Total, and the banks[4].

The lack of interest among investors to hold these types of instruments is to a large extent related to their structure, because in their current design, an important part of the risks are transferred to the market. The loan portfolio of the placements already made reflects this situation: in the first few months of 2010, delinquency level in the securitized portfolio was 24%, against 17% for loans retained in the balance sheet.

Other factors that have acted against these instruments have been the weakening of the credit quality of the issuers, and even of the financial guarantors of the placements. The three insurance companies in charge of issuing the guarantees for the issues, AMBAC (American Municipal Assurance Corporation), MBIA (Municipal Bonds Insurance Agency), and FGIC (Financial Guaranty Insurance Company), also known as monoliners, were seriously affected by the global financial crisis, to the extent that in some cases the core portfolio (or the loans that back the issue) exceeded the guaranty.

The overnight rate that these instruments pay in the secondary market reflects investors' level of confidence in them. For example, while the placements made by the public housing agencies (Cedevis in the case of Infonavit and Tfovis for Fovissste) and the banks have a 1.5% spread in relation to Udis, those of the non-bank intermediaries reach levels above 6%[5].

The domestic debt market lost strength, and was replaced with overseas placements, there was financing available

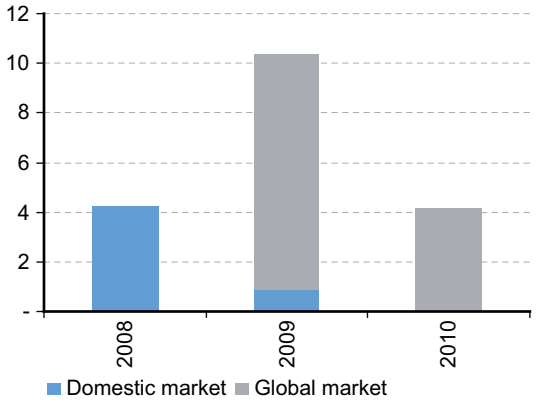
In the debt market, where both housing developers as well as non-bank intermediaries participate, the 2009 crisis also saw a substantial reduction in its issues, especially in the domestic market. While in 2008, long-term placements were made in the local market for a total of four billion pesos (measured in 2010 prices), for 2009 such placements only reached one billion pesos. The large developers chose to replace the domestic market with placements in dollars in the international markets, for the equivalent of 9.5 billion pesos, and in the first few months of 2010 (figures through the close of May) the amount of the placements reached 4 billion. During 2008, the international markets were closed to placements without an investment grade.

4: The only private placement in 2009 corresponded BBVA Bancomer, for 5.6 billion pesos.
5: Figures through the close of May 2010, for placements in UDIS, considering only the preferential series of the issues. In the case of non-bank intermediaries, the differential or spread, refers to the full wrap issues or those with guaranteed payment. It should be mentioned that these placements pay a spread that is even greater than that corresponding to non-guaranteed issues, based on the poor credit quality of the guarantors and the portfolio structure.

The *sofoles* and *sofomes*, which accounted for close to 60% of the long-term debt placements in 2008, did not make any placements in 2009 nor thus far in the course of 2010. Their share in this market has been limited to the refinancing of short-term liabilities, with the backing of *Sociedad Hipotecaria Federal* (SHF), (the Federal Mortgage Association).

Graph 22

Private long-term debt: housing, billions of pesos at 2010 prices



Figures through May 2010
Includes: Geo, Homex, Uribe, Sare, Ruba and Javer
Source: BBVA Research with issuers' figures

Chart 1

Mortgage *sofoles* and *sofomes*: Short-term debt * (current balances 2010)

	"Millions of pesos"
Total	8,854
Casa Mexicana	173
Su Casita	1,985
Crédito Inmobiliario	2,850
Fincasa	2,500
Patrimonio	1,103
Vértice	244

* 90-day refinancing
Source: BBVA Research with Valmer data

Industry challenges in relation to financing

Among the challenges that the housing industry is currently facing is to find long-term solutions for the operation of the financial intermediaries. Since they first began in the mid-1990s, financial intermediaries have played an important role in relation to credit, by focusing on financing for housing construction and mortgage loans for the middle- and low-income segments of the population, for whom the credit products available were insufficient.

In this sense, a first aspect that must be addressed is to improve the quality of supervision and regulation, which is more lax for the *sofoles* and *sofomes* than for bank intermediaries. The financial crisis that began in 2008 underlined the need to adopt regulations that would guarantee stronger financial institutions that are sufficiently capitalized and with better risk coverage. The proposal currently being discussed on an international level and that appears will be applied, is to bring the regulations for all the institutions that participate in the market into line.

Although short term, the financial situation of some *sofoles* and *sofomes* forces a process of consolidation of the industry, with regulations that are in line with each other, which could also lead to the creation of niche or specialized banks, which would, in turn, spur greater competition among intermediaries. A lesson of the 2009 crisis is that specific financing products are required (either through credit or other securitized instruments) to attend the needs of the different links that make up the value chain of the housing industry, and which range from purchasing land, its urbanization, obtaining licenses and permits, housing construction, and the placement of mortgages. Up to now, the banking system has been focused mainly on this latter link[6].

6: BBVA Bancomer is the exception. In addition to the mortgage market, it accounts for more than 50% of financing for home builders.

The second challenge that the industry faces is to develop adequate financial instruments that guarantee the flow of resources to the sector. In the October 2009 issue of *Mexico Real Estate Watch*, the need is raised of introducing adjustments in the instruments used in portfolio placements, through covered bonds. It is clear that with the financial crisis of 2009 and the problems related to the credit quality of the portfolio that had already been placed, new products are required that respond to the needs of the market, and that reflect the strength of the institutions that participate in the mortgage sector.

Conclusions: toward a full normalization of financing

Together with the recovery of the economy, home financing is gradually recovering from the 2008- 2009 crisis. Both the indicators measuring credit flows as well as those dealing with the past-due loan portfolio coincide in pointing to a gradual return to the stability and the financing levels prior to the crisis. It is important to note that despite the financial problems of some intermediaries, the granting of housing loans did not stop during the recession; both the banks as well as the public sector housing agencies maintained home financing open, which advanced at the rhythm that demand allowed.

Going forward, the main challenges that can be envisioned in terms of financing are related to the market, which was unattended following the withdrawal of the *sofoles* and *sofomes*. In addition, it will be important to find responses to the role that these institutions will play in the future and the rules under which they will operate. In the short term, a process of consolidation of the industry can be expected, although in the medium term it will be important to have specialized institutions that cover the financing needs throughout the different links of the housing industry chain, and that currently are only partially attended to.

Bibliographical References

Cruz Borges, Edgar (2009). *Bonos Privados. El regreso de los bonos respaldados por hipotecas de máxima calidad. Deuda corporativa México.* (Private Bonds. The return of high-quality mortgages. Mexico Corporate Debt) BBVA Bancomer. August

IXE, Grupo Financiero (2010). *Evolución de BORHIS, signos de recuperación.* (Evolution of BORHIS, signs of recovery.) Reporte trimestral (Quarterly Report) 1T10. (1Q10) June.

Inset 3: The developers that trade on the Mexican Stock Exchange (MSE) began the year well

Growth is returning

Developers that trade on the Mexican Stock Exchange (*Bolsa Mexicana de Valores*) (Ara, Geo, Homex, Sare, and Urbi) have begun the year with positive results. The gradual recovery in employment and consumer confidence has allowed companies in the housing sector to reverse the modest results of 2009, in which sales and operating flow grew 0.7% and 2.5%, respectively, and net earnings fell -8.1% Y/Y.

In 1Q10, growth returned to the sector thanks to a higher volume of notarized home sales (+4.2%) and a 6.3% rally in average price. Thus, aggregate income posted solid annual growth of 11.4% and the generation of greater economies of scale resulted in a 15.5% increase in the operating flow or EBITDA. Meanwhile, net earnings grew 5.1% Y/Y given the absence of currency exchange losses.

Chart 2

Developers listed on the BMV: Financial performance 1Q10 vs. 1Q09

	1Q09	1Q10	% change
Sales volume	29,881	31,133	4%
Low-income level	22,798	25,992	14%
Low-income level / total volume	76%	83%	
Mid-range and residential	7,083	5,141	-27%
Mid-range and resid / Total vol.	24%	17%	
Average price (P$)	380,251	404,040	6%
Income	10,740	11,966	11%
EBITDA	2,406	2,779	16%
EBITDA margin	22%	23%	4%
Net profit	878	923	5%
Net margin	8%	8%	-6%
Financial cycle (days)	569	611	7%

Note: figures in P$mn
Source: BMV and BBVA Research

Factors behind the recovery

We can identify the following elements in common within the business strategies of the companies that trade on the stock exchange:

a. Access to the credit market and low exposure to Sofoles/ Sofomes. Contrary to the medium and small homebuilders, the home developers listed on the MSE have taken advantage of greater access to financing, of the gradual normalization of the public debt market, and of a low exposure to Sofoles/ Sofomes bridge loans. Thus, in the past nine months Geo, Homex, and Urbi have financed working capital requirements and paid debt expirations with long-term placements (5 to 10 years) in the international market for US$800mn.

b. Greater market share. Together with better access to financing, the companies that trade on the MSE have gained between 6 and 8 percentage points of market share at the cost of the medium and small homebuilders.

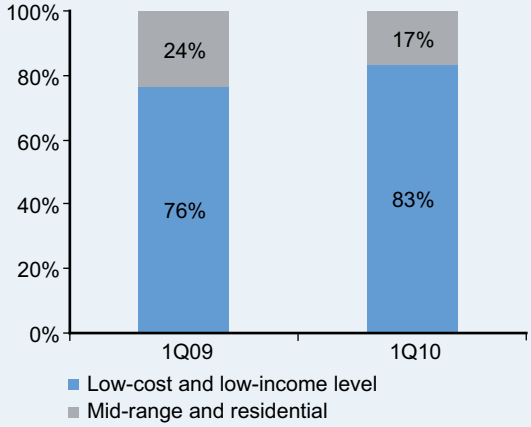
c. A greater focus on the low-cost and low-income level of the housing segment. This factor has been key for the return of growth to the sector. In response to the dynamism shown by the Infonavit and the Fovissste, homebuilders have modified their sales mix and high exposure to the low-cost and low-income level housing segments. During the 1Q10 these segments represented 86% of the volume of notarized housing sales, higher than the 76% posted in 1Q09.

d. Increases in profitability. The higher volume of notarized sales has been supplemented by strict control in operating expenses and greater economies of scale thanks to the construction of mega-projects. In 1Q10, profitability (measured through the operating margin flow) rose 82 basis points.

e. Greater control of cash flow. In general, homebuilders have sought to improve their cash position through a reduction in expansion plans (Capex), fewer land purchases (limiting them to replace already used land) and closing not very profitable projects.

Graph 23

Sales mix of the homebuilders (or developers)listed on the Mexican Stock Exchange



Source: BMV and BBVA Research

3. Special Issues

3a. Ten years of housing policy: the large numbers

Introduction

During the last decade the housing industry showed a sharply higher performance than the rest of the economy. The initial boost came from a favorable environment: on the macroeconomic side, from the stabilization of the economy, low interest rates; on the financial side, with credit products at long-term fixed interest rates, with various insurance modes due to a high unsatisfied housing demand and in a very outstanding way due to the organizational and operational change by Infonavit at the end of the decade of the nineties, which continued after the support programs implemented by the federal government as of 2000. Thus, the takeoff of the housing industry is, in good measure, due to a combination of an environment with the appropriate conditions and the result of the macroeconomic and sectorial policies applied during the last two government administrations. Ten years after the initiation of these policies, it is pertinent to summarize the advances achieved and the challenges still pending.

