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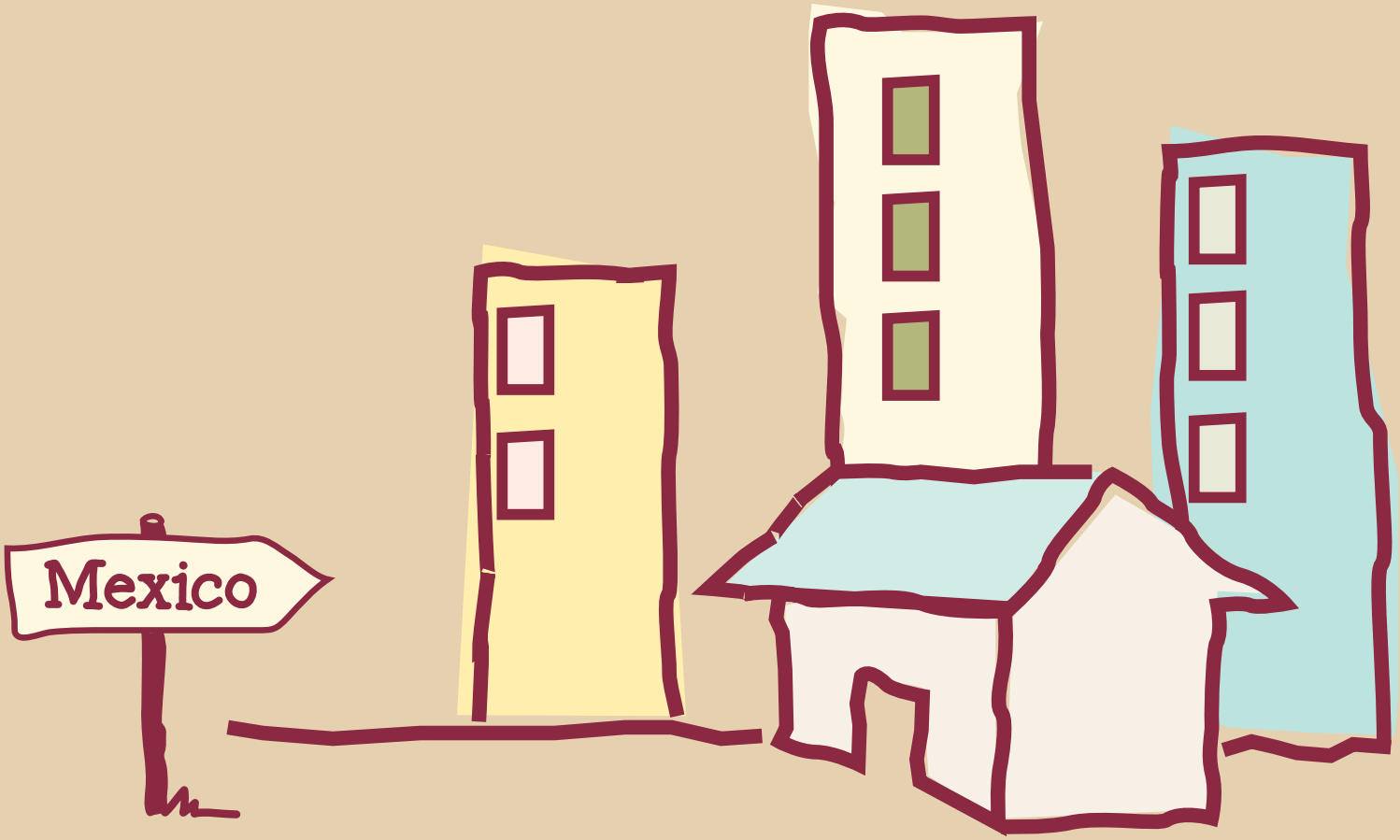
Real Estate Watch

Economic Research Department

January 2010



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Editorial

Economic recovery is underway in Mexico. In our base-case scenario, we believe that it will take a couple of years to return to the output and employment levels prior to the crisis. The recovery will be gradual and will be the result of international trade flows returning to normal, lower risk aversion, increased availability of external finance and a relative improvement in domestic demand. The main risks are external, a recovery which is just beginning in the USA; inadequate withdrawal of fiscal and monetary stimuli could result in the recovery being slower and weaker than expected.