This article analyzes the results of the housing policy based on a review of the main indicators, such as the number of houses built, the investment made and the distribution of the resources, both at the regional level as by the type of program. Although there are aspects of policy that can and should be improved, undoubtedly the efforts have been made in the right direction. The figures are impressive in terms of the growing support that the industry has received in recent years, which is reflected both in terms of the amount of resources that have been exercised as in the diversity of programs that have been implemented.

Ten years of housing policy

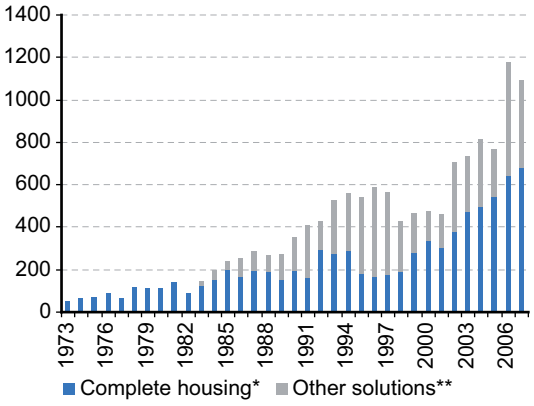
Between 2000 and 2009, the total amount of investment destined for the housing industry by the public sector averaged 1.2% of GDP, a significant increase compared with the average of the previous decade, when it was 0.8%. Measured in real terms, the investment amount exercised by the public sector increased 1.5 times, from an annual average of 177 billion pesos, to 477 billion pesos, all at 2009 prices. Not only was there more financing, but also, and above all, the number of loans increased: while in the decade of the nineties, among the various support programs[7] a total of 4.9 million housing actions were carried out (around 500 thousand per year), between 2000 and 2009, the accrued figure was close to nine million actions (nearly 900 thousand per year).

On the other hand, and despite the diversity of programs, financing has been aimed mainly for the acquisition of housing: in the decade of the nineties, its share of total resources invested was 93%, and in the period from 2000 to 2009, it maintained a similar share, 96%. This is relevant, since it shows that despite the diversity of efforts to attend the different segments of the population, the priorities have centered on construction programs and the acquisition of new housing.

7: Total housing (including new, used and rental), initial housing (self-construction and housing starts), physical improvement (expansion and remodeling), financial improvement (payment of liabilities and down payment) and infrastructure (land acquisition, lots with services and housing inputs).

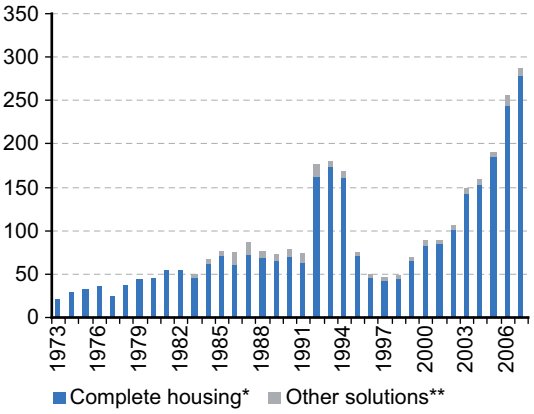
Probably this is one of the main elements that could change in future years, because as is mentioned in the article relative to the housing lag in this edition of Real Estate Outlook Mexico, there is an important market that must be served with regard to partial housing solutions, particularly in expansions and remodeling.

Graph 24
Housing actions (Number of loans and subsidies, thousands)



* Includes new, used and rental housing;
** Includes initial housing, physical improvement, financial improvement and infrastructure
Source: BBVA Research with Conavi data

Graph 25
Housing actions (Financing, billions of pesos, 2009 prices)

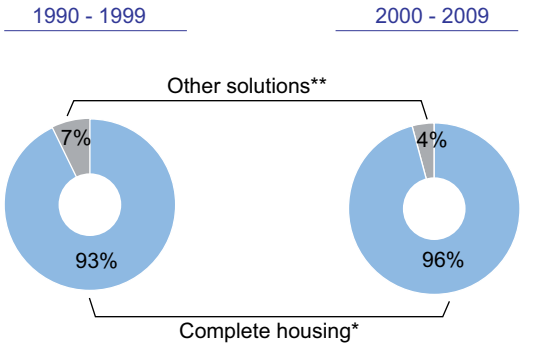


* Includes new, used and rental housing;
** Includes initial housing, physical improvement, financial improvement and infrastructure
Source: BBVA Research with Conavi data

Infonavit, cornerstone of housing policy

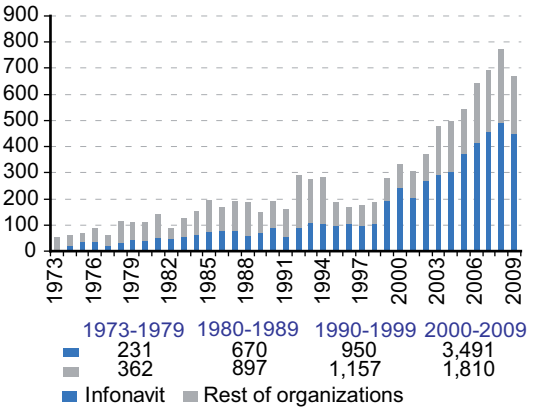
One of the main axes on which housing policy has turned in the last decade has been centered on the Infonavit (National Workers' Housing Fund Institute). With a base of 14.5 million affiliated workers, equivalent to nearly 30% of the economically active population, but with 85% of the workers in the formal sector, the decisions of the Infonavit decisively affect the national housing industry.

Graph 26
Housing actions: complete vs. other solutions (billions of pesos, 2009 prices)



Source: BBVA Research with Conavi data

Graph 27
Complete housing: Invonavit vs. other organizations (thousands of loans)



Source: BBVA Research with Conavi data

Changes of an institutional order, which made its operation more efficient, and the modifications to the Law on Retirement Savings in 1997 (*Ley del Ahorro para el Retiro*), which allowed individualizing workers' retirement and housing savings were the catalyzing factors for the development of the Infonavit. Between 2000 and 2009 the Infonavit granted 3.6 million housing loans, almost double that of all those granted since the beginning of its operations in 1973, and until 1999, 1.9 million. Also, while between 1990 and 1999 the share of this organization in total housing loans was 47%, from 2000 to 2009, this rose to 66%.

In future years, the Infonavit will continue to play a key role in the performance of the housing industry, notwithstanding that, as the article in this edition of Real Estate Outlook Mexico on the proposals to modify the Infonavit Law forecasts, products for segments of this market could begin to be developed that up to now have not been attended.

The banking sector provides a strong boost to financing

Private intermediaries, banks, *sofoles* and *sofomes* have also played an important role in the development of the housing industry during the past decade. Particularly in the acquisition of housing (both new and used), during the nineties, private intermediaries provided around 17% of total financing, which reached levels of more than 40% in the years prior to the crisis of 1995. While it is true that this last episode kept the banks removed from mortgage loans during some years, their presence began to be felt again in the early years of the decade beginning in the year 2000, and by 2009, the participation of private intermediaries in total investment represented 28%.[8] We would have to add financing for construction or bridge loans: in 2009, these resources, for a total of 35 billion pesos, represented 50% of the financing granted in the programs for housing acquisition by the banks and the mortgage *sofoles*/*sofomes* mortgage institutions.

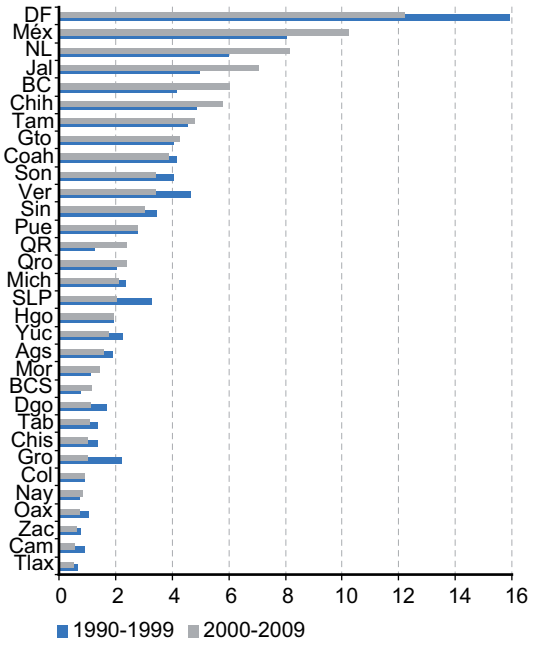
Geographic distribution of the resources; two different stories

Among the different housing programs develped by the federal government, state governments and the public housing agencies, and the programs for the acquisition of complete housing, these have significantly different performances compared with the other programs (self-construction, housing "startup", land acquisition, etc.). In the case of the former, they are mostly mortgage loans, whereas in the latter case, they are in most cases subsidies. This helps to explain the differences in the regional distribution of the resources in one or the other case. In the complete housing programs, the states where the greater part of formal employment is generated has a greater weight; this has been strengthened in this decade, with the Federal District (Mexico City), State of Mexico, Jalisco, Nuevo León and Baja California among the first places and with significant increases compared to the previous decade in the resources allocated to these programs. For the rest of the housing programs, the criteria for allocating resources have followed a pattern that is not as clear. Since the resources are fundamentally based on subsidies, it could be inferred that their allocation implies a redistributive purpose of income. However, the Federal District is also in first place, while Oaxaca and Guerrero, two of the states with the greatest lags in the country, are in 19th and 24th place, and with an even lower share than they had the previous decade.

8: Of this amount, 21% corresponds to the banks and 7% to the *sofoles*

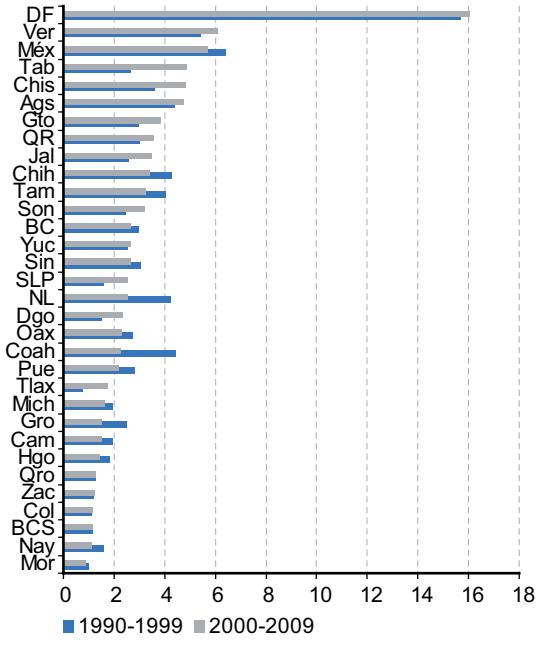
The subject of the resources and programs directed toward providing alternatvie housing solutions, that is, other than complete housing, is complex and merits a detailed and objective analysis, which although it goes beyond the purpose of this article, there are some aspects that are evident. There are more than 30 public organizations that support housing, which include federal, state and local agencies; there are various programs, although of limited impact and scant coordination and articulation among themselves. At some moment, it will be necessary to evaluate the advantage of consolidating efforts, merging programs and making more efficient use of public resources that are destined for these activities.

Graph 28
Complete housing (% share in financing)



Source: BBVA Research with Conavi data

Graph 29
Other housing solutions (% share in financing)



Source: BBVA Research with Conavi data

Conclusions

Since the end of the nineties the housing industry has had a strong boost in the country, first as a result of the individualization of retirement and housing accounts for workers affiliated with the IMSS (the Mexican Social Security Institute), and as of 2000, as a policy strategy during the last two government administrations. A decade has now gone by with these policies, and the results are evident with very favorable balances. The progress in terms of the modernization of the main agencies that promote housing at the federal level is clear and has had a solid impact on the development of the housing industry in the country.

Going forward it will be important to evaluate the programs in terms of their impact, growth potential and pending needs. We foresee the need to attend the current needs of the sector in various ways, such as, for example, those referring to finding better solutions in terms of the financing of expansions and remodelings, for the informal economy, for the development of urban centers that are better located and offer better services, among other challenges, but it will also be important to adopt criteria for efficency in the use of public resources that favor better management of those resources.

3b. Has the lag in housing been overcome?

Introduction

The boost to housing has been one of the distinctive elements in public policy during the last two government administrations in Mexico. But, has it been sufficient? In this article, the success of the support programs to housing during the last decade will be analyzed in terms of the needs of the country, which consider both attending the demographic dynamics and surpassing the accumulated or historic housing lag. Starting from the different ways of approaching the lag and the estimates that have been made with respect to it, a quantification criterion is adopted that allows its evolution throughout time, in particular between 2000 and 2008, the year of the last source of available information that permits making approximations to these relatively robust measurements.

The analysis confirms the progress made in the last decade in covering the housing needs and indicates the need to make some adjustments in the programs to promote the sector in the subsequent years so as to have the adequate instruments to cover the population segments still pending attention, for example, developing products for expansions or remodelings or for workers in the informal economy.

Quantification of the housing lag

In recent years various estimates have been made regarding the housing deficit in Mexico, the results of which depend on the criteria adopted as to their definition, the year taken as reference and the sources of information based on which the calculations are made. Thus, for example, the National Housing Commission (Conavi for its Spanish initials) considers that the housing lag should be understood as overcrowded houses of which the building materials are deteriorating and do not meet minimum well-being for its occupants. Conavi estimates that on the basis of these conditions, the figures of the XII General Population and Housing Census of 2000 (the 2000 Census) pointed to the fact that the deficit in that year was 4.3 million homes (Conavi 2004). Based on that figure, in the September issue of ***Real Estate Watch Mexico*** it was argued that the deficit could be grouped in terms of diverse characteristics, such as income and scholastic level of the population, as well as the size of the cities, among others (BBVA 2008).

The Federal Mortgage Association (*SHF*, Spanish initials for *Sociedad Hipotecaria Federal*), in turn, considers the need to distinguish, as to quality and durability of the materials, between those of precarious quality and those that can be considered as acceptable. By this, it is established that there is a basic lag (made up of housing units for two or more families and those built with precarious materials requiring immediate replacement) and an expanded one (that considers the houses built with acceptable materials) based on the National Survey of Family Income and Expenses (*ENIGH* for its Spanish initials) it is estimated that in 2008 the basic lag was equivalent to 1.7 million homes, while, in the expanded version, an additional 7.2 million could be estimated, by which the total lag, for that year, was 8.9 million[9] (*Cidoc* and *SHF*, 2009).

Also making use of the 2008 ENIGH survey, although with fewer modifications as to the concepts incorporated by the *SHF* of the homes to be included in the categories of overcrowded houses, deterioration, and duration of materials, the Infonavit estimates that the housing lag is along the order of 9.8 million homes[10] (Infonavit, 2009).

9: To this last estimate of the lag the 7.1 million who live in homes they do not own (rented or loaned) would have to be added, and which could be considered as a lag due to those who aspire to own a home.
10: In said document, overcrowded homes are those with 4 or more occupants per bedroom; all homes 30 years old or more are included in the deterioration category; and included in the durability of materials are all the homes of which the walls are not of brick, flat brick partition, block, stone or concrete.

Other authors like Kunz-Bolaños and Romero-Vadillo consider the need to differentiate between quantitative and qualitative lag, the latter being understood as the number of new homes for families who do not have a unit to live in and to substitute bad quality homes or those that have ended their useful life. The qualitative lag, for its part, considers the need for expansion or improvement so as to solve the problems of quality in the homes. With figures estimated in the Census taken in 2000, they indicate that the quantitative lag, taking into account families without a home (0.8 million), family extensions[11] (8.2 million) and homes in inadequate conditions[12] (2 million), rose in said year to 11 million homes. In turn, the qualitative lag—which takes into account aspects such as over-occupation, access to services, protection that homes provide to their occupants and the legal condition of the homes—can be quantified at 11.1 million (Kunz-Bolaños and Romero-Vadillo, 2007).

To summarize, even though in general terms, there seems to be a consensus among the organizations and analysts engaged in measuring the housing lag, to define it as the number of homes that, due to their characteristics of occupancy and to the components and materials used in their construction, do not meet a minimum well-being for their occupants[13], the interpretation of the concepts and the sources of information used mark substantial differences in the results.

Which source should be used?

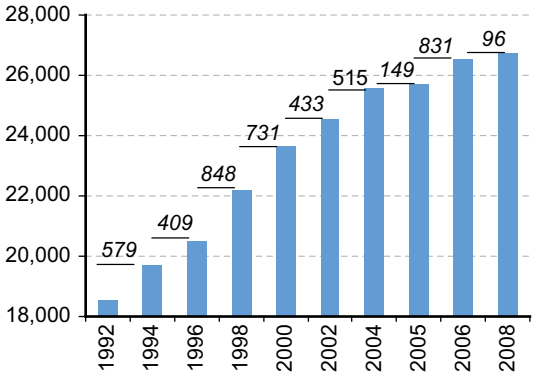
As to the sources of information, the restrictions that these impose on the quantification exercises and the interpretation of the results on the housing lag should be emphasized. Undoubtedly, the most ambitious and complete effort regarding the gathering of information on the characteristics of the population, families and homes in the country are constituted by the census taken by the INEGI (the National Statistics, Geography and Information Technology Institute) every ten years, and following this general accounting of the population and of the homes, the halfway time between census, they are not always fully comparable[14].

The lack of total comparability between the census and the counts (as well as the interest in having more timely indicators than those of the five-year periods) makes it necessary to use other sources, such as the National Survey of Family Income and Expenses (*ENIGH* for its Spanish initials), which offers important advantages such as including questions on construction materials in housing, a bi-annual periodicity and consistency in its structure[15]. Having said this, it is important to also mention that the surveys have their own limitations, since the design and size of the samples have a crucial bearing on them. Even though the structure of the information they contribute can have a high degree of consistency regarding the total population, the absolute numbers could turn out to be slightly deceptive in some indicators, be it when the result is compared between two surveys in one same year, ot when comparisons are made between years for one same survey. For example, in the National Survey on Demographic Dynamics (*NADID* for its Spanish initials) that the National Population Council (Conapo for its Spanish initials) and the INEGI, the number of homes reported for 2008 registered a difference of close to one million compared to what the ENIGH had reported in that same year[16];

11: That is, those with resident family members who, due to age or family relationship, could have their own home.
12: This category includes roof-top rooms, shelter areas, constructions without a private bedroom or bath (known as round rooms) and homes built with inadequate materials (debris material or that whose useful life has been spent).
13: This definition is consistent with the one used by the United Nations, which to measure the progress made in the Objectives of Mexico's Development in the Millennium (MDG) as to housing, uses access to sanitation, overcrowding of homes and housing materials as indicators (Cepal, 2009).
14: For example, the 2005 count did not include questions on the material s on roofs and walls that are essential for measuring the characteristics of the homes and for making comparisons as to the results of the census.
15: As of 1992, it has been sought to maintain the questionnaire structure, although in some cases with changes in the segregation of the information. An example is the number of categories included for classifying the materials on roofs and homes considered by the ENIGH which were 16 in 2000 and in 2008 were only 9.
16: In the ENADID, the total homes reported in 2006 were 25.7 million, while in the ENIGH the figure was 26.5 million. A similar case took place in 2008 between the National Survey of Occupation and Employment (ENOE for its Spanish initials), which reported 27.3 homes and the ENIGH reported 26.7 million for that year.

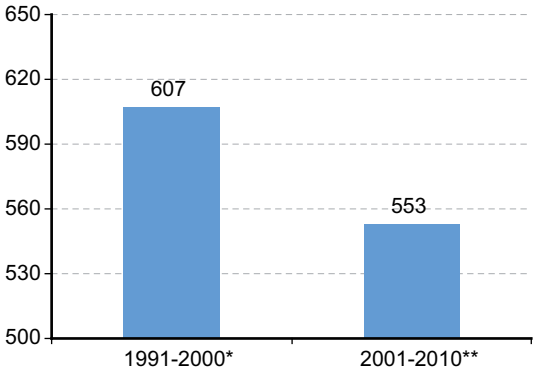
also, when comparing the ENIGH results between years, the household formation rate derived does not always have a consistent result with the official figures regarding this indicator. The recommendation is, then, that if it is decided to take absolute figures, the reference should be that of the census and/or the count, and to take advantage of the surveys more in terms of their structure.

Graph 30
ENIGH: Total homes and annual flow* (Thousands)



* In italics
Source: BBVA Research with INEGI data

Graph 31
Dynamics of household formation as per official sources (thousands)



* Population and household census 1990-2000
** 2005 Count, 2000 Census and Conapo 2006-2010 projections
Source: BBVA Research with INEGI and Conapo data

An approximation to the evolution of the housing lag

In order to measure the success of the housing policy in the last decade in terms of lowering the housing lag in the country, the more precise quantification exercise will be based on the comparison between the 2000 and 2010 Census. However, it is possible to obtain preliminary estimates—and probably consistent with the figures from the census—based on the comparison of the ENIGH in different periods, focusing the results more on the structure (distribution % of the homes) than on the absolute numbers.

As to the methodology, it is based on the structure used in similar studies, considering as elements of the housing lag: the overcrowding of persons and homes built with deteriorated materials or of short duration. For the definition of overcrowding of persons, the criterion of the United Nations is adopted, 2.5 persons per room[17] (Cepal); for their part, for the classification of the construction materials on walls and roofs, the criteria adopted by the SHF[18] is used (Cidoc-SHF, 2009). Finally, these are added to families without a home.

Thus, there are four concepts in terms of a lag: families without a home, overcrowded homes (with more than 2.5 persons per room), homes built with precarious materials and homes built with acceptable materials. For the year 2008, the sum of these four categories yields figures, in absolute numbers, very close to those at Infonavit for the same year (9.6 vs. 9.8 million) and consistent with those of the SHF (8.9 million), where the difference in the figures lies in the definition of overcrowding[19].

17: In reality, the criterion is based on occupants per bedroom, although the results of the ENIGH do not offer a clear distinction between what rooms and dormitories are. The way the question is presented “How many rooms are used for sleeping in this home?” is not strictly indicative of the number of bedrooms.
18: Said criteria consider homes built with precarious materials those where the roofs are made of debris material, cardboard sheet, palm or hay, or that the walls are made of debris material, cardboard sheet, reed, bamboo, palm, or mud. In turn, homes built with acceptable materials are identified as those where the roofs are of metallic sheets. wood or curved roof tile, or that the walls are of metallic sheet or asbestos, wood or adobe.
19: SHF considers as overcrowded those homes where more than one family lives. Also included in this study are the over-occupied homes (with more than 2.5 occupants per room), which add up to 639,210.

More important than the total number of homes—which would once again change if still another survey were taken for the same year—is the comparison that can be made based on the structure of the survey between two periods. Thus, the first result that is obtained from comparing the ENIGH of 2000 with that of 2008 is that the housing lag has been reduced when it is measured as a proportion of the total homes, of almost 43% to close to 36%.