Despite the economic conditions, the construction industry has performed better than in other recent recessions. It has continued its pro-cyclical performance, but its sensitivity to the general trend in the economy has been lower than in the past. It is estimated that the sector will have contracted in 2009 at a similar rate to that expected for GDP. This is explained by the economy stabilizing; a reduced impact on employment; the availability of mortgage loans at fixed, long-term interest rates; the support of public institutions for housing; the improved financial positions of real estate development and construction companies; and the boost provided by public investment. Construction activity may return to its trend and grow more rapidly than the average for the economy as a whole in 2010. This dynamism will result from public works and increased residential and industrial construction.

The performance of the housing sector will continue to differ from region to region and segment to segment. The areas which have been worst affected are those which are most exposed to the USA's economic cycle: mainly those along the northern border, beach destinations for tourists and foreign residents, and areas with high concentrations of manufacturing industry. The regions least affected are those which are more closely linked to the domestic market and services. In terms of housing, the largest falls were in the regions with the highest incomes and accumulation of stock. At the other extreme, the clearest and most widespread recovery has been in social and more affordable housing, and, lagging behind somewhat, medium-income housing; this has occurred to such an extent that we are seeing housing shortages in some areas of the country.

The contraction in housing sales has been the result of both lower demand and lower supply. There are a number of factors behind the reduced supply of housing: the most widespread of these is the reduction in the availability of construction loans, which has led to delays and postponement of projects. In addition, housing sales and receipts from sales have deteriorated, with the financial condition of developers and many non-banking financial intermediaries worsening as a result; this has, to an extent, led to a vicious circle which feeds back into the housing shortage. Given the importance of the issue, we have included a detailed article about the problem of construction loans and the recent stimulus measures taken by the authorities to alleviate and normalize this situation. We expect that these restrictions will start to be overcome in the first few months of 2010.

Crises also present opportunities. There are now fewer housing development companies and the industry has become more concentrated: this is a result of some companies leaving the sector and others merging or being bought. We offer an analysis of the trends in competition among developers from the perspective of the housing segments which define the relevant markets. The companies that have survived have shown better administration during the crisis; the good news is that better times are ahead and that efficiency and productivity gains will not just be maintained but will be enhanced. The quality of real estate development will need to continue to improve, and it is time to take advantage of the emerging positive trends; current conditions mean that this is possible – it is time to take advantage of them.

The Macroeconomic Environment and the Construction Industry

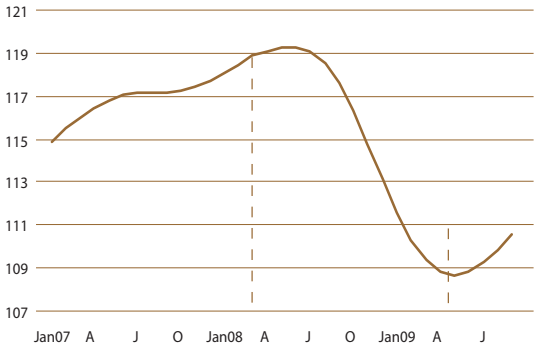
Economic activity has bottomed out and its recovery has begun

GDP grew by 2.93% compared to the previous quarter in the third quarter of 2009 (on a seasonally adjusted basis). This should be judged positively for a number of reasons: the increase was very high -the last time a change on such a scale was seen was in the first quarter of 2006- and is equivalent to a 12% annual rate; it is in sharp contrast to the five preceding consecutive quarters of decline; it can be regarded as a turning point with the change in trend being general across nearly all areas of activity, as has been seen in industry, services, exports and employment. Reports available so far for the fourth quarter and advance activity indicators show that the recovery continued in the fourth quarter of 2009, and would also continue into 2010, although at a slower rate.

We can therefore state that the Mexican economy has come out of recession and that recovery has begun. The traditional definition of an economy having come out of recession is two consecutive quarters of growth. However, more refined definitions used by the USA's NBER (National Bureau of Economic Research) consider a range of less deterministic criteria in which, in addition to the above, it is also necessary to observe a general recovery trend across a wide-ranging set of indicators in order to consider that a recession has ended. Under both of these approaches we can state that Mexico's economy came out of recession in the second half of 2009. Against this backdrop, the objective of this section is to review the nature of the recession and its implications for the construction industry in comparison with past experiences, and to present estimated data for the end of 2009 and the outlook for this year.

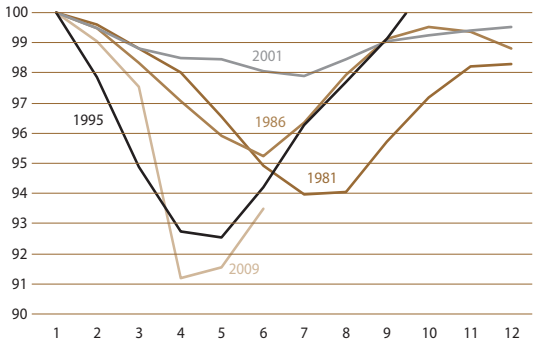
In comparison with previous cycles, and using the contraction from the quarter with the highest activity to the quarter with the lowest activity as a reference, the current recession was the deepest since 1980; however, as in 1995, the recovery started more quickly than in 1981, 1986 and 2001. The major decrease in output levels from mid-2008 to mid-2009 is related to the origin and nature of the recession: a contraction in foreign demand, resulting in a significant reduction in international trade volumes; the crisis in the US real estate and automotive sectors; and the openness of the Mexican economy, with its high level of exposure as an exporter of manufactured goods concentrating on markets and products which are very sensitive to the cycle. These factors combined and made a considerable impact on domestic output. We cannot of course ignore the international financial crisis, which is reflected in increased risk aversion and a contraction in finance and the availability of resources globally; however, for Mexico, given its low level of external debt (both public and private), its low requirements for foreign resources, and the solidity of its financial system, the main effect was to be found in the real economy, and not in the financial sector.

IGAE Total
Index, 2003 = 100, seasonally adjusted, September



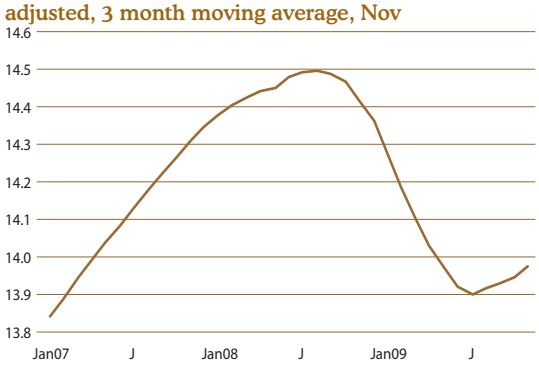
Source: BBVA Bancomer with INEGI data

GDP: Changes in Recessions
Max before recession = 100, quarters, seasonally adjusted



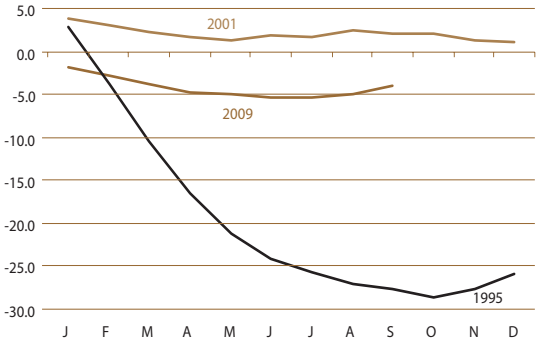
Source: BBVA Bancomer with INEGI data

Formal Private-Sector Employment
Social Security contributors, mill, seasonally adjusted, 3 month moving average, Nov