Chart 3
2008 Housing lag

	"Millions of homes"
Total	9.6
Overcrowding	1.2
Families without a home	0.5
Over-occupied homes	0.6
By quality of materials	8.4
Precarious materials	1.1
Acceptable Materials	7.3

Source: BBVA Research with INEGI data

Chart 4
Different quantifications of the housing lag

	"Millions of housing units"
BBVA	9.6
Infonavit	9.8
SHF/Conavi	8.9
Kunz-Bañuelos*	11.1

* Based on the 2000 Census

Source: BBVA Research

The lag seen from all angles

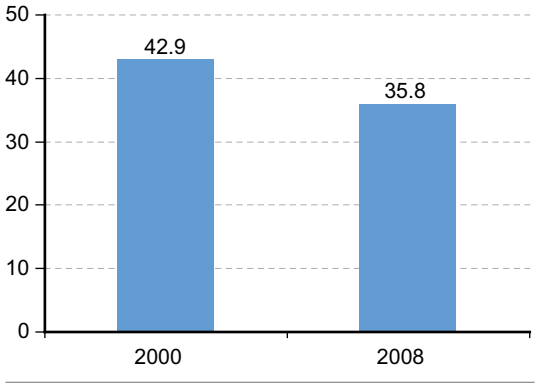
From the classifications and definitions adopted, the lag can be grouped according to the type of need, whether it is about a new home (families without a home and homes built with precarious material) or whether remodeling is required (families occupying homes built with acceptable materials) or an expansion (homes occupied by just one family although under conditions of overcrowding, or both (homes built with acceptable materials and over-occupied). Once this grouping is achieved, it is possible to reach a higher level of detail; for example, social security coverage among the population, as well as income level.

In the year 2000, the need to expand and remodel homes represented around 75% of the housing lag, while that of new homes, the remaining 25%. For the year 2008, this second component, that is, families needing a new home reduced their share in the total lag to 18%. The interpretation is that the complete[20] housing programs have had a greater impact than the subsidies applied for home remodeling and expansion or, to put it another way, the so-called "housing shares different from mortgage loans, despite being substantial in number, they could be having a marginal impact by offering real solutions for expansion, and particularly the remodeling of low-income homes.

When measuring the housing lag according to the size of the cities, it can be observed that close to 70% of the homes in a lagging condition are found in communities of fewer than 100,000 inhabitants, and this proportion remained practically unchanged between 2000 and 2008. This means that, in the agenda of the coming years, the housing policy could be centered on two types of strategies: on the one hand, to provide a solution to the housing needs emerging annually, in terms of demographic dynamics and the creation of employment, the latter being generated in the medium and large cities; and, on the other, thought should have to be given to a strategy specifically aimed at combating the housing lag, mainly in smaller-sized cities. It is interesting to note that around 55% of the total families lagging live in communities of fewer than 15,000 inhabitants.

20: New, used and rented homes.

Graph 32
Housing lag (% of total homes)



Source: BBVA Research with INEGI data

Chart 5
Housing lag according to type of need (% share)

	2000	2008
Total	100.0	100.0
New	25.5	17.5
Remodeling and expansion	74.5	82.5
Remodeling	60.7	75.8
Expansion	13.9	6.7

Source: BBVA Research with INEGI data

The housing lag can also be measured in terms of the level of social security coverage of the population[21]. For 2008, over 60% of the housing lag was concentrated on the population who works in the informal sector or without social security coverage. Even though it is difficult to explain this figure when it is compared with the result in 2000 (when the share of the population with social security coverage in total lag was of only 16%), a connection can be established between the result for 2008 and the lag estimates between the social security affiliated population conducted by Infoinavit[22].

Chart 6
Housing lag according to the size of the community (% share)

	2000	2008
Total	100.0	100.0
100,000 inhabitants	30.4	31.8
New	10.7	5.2
Remodeling and expansion	19.7	26.6
15 to 99.9 thousand inhab.	13.1	12.3
New	1.9	1.8
Remodeling and expansion	11.2	10.5
2.5 to 14.9 thousand inhab.	15.8	16.4
New	2.6	3.1
Remodeling and expansion	13.2	13.4
Up to 2.5 thousand inhab.	40.7	39.4
New	10.3	7.4
Remodeling and expansion	30.4	32.0

Source: BBVA Research with INEGI data

Chart 7
Housing lag according to social security coverage (% share)

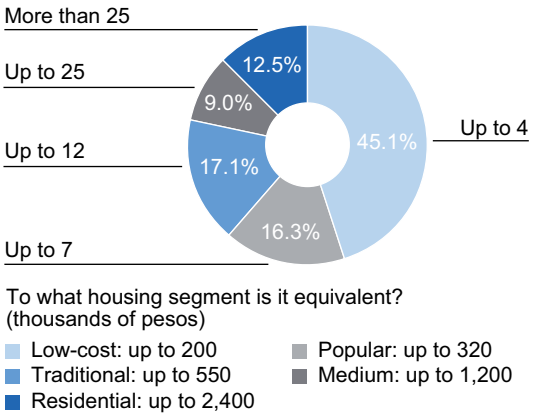
	2000	2008
Total	100.0	100.0
With coverage	16.1	37.5
Without coverage	83.9	62.5

Source: BBVA Research with INEGI data

21: The criterion for defining whether a family has coverage or not consisted in selecting those who received health services from the IMSS, ISSTE, Pemex, Armed Forces, and universities. Excluded from this criterion were the families who received attention from the Popular Insurance that offers health services but does not grant the right to a home.
22: In the 2010-2014 Financial Plan of the Infonavit, it is established that the lag between its affiliates can be of the order of 2.5 million workers. Considering that said Institute could incorporate something like between 75% and 85% of all the workers in the formal sector and that the total lag that is derived from the estimate exercise is in absolute numbers along the order of 10 million, 38% of the result here would imply that between 2.8 and 3.1 million of the lag would correspond to workers registered in the Infonavit.

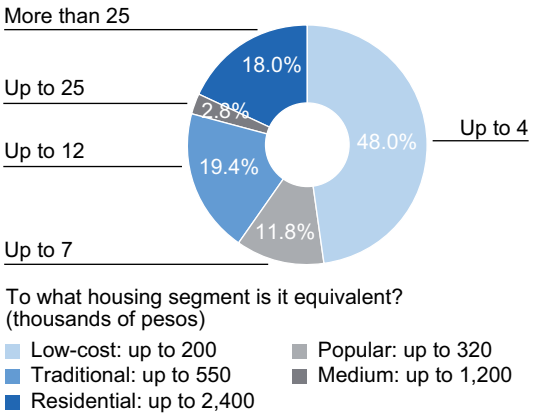
What income level does the population found in the housing lag condition have? By comparing the results of 2000 and 2008, it can be seen that, in both periods, close to 50% of the population under a lagging condition has a salary income of up to four minimum wages, which would be equivalent to the current conditions of financing the capacity to acquire homes of up to P$200,000 (standardized to 2009 prices). It can also be observed that those of higher income (of over 25 minimum wages) have been those who have better managed to take advantage of the housing programs during the last decade, inasmuch as their share in the total population in the lag dropped from 18% to 12.5%. This result is little surprising, being that the income of this population would allow it to acquire, in principle, a home of up to P$2.4 million at 2009 prices.

Graph 33
Housing lag according to wage income (% share) 2008



Source: BBVA Research with INEGI data

Graph 34
Housing lag according to wage income (% share) 2000



Source: BBVA Research with INEGI data

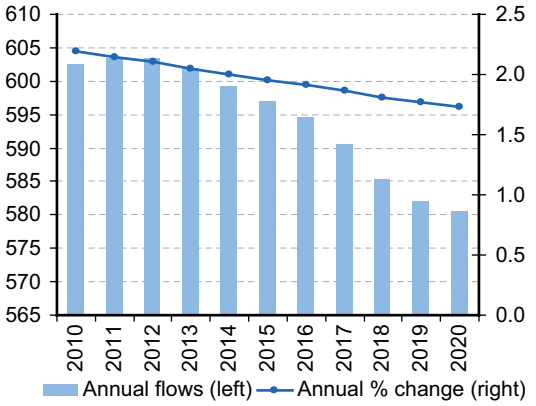
Medium-term trends: it would be necessary to add to the housing lag at least the demand for household formation

The housing policy has been successful by gradually lowering the housing lag in the country mainly for the acquisition of homes (new and used), but that does not mean that the housing needs are being reduced for the coming years, or at least not in an abrupt manner. The key lies in the rate of household formation, which at its current growth rate, higher than 2% annually, more than doubled the population growth rate, of which the rate of expansion has remained at rates along the order of 1% annually.

Between 2010 and 2020, something like 550,000 and 600,000 households will be formed annually, according to projections by Conapo, which represents the potential housing demand forthcoming from the demographic trends. Of these, only a fraction will require new housing; that is, those families who want and are in economic conditions for acquiring it, which is what constitutes a part of effective housing demand. The unipersonal homes would be in this group, which represent close to 9% of total households (and with a higher growth rate than 3%), and the nuclear (formed exclusively by parents and children), which currently represent close to two-thirds of the total[23]; between 2010 and 2020 the cumulative housing needs for these two groups will be close to 5 million units. Added to this figure should be the households that are currently in a housing lag condition and require new homes, around 1.5 million, based on estimates presented here. Thus, in round numbers, the annual needs for the construction of new homes between 2010 and 2020 can be calculated at around 650,000 annual units.

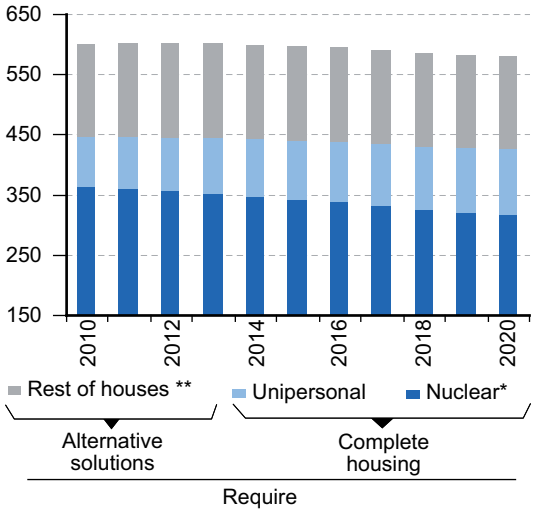
23: Although this group of homes decreases rapidly, Conapo estimates indicate that in 2020 they will still be more than 60% of the total homes in the country.

Graph 35
Projection of household formation (Thousands and annual % change.)



Source: BBVA Research with Conapo data

Graph 36
Households and housing requirements (Thousands)



* Parents and children; ** Co-residents, extended families, etc
Source: BBVA Research with INEGI and Conapo data

Conclusions: the need for adjustment of public policy and for searching other solutions to lower the existing housing lag

The analysis and the comparison of the results of the ENIGH between 2000 and 2008 show that the housing lag has been reduced throughout the last decade. The greatest progress was concentrated in medium and large cities (larger than 100,000 inhabitants), which is why, in the future, the strategies for reducing the lag should be more centered on the rural and semi-rural environment (communities of fewer than 15,000 inhabitants) with specific programs for the low-income population (up to four minimum wages) and in the informal sector.

It is important to underscore that not all the families in the lag condition require new homes; even when analyzing the degree of occupation and the construction materials of the homes, it can be said that the greater part of the housing lag corresponds to the needs of expansion and, above all, remodeling, and only a fraction lower than 20% requires a complete home. However, this does not mean that the need for housing construction has decreased, being that the household formation rate is double that of population growth. Between both elements, it is estimated that the need for construction of new homes in the coming decade will be along the order of 650,000 units annually.

Bibliographical References

Cidoc/SHF (2009). *Estado Actual de la Vivienda en México*. (Current Status of Housing in Mexico) Infonavit (2009). Financial Plan 2010-2014.

Cepal (2007). Regional proposal of complementary indicators to the objective of development of the Millennium 7: *"Garantizar la sostenibilidad del medio ambiente"*. ("Guaranteeing the sustainability of the environment") Series of Statistical and Prospective Studies, No. 50. Santiago de Chile.

Kunz-Bolaños, Ignacio y Romero-Vadillo, Irma (2008). Nature and dimension of the housing lag in Mexico. Magazine: *Economía, Sociedad y Territorio*, vol. VIII, no. 26.