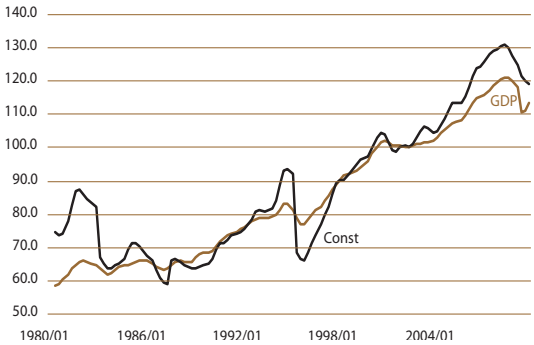
Source: BBVA Bancomer with INEGI data

Real Wage Income
Annual % change



Source: BBVA Bancomer with INEGI data

GDP and Construction
Jan 2002 = 100, real



Source: BBVA Bancomer with INEGI data

GDP Indicators in the Construction Industry

	Total GDP	Construction GDP			
		Total	Building	Civil Engineering	Specialized activities
	(Billion pesos)				
2008	8,928.6	574.3	355.9	174.3	44.0
	(Structure %)				
	100.0	6.4	4.0	2.0	0.5
		100.0	62.0	30.4	7.7
	(% Real Annual Change)				
1Q09	-7.9	-7.2	-6.6	-6.9	-13.1
2Q09	-10.1	-8.7	-8.1	-8.7	-13.2
3Q09	-6.2	-6.6	-6.1	-7.1	-8.2
Avg.	-8.1	-7.5	-6.9	-7.6	-11.5

Source: BBVA Bancomer with INEGI data

Historically, there has been a strong relationship between productive activity and employment; as a result, during recessions, employment levels tend to fall in proportion to economic activity. For example, in the 1995 crisis the maximum contraction in both GDP and social security contributors was around nine percent. Another similar point of reference is the slowdown in activity in Mexico in 2001, which was in part explained by the recession in the USA at the time. In 2009, this relationship weakened, as in the first nine months of the year GDP contracted at an average annual rate of 8.1%, whilst employment in the formal private sector, as measured by permanent social security contributors, fell by 3.2%. The reasons which might explain this behavior include: demand shocks being limited to the manufacturing sector (which has a close correlation with the USA); the greater structural solidity of the construction sector and some services as a result of stabilization of the economy, among other factors; public sector programs to support productive plant and employment; and the financial condition of companies and the solvency of the financial system, which meant that it was possible to maintain the availability of internal finance.

Furthermore, low inflationary pressures contributed to the labor market adjustment being less severe. For example, the average salary of contributors performed very differently in 1995 and 2009. In 1995 the maximum fall in this indicator was –23% in December; however, in the current recession the maximum contraction was –1.6% in April 2009. This means that the wage bill has been more favorable than in other recessions. In this recession, following the fall in the early months of 2009, it began to return to its previous level; this will contribute positively to economic recovery in the coming months.

Construction: better performance than in previous crises, but activity still fell

The construction sector accounted for a little over six percent of total GDP in 2008, with the main component being building construction, which accounted for 62%, followed by civil engineering work, at 30.4%, and specialist work, 7.7%. The GDP of the real construction sector fell on average by 7.5% in the first nine months of 2009; this was less than the fall in total GDP (-8.1%), despite this activity historically being pro-cyclical. The largest falls were in civil engineering and, to a lesser extent, building construction. This behavior is explained by the following factors: better structural conditions in the construction sector as a result of the stabilization of the economy; the availability of long-term finance at historically low levels for buying property; the stimulus from public housing bodies; better performance by construction and development companies; and, of course, the application of counter-cyclical fiscal and monetary policies. These factors will continue to be positive and support recovery in the construction sector throughout 2010.