UNO (Organization of the United Nations) (2004). Urban indicators as per the agenda, Hábitat. United Nations Program for Urban Settlements.

Inset 4: Salaries: only a part of income

During the past decade, the development of the mortgage market in Mexico has been based mainly on the programs for the acquisition of new housing by workers in the formal sector of the economy, where wages are the main reference point for defining payment capacity and therefore, determine the amount of the credit. However, this situation does not fully reflect the structural conditions of the labor market in Mexico, and therefore in recent years new products have been developed that expand the category of accreditable income. Such products include, for example, conjugal credits and loans for non-salaried workers. The trends indicate that these financial products could increase their share in mortgage financing in the next few years. In this inset we will use the results of the 2008 National Survey of Household Income and Spending (*ENIGH* for *Encuesta Nacional de Ingresos y Gastos de los Hogares*) to obtain an estimate on the potential increase in families' capacity to acquire housing by incorporating sources of income that are alternative to or supplement the contractual salary.

Salary income vs. total income

According to the 2008 ENIGH, household income has a monetary component (80%) and another non- monetary component (20%). In the former category, wages account for 62% of the total, while other sources (property rental, independent work, and subsidies, mainly public), provide up to an additional 38%.

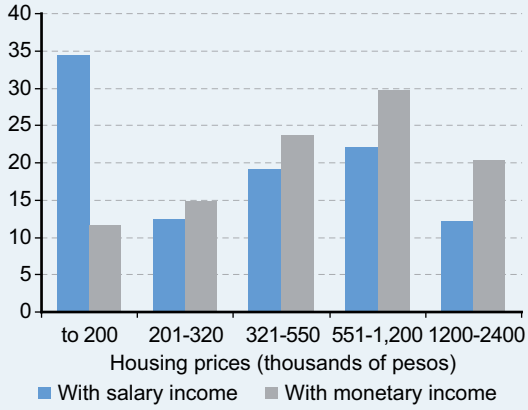
To measure this potential impact, the number of families (measured as a percentage of the total) was correlated with their purchasing power; that is, with the value of the home that they could acquire with their contractual salaried income. Non-monetary income was added to the results of this first exercise and a new calculation of families' purchasing capacity for home acquisition was obtained. The result is intuitive, showing a significant improvement for families, since they have the potential to acquire higher priced housing[24].

For example, using salary income as a reference for payment capacity and therefore of acquirable housing[25], it can be concluded that for close to 35% of households, formal salary income is only sufficient for obtaining low-cost housing in the market (with a price tag of around 200,000 pesos), while only 11% of families could acquire a home priced at more than 1.2 million pesos. At the same time, using monetary income as a whole, the population with the capacity to purchase only low-cost housing decreases to 11%, and purchasing capacity in all segments increases, with 20% of households now in the higher price segment.

In conclusion, products have begun to be developed in the Mexican mortgage market that contemplate revenue generated in non-salaried activities in calculating total income. Considerable progress still remains to be made in this field in order to adequately measure income and the risks inherent in families' payment capacity, which can translate into an expansion in demand for mid-range and residential housing.

Graph 37

Breakdown of households and housing segments according to income: salary vs. monetary (2008)



Source: BBVA Research with INEGI and AHM data

Bibliographical References

INEGI (2008). Encuesta Nacional de Ingresos y Gastos de los hogares (National Survey on Household Income and Expenses).

24: To calculate the value of acquirable housing, the reference variables used were the monthly payments required for a 20-year mortgage loan, at an annual 12% interest rate, and a monthly payment not greater than 33% of salary income.
25: Excluded from the analysis are factors such as time on the job, credit history, and debt level, which also influence credit rating and capacity

3c. The impact of housing policy on the cities

Introduction

Housing construction throughout the last decade has had a strong impact at the local level, particularly in those regions where complexes of thousands of housing units were built, which suddenly led to growth several times greater than the cities' original size. In some cases, housing construction was associated with the dynamics of economic activity itself, although in others it was due more to land availability and proximity to large urban centers which could provide more and better public services for the community. This article analyzes the main cities where housing has been built in the last decade, as well as their characteristics, such as their relative importance in terms of economic activity and employment. Among the most relevant results of this analysis are, on one hand, the great concentration of housing in a limited number of cities, the accelerated growth of metropolitan areas and the appearance of some emerging cities that have strongly boosted economic activity at the state level. Moreover, it is observed that urban planning and development was one step behind the dynamic of housing construction, especially in the cities considered small, where the growth was explosive.

Estimating the impact of housing on cities

The accelerated process of housing construction in the last decade has had important repercussions on the cities where it has been concentrated. The number of housing units and the needs that have arisen (in terms of provision of services and urban development) is an important part, although clearly this is not the only aspect. However, a comprehensive analysis of this issue must also be considered, such as aspects relative to social and family relations, and even political organization, to mention only some of the most important. This work approaches only some of the previous elements, particularly the geographic and economic characteristics of the cities where the greater part of housing has been built in recent years.

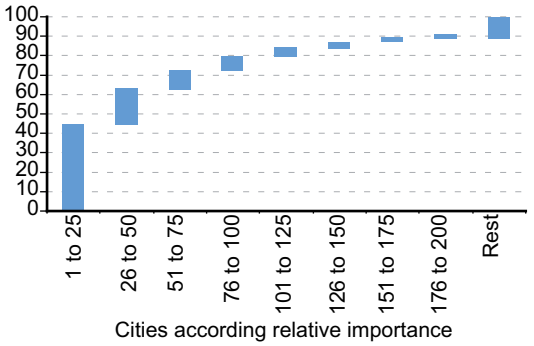
The information to conduct the analysis was based on the records of the National Workers' Housing Fund Institute (Instituto del Fondo Nacional de Vivienda para los Trabajadores (Infonavit[26]) at the municipal level reported by the National Housing Commission (Comisión Nacional de Vivienda (Conavi). Although there are figures for the year 2000, the analysis includes the number of loans granted for the 2001-2009 period, to compare these with the existing housing stock in 2000, according to the population census for that year[27]. The employment level is also analyzed at the municipal level, measured by the number of workers affiliated in the Mexican Social Security Institute (IMSS) from 2000 to 2009. Finally, the added value reported by the 2004 Economic Census as an approximation of municipal GDP to relate housing construction with the relative importance of the cities in terms of their share in income generation.

26: Complete housing program (includes new, used and rental housing), which represents around 98% of total loans granted.
27: This approximation has some limitations, such as the fact that not all the credits or loans imply new housing (up to 2008, the weight of used housing was 10% to 15%, and in 2009 reached 30%; also, it must be considered that in some cases, new housing was constructed on the same land surface that was occupied by other housing; that is, the housing construction is overestimated. Although this last fact was observed in cities with a high housing density, the greater part of the construction has been done on land in cities of medium development. To consider both factors, a 25% adjustment is made to the figures for loans granted at the municipal level. This corrects the overestimation bias in the large cities and does not invalidate the results in the small and medium cities.

Strong concentration on housing construction

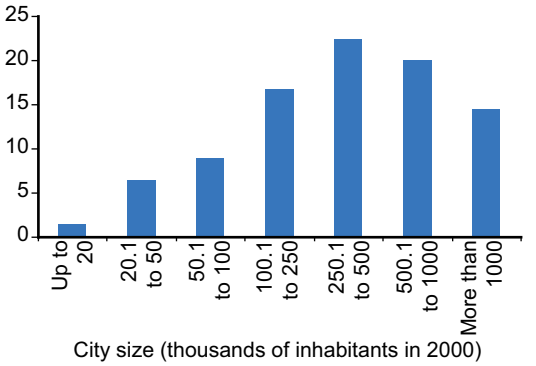
Between 2001 and 2009, the Infonavit placed around 3.3 million mortgage loans for complete housing in close to 1,560 municipalities in the country. However, 95% of these loans were concentrated in 207 cities. Moreover, the top 25 cities accounted for nearly 40% of total loans granted, and the top100 cities accounted for around 80%.

Graph 38
Housing construction 2001-2009 (Accrued % share)



Source: BBVA Research with Infonavit data

Graph 39
Housing construction by size of city (% share)



Considers the 203 cities that concentrate 95% of Infonavit loans granted in the 2001-2009 period
Source: BBVA Research with Infonavit data

The high concentration level of mortgage loans is evident, which takes on greater relevance considering that the 207 municipalities referred to represent less than 1% of the national total (2,554). The figure is consistent with the results of the article regarding the housing lag in this issue of ***Mexico Real Estate Outlook***, in the sense that the housing policy has managed to reduce the lag, especially in medium and large cities, and the greater part of what is still pending attention is located in cities with less than 100,000 inhabitants and geographically dispersed.

Thus, we must ask ourselves what characteristics those cities possess where more housing has been built throughout the last decade, in terms of their economic importance and dynamism, as well as their geographic location.

Does economic activity determine housing construction?

It is clear that in the demand for housing, two fundamental variables are employment and the rate of household formation, both linked with production centers, which in Mexico's case traditionally has revolved around the capital of the country and of the states. Thus, there is a direct relationship between the number of mortgage loans granted during the 2001-2009 period and the relative importance of cities, measured through their share in total added value of the economy (according to the 2004 economic census, the most recent and desegregated source of activity at the municipal level). Also, there is a relationship between loans and the growth of the cities, observed through employment growth (workers affiliated in the IMSS) at the municipal level throughout the decade.

Nevertheless, the relationship, although positive, is not as marked as could be surmised. In the case of GDP, for example, the concentration of income is higher than in the case of housing construction: the top 50 municipalities contribute 72% of GDP, while the 50 municipalities

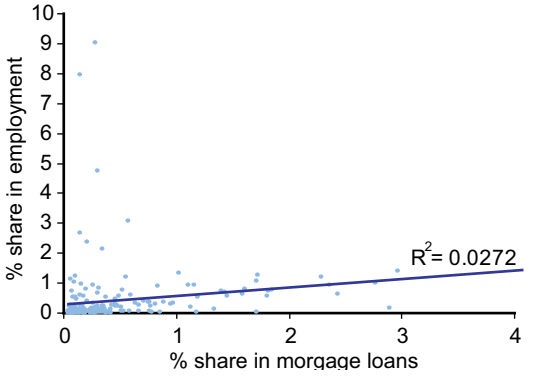
with the greatest number of mortgages represented 60% of the total. That is, in a significant number of cases, the city is important in terms of its share in housing construction, but does not necessarily contribute to a greater size of the economy[28].

In terms of the relation between mortgage loans and employment, something similar occurs. Nearly, 79% of the employment generated in the country during the decade[29] was concentrated in the 207 municipalities analyzed. However, for a large number of municipalities with a high share of housing construction, the generation of employment was scant.

Graph 40
Employment vs. housing construction

The graph compares employment generated during the 2000-2008 period and housing construction in the 2001-2009 period for the 200 cities where 95% of Infonavit loans were granted
Source: BBVA Research with Infonavit and IMSS data

Graph 41
GDP vs. housing construction



Note: The graph compares added value at the municipal level (according to the 2004 Economic Census) and housing construction in the 2001-2009 period for the 200 cities where 95% of Infonavit loans were granted
Source: BBVA Research with Infonavit and INEGI data

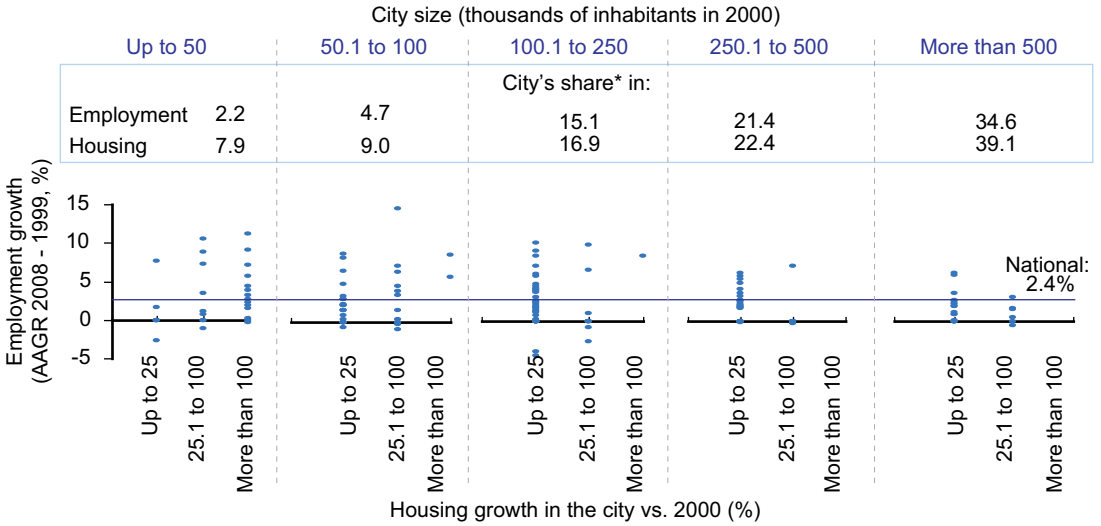
Another manner of analyzing the link between employment and housing construction is by grouping cities according to size and analyzing in each one the employment dynamics (through its average annual variation rate) and housing construction. Based on this, there are several interesting results: first, in the smaller sized cities, up to 500,000 inhabitants, the share of employment is much lower than that of housing; the most representative cases are those of cities of up to 50 thousand and up to 100 thousand inhabitants, which jointly accounted for less than 7% of employment and almost 17% of the loans.

Second, employment growth greater than the national average (2.4% annual growth) was observed in cities of up to 500,000 inhabitants; and the combination of cities with high employment growth and strong growth in housing construction (greater than the national total, which according to the household formation rate could have been up to 25% in the decade) was seen mainly in cities of up to 250,000 inhabitants.

What is outstanding is the emergence of small and medium-sized cities that are driving both housing construction and generating employment in an important way. The following section offers greater evidence regarding this trend and its possible explanations.

28: In the same manner, some cities with a high contribution to GDP have a comparatively low share in terms of housing construction. For example, according to the figures of the 2004 Economic Census, the cities of Ciuded del Carmen in the state of Campeche, Monterrey in Nuevo León, Guadalajara in Jalisco, as well as the burroughs of Cuauhtémoc, Benito Juarez and Alvaro Obregón in the Federal District (Mexico City), jointly contribute 32% of added value, but only 2% of housing was constructed there. Without these cities, the R2 of the regression between housing and GDP rises from 0.027 to 0.375.
29: The year 2008 is excluded to avoid the effect of the crisis in 2009 on employment, since it is reasonable to think that the construction of housing does not adjust with the same speed as employment. It could be surmised that a high proportion of the housing built in 2009 was begun in 2008, when expectations regarding employment and the economy in general were more favorable.

Graph 42
Employment and growth dynamics in the cities according to their size



*Refers to the city's share in employment and the number of loans granted by Infonavit in the decade
Source: BBVA Research with Infonavit, INEGI and IMSS data

Small cities, on the rise

The size of the cities and their geographical location also provide information on the process of housing construction in the last decade. Grouping the cities that concentrated 95% of mortgage loans in terms of the number of inhabitants in the year 2000, it is seen that around one third of the loans were placed in medium-sized cities, of between 500,000 and one million inhabitants (20%) and large cities of more than one million inhabitants (around 13%). These cities correspond to some of the burroughs in the Federal District and municipalities in the state of Mexico, as well as some state capitals.

Nevertheless, it is interesting to note that the rest of the housing units, two thirds, were built in small cities, which in the year 2000 did not have a population count greater than 250,000 inhabitants. On one hand, a direct implication of the dynamics of housing construction in this type of cities has to do with the costs associated with population growth and the capacity of the cities to handle it. In some cases, especially in the smaller sized cities, growth in housing construction was equivalent to multiplying the original size of the city several times; in turn, the provision of services and urban infrastructure advanced at a much slower pace. This speaks of the urgent need of giving priority to planning activities and urban development, prior to housing development policy, as well as a reimplementation objective in terms of the powers that the different spheres of government should have on this matter.

In turn, the location of the cities where the greater part of mortgage loans have been placed also points toward the growing importance of relatively small cities, particularly if they are near the regional production centers. If the number of loans for the 2001-2009 period is grouped in accordance with the location and condition of the cities, it is seen that the greater drive has been seen in cities surrounding the state capitals or the area surrounding the Federal District, that is the metropolitan areas. These cities concentrated almost 40% of the loans granted. In turn, the state capitals and the Federal District accounted for 25%. The rest of the loans were located in the border cities and in emerging cities such as León in the state of Guanajuato, the region of the lagoon, in Coahuila and Durango, as well as in some tourist cities of growing

importance such as Cancún and Playa del Carmen in the state of Quintana Roo, and Los Cabos in Southern Baja California.

Thus, it is important to know what the factors are that explain the strong growth of housing in cities other than those where production and/or employment are concentrated. Although the reasons for this trend could be diverse, some are clearly identified. First, the emergence of new poles of economic activity. This is the case of the regional production centers engaged in exporting activity, in the automobile industry and the border area corridors of in-bond manufacturing for export ("maquiladoras"), which are both linked more to the availability of logistics and transportation infrastructure than to urban centers. Also in this category, we would have to consider the emerging cities mentioned above, which without being state capitals, generate a strong impulse in terms of industrial activity and services.

Second, there is the pressure from the cities themselves toward horizontal growth, which in a certain sense is natural. Nevertheless, the accelerated growth of the peripheral areas of urban centers could also reflect the difficulty of establishing housing policies and/or use of the ground that encourage better use of the existing infrastructure or a vertical growth of cities.

Third, the construction model used is based on horizontal rather than vertical housing. The greater part of the housing that has been built in the country has been directed toward the medium- and low-income segments. These concentrate more than 70% of the mortgage loans granted by the Infonavit during the last decade. The model used to attend this segment has been based on constructions of one or two floors, in some cases in developments of thousands of homes, which naturally implies great extensions of land that are not available in the large cities.

Fourth, there is the growth of small cities with scant provision of services and infrastructure, and although they are located at a short distance from the production centers, they are not necessarily adjacent to those areas where economic activity and jobs are generated. They also reflect the bottlenecks that exist in the housing market which inhibit the efficient development of industry. The difficulty of regulating the land market, in the absence of sufficient information on land reserves and the lack of clear rules and standardized processes on the matter of the conversion of urban land, as well as strong disparities in the efficient operation of the public registries at the state level and the cadastral values at the municipal level, are just some of the most evident examples.

Conclusions: the importance of the small and medium-sized cities

Housing construction throughout the last decade has had an important effect within the cities. The growth of small and medium-sized cities has been notable; proportionally, these are where housing construction has been most concentrated. This has been partly due to the natural pressure of the cities and in part also due to the conditions under which the housing industry operates (the horizontal construction model, little land available and institutional factors that limit the efficiency of the production chain). A process of migration from the centers of production and employment toward the peripheral areas has been generated. This dynamics will present new challenges for policies on housing and urban development in the next few years, among which there is the need for decisive programs, budgets and agencies at the metropolitan rather than the municipal level. On the other hand, it will be important to have objective appraisals and, if necessary, the re-implementation of the powers of the different levels of government (federal, state and municipal), with regard to the planning and housing policy in the country.

Inset 5: Modifications to the Infonavit Law

Introduction

The Mexican Congress is currently discussing a bill to reform the National Workers Housing Fund Institute (*Fondo Nacional de la Vivienda para los Trabajadores*), Infonavit Law, which represents one of the most important structural transformations for the agency. In this article we will analyze the content of the bill, the motivation behind it, and some repercussions that it could generate in the Mexican mortgage market in the short and medium term.

Content of the bill

The axes of the reform proposal are[30]:

1. The workers' housing sub-account, which is equivalent to 5% of their salary and that is currently administered by the Infonavit, will gradually be divided into two, one corresponding to the housing fund (1%) and the other to the retirement sub-account (4%). The resources from the latter will also be administered by the Infonavit, through the creation a Retirement Fund Manager (*Afore*). The deadline for the separation of these resources will be from 2011 to 2017.
2. The Infonavit will be granted the authority to undertake financing, coverage, and guaranty operations, to be charged to the National Housing Fund.
3. The Infonavit will be allowed to expand its affiliate base, to include former workers and employees of state and municipal government departments.
4. The housing agency's audit and oversight powers will strengthened and regulation will be enacted that will allow it to operate as an autonomous fiscal body.

Motivation behind the proposal

The bill to reform the Infonavit Law seeks to anticipate the reduction in the housing needs that it could face in the next few years from the agency's current affiliates. It also aims to eliminate bottlenecks that have limited their access to financing in the recent period. In addition, the reform will increase the size of the population that the Infonavit attends and will use the agency's operating structure to offer new services.

Between employer fee payments, demographic trends, and credit amortizations, the Infonavit will have resources to maintain the rate of financing, but the agency is concerned over whether there will be sufficient demand. With the close to five million mortgage loans that it has granted to date (three million of these in the past 12 years), the agency has been reducing the housing needs of its affiliates. As a result, its projections indicate that financing needs could decrease significantly toward the middle of this decade.

At the same time, the model promoted in the past few years has been based on mortgage loans for the acquisition of complete, mainly new, housing[31]. However, the needs of workers who require other types of solutions have not been attended. In the 2010-2014 Financial Plan, the Infonavit recognizes this situation, and it also detects that it is in the home expansion and remodeling market where most of its affiliates who still face the need to address deficiencies in their housing are to be found.

The modifications to the law will allow the Infonavit to expand its base of affiliates, to include workers who were removed from the agency's roles but who had paid fees into the system for a period of at least two years (according to the Infonavit, their numbers could total as much as 25 million potential affiliates), as well as employees of state and municipal agencies that do not have a housing fund (the total universe of such workers is estimated to be between 3.5 million and 5 million).

The new powers in terms of audits and oversight could speed up judicial processes and the execution of guarantees and thus reduce the timeframes for portfolio and overdue loan recovery.

With regard to financing, there are two points that should be emphasized in the reform bill, and that seek to diversify sources and reduce funding costs. On one hand, with the

30: In addition to those mentioned here, the bill contains modifications to permit those who have never exercised a mortgage loan to transfer their resources to the retirment account (without the need of entering into a legal process for this); as well as the possibility that young workers (30 years maximum) with low income (three minimum wages) withdraw 30% from the balance of the housing sub-account for down payment on a new home. The details of this are not described due to the small impact on the Infonavit operation.
31: Although used housing is increasingly more important, and in 2009 represented 30% of loans.

authority to issue debt and guarantees, the possibility is opened for undertaking portfolio placements and debt issues through new products, such as covered bonds, which offer a combination of risk and yield that investors (especially in the international market) value more highly than what is offered by the current placements (through *Cedevis*). This translates into longer-term placements and lower interest rates. On the other hand, with the creation of an *Afore* in order to manage a part of the resources of the housing sub-account, the investment portfolio of the new pension fund manager could include the agency's own debt and portfolio placements.

Finally, the policy of fee collection via payroll will represent a new opportunity for revenue for the Infonavit. In the credits granted in the form of co-financing (which represent between 20% and 25% of total agency loans) the Infonavit can ask businesses to deduct the complete monthly mortgage payment from the payroll (not only the portion of the credit granted by the agency), and it will then distribute the part corresponding to the financial institutions. By delegating the collection expenditures to the Infonavit, the financial intermediaries could reduce their operating costs and the risk of payment default. This will allow for a more integrated and efficient system.