Construction industry data for October 2009 shows the lowest level of activity in the last four years, and a continuing negative trend, although the level of this has fallen. Of the four major components of industrial activity, construction is the only sector which has not yet recorded quarter-on-quarter growth, unlike manufacturing, mining and electricity. Despite this, we can state that the construction sector is performing better than in previous recessions. The accompanying chart shows changes in total GDP and construction at different times; and reveals that in 2009 it slowed down by less in relative terms than total activity.

A relative comparison of the performance of construction in different recessions reveals significant characteristics and changes: in the 1980s and 1990s, the adjustments were substantial, with drops in some cases of 30% compared to the maximum before the recession; in addition, the changes were very sharp in the short term. In 2009 the contraction was more gradual and less dramatic.

Construction: lagging despite the government stimulus, but less than in previous recessions

Public investment grew in the first half of 2009 at a real annual rate of 27%, due to an increase in investment expenditure (+73% in real terms in the same period) and a boost from the national infrastructure program. Despite this, total investment fell by 11% as a result of contraction in private investment (19% in real terms on an annual basis). In this sense public expenditure and investment offset some of the impact of the crisis on investment, but the relative weight of each of these (public investment accounts for 22% of total investment, and private investment 78%) meant that it was still negative. Infrastructure investment is relevant in a number of ways: a) Public investment has a positive effect, but there is a lag before the resulting activity occurs - we may start to see the effect of the infrastructure stimulus more clearly in the coming months; b) there will be more favorable economic conditions, a gradual recovery of confidence and the availability of finance, particularly international finance which will make it possible to resume work on projects postponed due to the recession; and, c) the elements described above tend to feed back into each other, as 44% of public investment is in the construction sector.

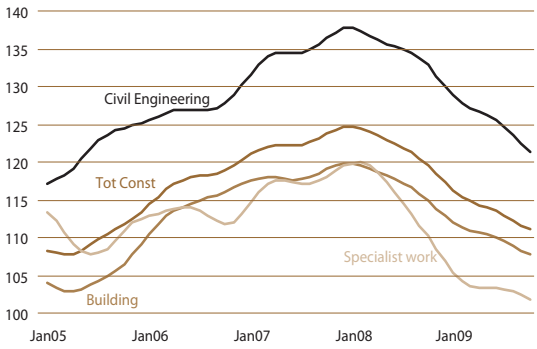
The approved public expenditure budget for 2010 increases the amounts assigned to infrastructure projects, and also maintains finance programs and boosts housing which, together with the positive developments being seen in employment and the wage bill, are likely to drive a recovery in activity from the early months of 2010. Highlights of the budget for infrastructure investment in 2010 include the amount assigned to Pemex, particularly for Exploration and Production, and the widespread regional distribution of federal funds for road and water projects.

Periods of Low Construction Growth

	Largest GDP fall	Time length (months)* Construction	
2009	-9.0(a)	-9.4(a)	15(b)
2001	-0.1	-5.6	15
1995	-6.2	-23.3	15
1986	-3.8	-10.3	12
1983	-4.2	-19.2	12
1977	3.4	-5.3	12
1971	3.8	-4.5	12
1930	-6.6	n.a.	n.a.
Avg.	-2.8	-11.1	13

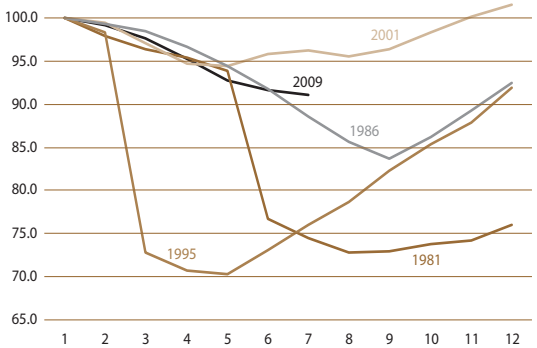
* The average time required to achieve positive growth rates
(a) Annual rate first quarter, seasonally adjusted
(b) Months elapsed. Estimated end
Source: BBVA Bancomer with Banco de Mexico data