Short and medium-term impact

In the short term, the Infonavit could reduce its funding cost. In undertaking portfolio and debt placements under more favorable conditions, the housing agency could not only assure the availability of resources to fulfill its financing goals but also to refinance its liabilities, which expands the maneuvering room of its finances.

In the medium term, the Infonavit will have greater resources to attend to new markets, such as workers in the formal private sector not affiliated to the agency, mortgage products different from complete housing, and financing for housing construction. Among the new base of affiliates will be informal sector workers (those who have paid fees to the Infonavit for at least two years), as well as state and municipal government employees. New credit products will be developed, to attend to the market for home remodeling and expansion, as well as financing for housing construction. This latter point is already allowed under the current legislation, but now housing construction will also have access to resources.

Conclusions

The bill to modify the Infonavit Law seeks to eliminate some restrictions that the agency currently faces in terms of financing, and others that are projected to occur toward the middle of the decade, related to its affiliates' demographic structure and housing needs. It can be anticipated that the changes proposed in the legislation will have important repercussions for the Mexican mortgage market (some in the short and others in the medium term), among the most important of which are, first of all, a more solid financial position on the part of the institute; secondly, a broader creditor base, and thirdly, new financing products

The reform bill unquestionably is an interesting proposal and as opposed to others, reflects a view toward the future in relation to the factors that, over the course of the decade, will have an impact on Infonavit financing.

Bibliographical References

Cámara de Diputados (2009) (The Chamber of Deputies of the Mexican Congress). Iniciativa de Decreto por el que se reforman y adicionan diversas disposiciones de la *Ley del Instituto del Fondo Nacional de la Vivienda para los Trabajadores y de la Ley del Seguro Social*. (Bill of the Decree to reform and add various provisions to the Law of the National Workers' Housing Fund Institute and the Social Security Law) *Poder Ejecutivo Federal* (Federal Executive Power).

4. Annual macroeconomic indicators

Chart 8

Annual macroeconomic indicators

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010f
Real GDP[1] (annual % change)	-1.0	0.1	1.3	4.0	3.2	4.9	3.3	1.5	-6.6	**4.5-5.0**
Private consumption, real (annual % change)	2.5	1.6	2.2	5.6	4.8	5.6	4.0	1.9	**-6.2**	**1.5**
Government consumption, real (annual % change)	-2.0	-0.3	0.8	-2.8	2.5	1.9	3.1	0.8	**2.3**	**0.2**
Investment in construction, real (annual % change)	-4.6	3.5	3.2	5.1	4.1	7.9	4.9	1.7	**-2.3**	**2.5**
Residential				3.7	2.5	8.9	3.4	0.7	**-6.9**	**2.2**
Non-residential				6.1	5.2	7.2	5.9	2.3	**0.8**	**2.6**
Formal private empl. (IMSS), total (thousands of people, avge.)	12,381	12,279	12,255	12,522	12,898	13,508	14,043	14,394	**13,963**	**14,298**
Annual % change	0.2	-0.8	-0.2	2.2	3.0	4.7	4.0	2.5	**-3.0**	**2.4**
Avge. salary of contribution (IMSS, nominal pesos per day, avge.)	146.2	158.0	168.4	178.6	188.9	198.5	209.2	220.3	**229.6**	**242.5**
% real annual change	6.0	2.9	1.9	1.3	1.7	1.4	1.4	0.2	**-1.0**	**1.0**
Real total wages (IMSS, annual % change)	6.2	2.1	1.7	3.5	4.8	6.2	5.4	2.7	**-4.0**	**3.4**
Minimum general salary (daily, nominal pesos)	37.57	39.74	41.53	43.30	45.24	47.05	48.88	50.84	53.20	55.78
% real annual change	0.6	0.7	0.0	-0.4	0.5	0.4	-0.1	-1.1	**-0.6**	**0.3**
Consumer prices (end of period, annual % change)	4.0	5.1	7.3	14.5	0.6	11.8	2.9	1.0	**3.6**	**5.6**
Average 28-day equivalent interest rate (TIIE)	12.9	8.2	6.8	7.1	9.6	7.5	7.7	8.1	**4.5**	**5.0**
10 year interest rate, 10 year Govt bond (M10)	10.8	10.1	9.0	9.5	9.7	9.8	9.9	10.0	**8.0**	**7.6**

f: forecast; 1: INEGI modified its registry methodology base 2003=100. Previous data are being revised by INEGI, that is why data is in 1993=100 base
Source: BBVA Research with Banco de Mexico, Conasami, INEGI and IMSS data

Chart 9

Annual construction and housing indicators

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010f
Construction GDP, real (annual % change)	-3.4	2.0	3.3	5.3	3.9	7.8	4.4	0.6	**-7.5**	**2.2-2.6**
Building	-3.5	2.6	3.3	3.6	0.7	9.6	3.6	0.2	**-6.9**	**2.2**
Civil engineering and major works	-2.5	1.0	3.3	7.8	12.3	5.5	6.2	2.0	**-8.0**	**2.9**
Specialist construction work	-5.2	0.7	3.3	10.5	-0.6	2.7	4.0	-1.3	**-10.5**	**4.2**
Construction employment (IMSS, thousands of people, avge.)	934.2	937.5	945.5	969.4	1,020.1	1,133.1	1,203.8	1,209.5	**1,103.6**	**1,130.0**
Annual % change	-1.1	0.4	0.8	2.5	5.2	11.1	6.2	0.5	**-8.8**	**2.4**
Hydraulic cement production (tons, annual % change)	-4.3	2.4	0.8	4.0	11.1	7.7	2.0	-3.1	-3.1	
Domestic cement consumption (tons, annual % change)	-5.5	1.2	-0.3	2.9	10.1	6.7	1.1	-4.0	1.5	
Construction companies[2] (real prod. value, annual % change)				1.7	4.2	7.5	2.8	-0.8	-10.1	
Building				16.2	9.0	9.5	9.2	-0.9	-20.2	
Public works				-6.0	0.2	8.7	-3.2	-0.2	8.7	
Water, irrigation and sanitation				31.2	-1.3	-18.5	-22.0	4.9	-1.3	
Electricity & communications				-15.3	-28.4	12.5	-15.2	19.6	32.4	
Transportation				-16.8	6.9	6.9	7.8	13.7	9.4	
Oil and petrochemicals				-0.2	5.7	26.3	-5.6	-26.3	1.4	
Other				-16.4	-0.8	-6.9	-5.8	-3.3	-36.4	
Residential construction prices, general (annual % change)	3.5	3.5	6.9	14.5	0.6	11.8	2.9	13.1	-1.0	
Construction materials (annual % change)	2.2	2.7	7.2	17.7	-0.2	14.1	2.6	15.5	-1.8	
Labor (annual % change)	10.1	7.6	5.4	4.5	3.8	3.8	4.4	3.5	3.1	

f: forecast; 2: Considers companies which are affiliated and not affiliated to the Mexican Chamber of Construction Industry
Source: BBVA Research with Banco de México, Conasami, INEGI and IMSS data

Chart 10

Annual housing market indicators (a)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
Housing sales (thousands of units)												
Total	242.0	282.2	253.2	343.6	400.5	418.6	554.9	538.9	512.1	501.7	330.4	
Segment A	103.3	93.1	63.4	75.6	83.2	94.2	105.3	137.0	120.0	187.0	126.1	
Segment B	127.1	172.1	162.2	223.8	259.5	246.4	363.2	275.0	250.0	188.0	120.6	
Segment C	7.4	12.0	21.3	34.3	44.2	54.8	58.8	85.0	90.0	82.5	54.5	
Segment D	2.2	2.8	3.7	6.4	9.1	13.8	18.9	23.5	31.2	30.6	20.1	
Segment E	1.9	2.1	2.6	3.6	4.4	9.4	8.8	18.4	20.9	13.6	9.1	
Housing prices (thousands of pesos*, average)												
Total**	426.0	441.1	492.5	520.9	520.3	335.2	534.4	604.8	690.2	578.0	594.2	
Segment A	282.0	279.4	286.8	273.9	254.3	238.3	241.2	234.2	239.4	221.7	228.7	
Segment B	401.4	414.7	406.1	424.4	415.8	38.2	403.0	379.5	389.7	369.5	372.4	
Segment C	1,075.0	933.0	948.1	946.5	937.8	852.7	842.2	786.7	813.2	766.6	772.3	
Segment D	2,269.5	2,131.3	2,129.9	2,118.8	2,055.1	1,472.0	1,916.6	1,896.2	1,857.7	1,754.6	1,901.1	
Segment E	5,210.7	4,809.0	4,825.1	4,802.9	4,306.1	4,415.8	4,461.2	4,237.7	4,600.4	4,568.0	4,661.0	
Housing prices per M^2 (pesos*, average)												
Total**	6,246	6,362	6,587	6,651	7,016	6,770	6,978	7,038	7,565	6,985	7,378	
Segment A	5,512	5,419	5,674	5,317	5,512	5,299	5,673	5,556	5,711	5,450	5,741	
Segment B	6,378	6,512	6,388	6,406	6,790	6,299	6,565	6,337	6,597	6,365	6,483	
Segment C	8,820	8,481	8,740	9,181	8,994	8,442	8,549	8,127	8,366	8,151	8,548	
Segment D	13,615	11,689	11,742	11,803	12,633	11,613	12,209	11,738	12,232	11,919	13,617	
Segment E	18,652	16,910	16,295	16,577	17,175	17,020	17,964	17,494	19,361	18,490	21,182	
SHF index housing prices in Mexico (annual % change)								6.7	7.6	5.0	3.2	

*May 2010 pesos with April data; ** Weighted by volume of sales
Source: BBVA Research with Banco de Mexico, Softec, CNBV, Conavi and SHF data

Chart 11

Annual housing finance indicators

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
Number of loans granted (thousands)												
Total	214.0	275.2	230.8	289.5	378.6	397.8	469.5	587.3	716.8	772.4	677.6	190.9
Infonavit	195.4	250.1	200.5	268.7	291.4	300.8	371.7	418.0	456.0	494.1	447.5	137.8
Fovissste	17.9	24.3	26.6	11.1	66.4	59.4	48.7	76.5	70.5	90.1	100.1	21.7
Commercial banks and *Sofoles*	0.8	0.8	3.7	9.7	20.7	37.5	49.0	92.8	190.3	188.2	130.1	31.5
Reduction***							-52.8	-77.7	-181.0	-130.0	-110.8	-22.3
Equivalent purchases	214.0	275.2	230.8	289.5	378.6	397.8	416.7	509.6	535.8	642.4	566.8	168.7
Financing flow (billions of pesos*)												
Total	62.8	73.1	64.4	83.7	110.9	123.3	162.0	229.5	256.6	255.4	224.5	59.5
Infonavit	56.9	66.7	53.8	70.6	73.6	74.4	94.2	106.9	114.6	122.8	105.3	31.7
Fovissste	5.1	5.4	7.2	4.9	23.0	21.5	18.5	29.4	25.0	32.9	48.2	10.5
Commercial banks and *Sofoles*	0.9	1.0	3.4	8.2	14.3	27.4	49.3	93.2	116.9	99.7	71.0	17.3
Commercial banks current loan portfolio												
Balance end of period (billion pesos*)	91.7	83.1	78.8	77.1	80.0	91.7	169.1	229.4	275.9	314.8	333.3	338.8
Past-due loans index (%)	22.3	13.7	12.6	11.2	8.4	6.1	3.2	2.7	3.1	3.6	4.6	4.6

Note: Price ranges expressed in multiples of minimum monthly salary (vsmm). Segment A (61-160 vsmm); B (161-300); C (301-750); D (751-1,670) and E (1,671 and over). Min Monthly Salary (SMM) = 1,667 pesos in 2009 in zone "A"; * May 2010 pesos with April data; *** Refers to finance (loans and subsidies) counted in two or more institutions
Source: BBVA Research with Banco de Mexico, Softec, CNBV, Conavi and SHF data

Chart 12

Quarterly macroeconomic indicators

	07'I	II	III	IV	08'I	II	III	IV	09'I	II	III	IV	10'I
Real GDP (annual % change)	2.9	2.9	3.6	3.9	2.6	3.0	1.6	-1.1	-7.9	-10.0	-6.1	-2.3	4.3
Private consumption, real (annual % change)	4.7	4.2	3.1	4.0	6.9	4.2	-0.7	-2.3	-8.4	-7.6	-4.8	-3.7	4.7
Government consumption, real (ann. % chge.)	2.0	2.2	4.0	4.2	2.3	1.0	1.9	-1.8	4.2	1.4	2.2	1.4	-1.1
Const. investment, real (annual % change)	6.5	4.0	4.3	4.8	2.4	3.9	2.0	-1.7	-2.7	-3.4	-1.1	-1.9	0.2
Residential	5.6	2.4	2.6	3.3	1.8	3.9	0.5	-3.3	-6.4	-8.1	-6.4	-6.5	-4.3
Non-residential	7.2	5.1	5.4	5.9	2.9	3.9	3.1	-0.6	-0.2	-0.1	2.5	1.2	3.1

Source: BBVA Research with INEGI, Softec and Banxico data

Chart 13

Quarterly construction and housing indicators

	07'I	II	III	IV	08'I	II	III	IV	09'I	II	III	IV	10'I
Const. GDP, real. (annual % change)	6.0	3.5	3.6	4.4	2.0	3.5	0.3	-3.3	-7.3	-8.8	-6.9	-7.0	-3.8
Building	6.3	2.6	2.5	3.0	1.3	3.4	-0.1	-3.8	-6.6	-8.1	-6.3	-6.3	-4.3
Const. engineering and major works	6.3	5.4	6.1	6.9	3.4	4.0	2.0	-1.4	-7.0	-8.9	-7.6	-8.7	-3.8
Specialist const. work	3.4	3.4	3.0	6.5	2.8	2.2	-3.1	-7.3	-13.5	-13.6	-8.5	-5.9	0.4
Const. companies[1] real prod. value (ann. % chge.)	3.7	2.3	2.3	2.8	0.4	1.9	-1.8	-3.2	-5.0	-6.3	-7.5	-6.5	-4.0
Building	10.5	9.3	8.6	8.6	5.2	3.1	-4.0	-6.7	-18.6	-19.4	-13.5	-8.3	-5.5
Public works	-1.9	-4.3	-3.5	-2.8	-5.0	0.3	1.1	2.3	18.1	18.4	7.1	1.5	-1.5
Water, irrigation and sanitation	-28.2	-27.8	-16.1	-16.8	5.6	28.5	3.4	-9.5	-2.6	6.0	7.3	15.2	10.6
Electricity & communications	-10.4	-26.5	-10.1	-12.0	3.2	31.7	8.5	32.5	58.0	34.7	26.3	19.5	4.5
Transportation	5.8	4.0	17.3	4.4	12.0	14.9	14.2	13.4	30.0	19.1	4.9	-6.9	-5.8
Oil and petrochemicals	3.5	0.8	-20.2	-4.4	-29.2	-32.1	-22.7	-20.5	-7.4	14.7	4.3	6.0	0.1
Other	-7.2	-6.6	-6.3	-3.6	-4.4	1.9	-1.7	-7.9	-21.5	-37.9	-40.3	-35.4	-12.5

1: Considers companies which are affiliated and not affiliated to the Mexican Chamber of Construction Industry
Source: BBVA Research with INEGI, Softec and Banxico data

Chart 14

Quarterly housing market indicators

	07'I	II	III	IV	08'I	II	III	IV	09'I	II	III	IV	10'I
Average house price (thousands of pesos*, end of period)													
Segment A	243	242	233	238	230	221	217	217	225	228	232	233	
Segment B	382	387	391	397	389	368	363	357	366	373	377	380	
Segment C	807	807	823	815	807	760	753	748	768	765	783	787	
Segment D	1,882	1,847	1,855	1,855	1,801	1,745	1,733	1,741	1,887	1,906	1,909	1,908	
Segment E	4,330	4,592	4,668	4,805	4,710	4,559	4,482	4,531	4,580	4,619	4,783	4,758	
Average house price per M² (pesos*, end of period)													
Segment A	5,789	5,628	5,697	5,731	5,653	5,427	5,391	5,346	5,585	5,677	5,945	5,987	
Segment B	6,409	6,488	6,710	6,776	6,682	6,361	6,305	6,140	6,430	6,494	6,504	6,614	
Segment C	8,285	8,279	8,442	8,454	8,451	8,174	8,006	8,000	8,425	8,441	8,755	8,722	
Segment D	11,829	12,252	12,472	12,368	12,165	11,965	11,706	11,862	13,438	13,550	13,823	13,884	
Segment E	18,107	19,668	19,571	20,076	19,283	18,579	17,613	18,554	21,217	20,851	21,415	21,744	
SHF index of housing prices in Mexico													
Annual % change	9.2	7.9	7.4	6.1	4.5	4.7	5.3	5.7	4.9	2.4	2.0	3.6	3.1

*May 2010 pesos; Note: Price ranges expressed in multiples of minimum monthly salary (vsmm). Segment A (61-160 vsmm); B (161-300); C (301-750); D (751-1,670) and E (1,671 and over). Min Monthly Salary (SMM) = 1,667 pesos in 2009 in zone "A"
Source: BBVA Research with INEGI, Softec and Banxico data

Chart 15

Quarterly housing finance indicators

Commercial banks current loan portfolio

	07'I	II	III	IV	08'I	II	III	IV	09'I	II	III	IV	10'I
Past-due loans index (%)	3.0	3.1	3.1	3.1	2.9	3.1	3.3	3.6	3.8	4.3	4.6	4.6	4.56

Source: BBVA Research with INEGI, Softec, Banco de México and SHF data

Chart 16

Monthly macroeconomic indicators

	F.09	M	A	M	J	J	A	S	O	N	D	J.10	F	M	A
IGAE (annual % change)	-10.2	-4.7	-11.8	-10.7	-7.6	-6.7	-6.9	-5.3	-5.5	-1.7	0.5	2.5	3.8	6.9	
Construction volume, real (annual % change)	-10.6	-2.4	-11.9	-9.3	-5.2	-5.2	-8.0	-7.5	-9.4	-5.8	-5.6	-5.9	-3.8	-0.6	-3.1
Building	-9.9	-1.9	-11.6	-8.4	-4.4	-4.5	-7.5	-7.1	-8.5	-5.7	-4.5	-6.2	-4.1	-1.4	-3.5
Civil engineering and major works	-10.2	-1.9	-11.1	-10.0	-5.5	-5.8	-8.7	-8.3	-11.1	-6.4	-8.2	-5.8	-4.1	-0.1	-4.1
Specialist construction work	-17.4	-8.2	-17.5	-13.8	-9.7	-8.0	-9.3	-8.2	-10.0	-3.9	-3.0	-3.5	0.6	4.9	4.8
Formal private employment (IMSS, millions)	14.0	14.0	14.0	13.9	13.9	13.9	13.9	14.0	14.1	14.2	14.0	14.1	14.2	14.3	14.4
Annual % change	-2.6	-2.5	-3.5	-4.0	-4.2	-4.1	-3.7	-3.7	-3.4	-2.2	-1.2	0.0	1.3	2.1	3.1
Avge. contribution salary (IMSS, nom. daily pesos)	232.0	228.6	228.5	231.2	230.7	231.5	230.9	229.4	227.9	227.2	227.3	237.2	237.7	234.3	234.0
Real annual % change	-0.1	-1.6	-1.5	-1.2	-1.1	-1.3	-1.1	-0.9	-0.8	-1.2	0.0	0.0	0.0	0.0	0.0
Real wage income (IMSS, annual % change)	-2.6	-4.1	-4.9	-5.1	-5.2	-5.3	-7.8	-7.0	-6.4	-5.1	-3.8	-1.7	-0.8	0.6	1.9
Minimum general salary (daily, nominal pesos)	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	55.8	55.8	55.8	55.8
CPI (end of period, annual % change)	6.2	6.0	6.2	6.0	5.7	5.4	5.1	4.9	4.5	3.9	3.6	4.5	4.8	5.0	4.3
Average 28-day equivalent interest rate (TIIE) (%)	7.9	7.6	6.7	5.8	5.3	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
10-year Goverment bond interest rate (M10)	8.2	7.8	7.8	7.6	8.2	8.1	8.1	8.0	8.1	8.1	7.8	7.8	7.7	7.7	7.5

Source: BBVA Research with Banco de México, Conasami, INEGI, IMSS and CNBV data

Chart 17

Monthly construction and housing indicators

	F.09	M	A	M	J	J	A	S	O	N	D	J.10	F	M	A
Construction employment (IMSS, thousands)	1,094	1,102	1,101	1,099	1,113	1,120	1,121	1,110	1,119	1,120	1,043	1,062	1,085	1,102	1,128
Annual % change	-8.8	-7.4	-9.4	-10.1	-9.4	-9.9	-10.1	-10.5	-9.5	-7.2	-5.2	-3.5	-0.8	0.0	2.4
Hydraulic cement prod. (tons, annual % change)	-5.4	1.8	-9.8	-1.5	6.1	1.1	-7.5	-5.2	-9.4	-7.0	-4.3	-12.5	-7.7	-8.2	
Cement consum. per inhab. (annual % change)[1]	-5.8	1.1	-10.4	-2.1	5.3	0.2	-8.3	-6.2	-10.4	-7.9	-4.9	-13.0	-8.2	-8.6	
Residential construction prices general															
(annual % change)	8.1	7.0	4.5	1.7	-0.6	-1.6	-1.4	-0.9	-1.6	-2.8	-1.0	1.3	2.3	2.7	3.1
Materials (annual % change)	9.2	7.7	4.6	1.1	-1.7	-2.9	-2.7	-2.0	-2.8	-4.1	-1.8	0.8	2.0	2.5	3.1
Labor (annual % change)	3.4	3.5	3.8	3.6	3.7	3.8	3.8	3.7	3.5	3.1	3.1	3.8	4.2	3.8	3.5

1: The volume of cement production is used as a proxy for consumption
Source: BBVA Research with Banco de México, Conasami, INEGI, IMSS and CNBV data

Chart 18

Monthly housing finance indicators

	F.09	M	A	M	J	J	A	S	O	N	D	J.10	F	M	A
Commercial banks current loan portfolio															
(balances, billions of pesos*)	305.4	307.7	307.9	311.1	312.7	314.6	308.8	311.5	313.4	328.0	332.5	333.3	333.4	333.3	336.7
Annual % change	5.6	7.0	5.8	5.1	4.7	4.2	3.0	3.5	2.9	7.3	10.6	9.7	9.2	8.3	9.4
Mortgage Sofoles loan portfolio															
(balances, billions of pesos*)	55.5	55.2	55.2	54.3	54.0	53.3	52.9	52.3	51.9	51.7	19.6	19.4	19.4	19.3	19.4
Annual % change	-31.6	-31.5	-31.0	-32.0	-33.2	-34.9	-36.2	-37.1	-6.9	-6.3	-64.6	-65.1	-65.0	-65.0	-64.9
Total annual cost (CAT),															
(average in pesos at fixed rate)	14.69	14.87	14.77	14.77	14.78	14.74	14.79	14.77	14.80	14.89	14.74	14.75	14.75	14.75	14.73

* May 2010 pesos
Source: BBVA Research with Banco de México, Conasami, INEGI, IMSS and CNBV data

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