Construction Industry
2003 = 100, st



Source: BBVA Bancomer with INEGI data

Construction GDP: Changes in Recessions
Max before recession = 100, quarters, st



Source: BBVA Bancomer with INEGI data

Aggregate Supply and Demand
Real, series trend (st)

	2008		2009 % annual change	
	Billion pesos	Est %	1Q09	2Q09
GDP	8,927	100.0	-8.4	-9.7
Total Consumption	7,150	80.1	-7.2	-7.9
Private consumption	6,220	69.7	-8.8	-9.3
Govt consumption	930	10.4	3.7	1.0
GFCF Tot	2,050	23.0	-7.1	-15.2
GFCF Pub	456	5.1	29.5	23.7
GFCF Priv	1,580	17.7	-13.8	-23.6
Export b y s	2,709	30.4	-20.4	-24.3
Import b y s	3,061	34.3	-22.6	-27.1

Source: BBVA Bancomer with Bank of Mexico data
Notes: GFCF Gross Fixed Capital Formation

Programmed Infrastructure Investment 2010, Selected Activities

	mp	Share %
Road infrastructure	52,391.4	14.8
Construction and modernization	23,083.9	6.5
Rural roads	15,971.7	4.5
Maintenance and others	13,335.8	3.8
Water infrastructure	34,499.2	9.8
Drinking water	18,595.9	5.3
Hydro-agriculture	7,369.4	2.1
Water administration	8,533.9	2.4
Pemex	263,369.0	74.5
Exploration and production	220,000.0	62.2
Refining	32,000.0	9.0
Rest	11,369.0	3.2
Tourism	3,363.4	1.0
Infrastructure	837.0	0.2
FONATUR	2,526.4	0.7
Total	353,623.0	100.0

mdp = million pesos
Source: BBVA Bancomer with PEF data

Outlook: 2010 will be a better year, but there are risks

A number of factors allow us to be optimistic about the performance of the economy in 2010. Abroad, the global economy is beginning to recover, particularly in the USA, and this will maintain the boost from foreign demand; the end of the international financial crisis will support international finance, which will help to keep commodity prices high, offsetting the deterioration in oil production. Domestically, the initial signs of recovery will be consolidated by the boost from abroad, macroeconomic stability, the 2010 economic program and, of particular importance, the capacity of the domestic market, which contracted by only a relatively small amount, and which has reduced its debt and started to grow again. The outlook for 2010 includes an increase of GDP at a rate of well over 3%, with price increases at the beginning of the year due to the fiscal package, and average annual inflation of 4.7%; policy interest rates will be stable for most of the year, although they may rise slightly as the recovery consolidates and monetary policy can become more neutral. There is some moderate upside bias to the value of the peso during the year. Construction will return to its trend from previous years, and may grow in excess of 4%; the most dynamic parts of this sector will be civil engineering, followed by building construction and specialized work. Whilst these numbers point to a good year, we should consider them in a general context over a longer term; despite the growth expected in 2010, levels of production and employment will not return to their pre-recession levels until 2011.

In summary, the Mexican economy has begun to recover; in our base-case scenario we consider that this recovery will be moderate and gradual, and that it will accelerate in the second half of 2010. As on previous occasions, recovery will be driven by foreign demand as a result of international trade flows returning to normal; this will be reflected in inventories recovering, manufacturing output increasing, increased investment, a recovery in consumer confidence and, finally, increased job creation. This process will feed back into itself in 2010, consolidating the recovery. The main risks to this scenario are external, arising mainly from a slower and weaker than expected recovery in the USA and difficulties in removing fiscal and monetary stimuli; there are also similar risks in other industrialized countries, and these may lead to increased risk aversion and lower commodity prices; there are also risks of unexpected and severe international interest rate increases.

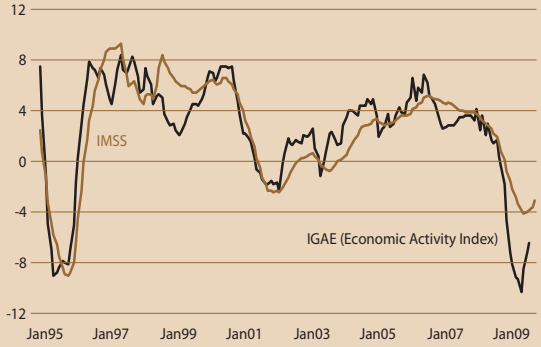
The Construction Boost and its Spillover Effects on the Economy

Impact of public investment expenditure on employment

There is almost by definition a direct relationship between production and employment; if technology and capital remain constant, the addition of new units to the labor force will increase output. Of course, the factors of production are never constant, but, over short periods of time they tend only to change marginally, except at times of major technological change or expansion of production. In Mexico, employment, in terms of formal private-sector employment as measured by social security contributors, has historically tended to follow economic performance very closely, as can be seen in the accompanying charts and tables.

Employment

% annual change, seasonally adjusted, end of period



pm3 3-month rolling average
Source: BBVA Bancomer with INEGI and IMSS data

Employment vs. Economic Activity

IMSS social security contributors, IGAE, % annual, 3 moving average

	GDP	Employment
1Q09	-9.0	-2.5
2Q09	-8.9	-4.2
3Q09	-6.3	-3.7
Average	-8.1	-3.4

Source: BBVA Bancomer with INEGI and IMSS data

However, over the last year, the contraction in employment has been slightly lower than the fall in economic activity. For example, at the end of the third quarter of 2009, the annual contraction of the economy (as measured by GDP), on a seasonally adjusted basis, was 6.3%, whilst employment fell by 3.7%; this difference in performance by the two variables to the favor of employment was also seen in the preceding quarters, and is, therefore, a distinctive characteristic of this recession and not just due to factors in a single quarter. In general, during recoveries, job creation lags behind other indicators, whilst in recessions it may reflect activity. The relevant aspect on this occasion is the relatively low cost in terms of unemployment in 2009. Of course, the effects of the recession have impacted differently in different sectors and regions, but given the seriousness of the crisis, the maintenance of employment levels is noteworthy.

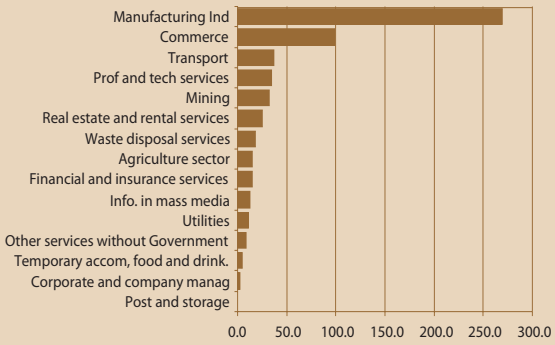
Among the various programs implemented to handle the crisis, the increase in public infrastructure investment has the virtue of contributing in the short-term to reducing the cost in lost output and employment, but it will also generate benefits in the medium and longer term by increasing the productive capacity and efficiency of the economy. In the first half of the year, public investment grew by 26% in real terms, which compares favorably with figures for total investment (-11.5%) and private investment (-18.9%). In the first half of the year, public investment contributed 1 p.p. to growth, whilst public sector consumption contributed 0.2 p.p. Without these factors, the fall in GDP would have been greater than that experienced, and the fall in employment would almost certainly have been more severe. The direct effect of this support from the public sector on the labor market was around one hundred thousand jobs. Of course, financing programs, guarantees for the system of production, support for unemployment and temporary work programs, amongst other measures, were also important. The recovery in employment and payrolls are important for household welfare, and will support the domestic market and the recovery in activity.

In particular, construction has positive effects on other productive activity, as it is an intensive user of labor and a driver of domestic demand. The accompanying chart shows an estimate of the main inputs required by other activities for each peso spent on construction; the impact on manufacturing output is substantial, as it is, to a lesser extent, in services. Because of its multiplier effect, public investment played a significant role in offsetting the costs of the crisis and it will have the same effect during

1 A detailed study of the National Infrastructure Program (PNI) is available at Regional Sector Watch: Infrastructure Special, July 2009.
2 Ditto. This publication also includes detailed analysis of the impact on employment and the productive sectors of GDP using a product input matrix.

the recovery, as the efforts of the national and federal governments provide boosts through work in progress, and through tenders awarded and new projects. Without aiming to be exhaustive, and solely as an example, we can mention some major projects which may take place in the future, which include metro systems, the Mexico Valley eastern drainage tunnel, the Cutzamala System, second floors and a third route for suburban trains in the metropolitan area of Mexico City; award of tenders for the Manzanillo container terminal and the north Pacific road plan; together with the redesign of the Punta Colonet project and consultations for the Federal Electricity Commission's fiber optic tender. These and other projects will boost construction and have a positive impact on productive activity and employment in coming years.

Mexico: Construction. Total requirements industry by industry*
Thousand pesos



Source: BBVA Bancomer with INEGI and IMSS data

Housing Activity and Finance: Gradual recovery in 2010

2009 was a difficult year for the housing sector in Mexico. However, in perspective, its performance reflected not only the recession, but also the consequences of some factors dating back to earlier years, including criteria about when and how much housing to build, and issues relating to finance. In this section we review the main trends in housing over recent years, examining past and current conditions; we then present a general overview of what we can expect in 2010.

A decade of strong growth

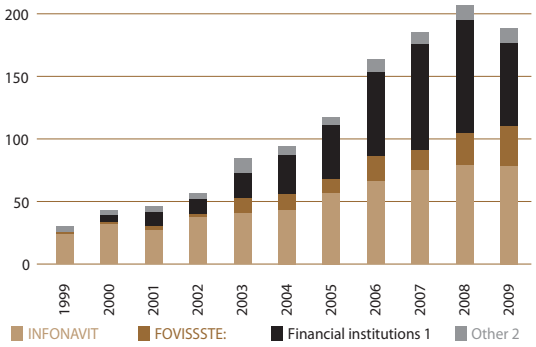
The housing sector has been one of the fastest growing in the Mexican economy over the current decade. In terms of investment, for example, if we include both public bodies and private intermediaries, the resources flowing into the sector have increased from 51.6 billion pesos in 1999 to 188 billion pesos in 2009 (all measured at 2009 prices), equating to a real annual growth rate of 15.5%; in contrast, over the same period the economy as a whole grew at an annual rate of 2.5%.

A number of factors are behind this rapid growth rate. On the supply side, the main factors have been the support programs from the federal government and NGOs. For example, in the 1990s Infonavit (the National Housing Fund for Workers Institute) on average granted 115 thousand individual loans per year, whilst in 2000-2009 the average was 359 thousand; despite the crisis, in 2009 there were over 450 thousand individual loans. Fovissste (the Public Sector Employees Social Security Institute Housing Fund) also increased its coverage, from 18 loans in 1999 to 100 thousand in 2009. Private intermediaries have also increased their resources. Measured at constant 2009 prices, the balance of lending for housing by mortgage Sofoles (Limited Objective Financial Companies for Housing) and Sofomes (Multiple Purpose Financial Companies for Housing) and banks increased from 701 billion pesos at the end of 1999, to 1.05 trillion (million million) pesos in mid-2009: accumulated growth in the decade of 50%.

Three factors have boosted the sector on the demand side. Firstly, the backlog of accommodation in the country, including requirements for refurbishments and expansions of existing buildings and construction of new housing. According to Infonavit, this backlog currently affects 2.5 million workers among its members alone (see the section on the Infonavit 2010-2014 Finance Plan); Fovissste meanwhile estimates that at the current rate of lending, with 100 thousand new credit facilities agreed annually, it will take between 17 and 23 years to meet the needs of its members (see the section on housing support programs in 2010).[1] Secondly, the country's demographic structure has boosted the formation of households, and will continue to do so until at least 2030. The third element was increased employment: between 2004 (when employment began to increase again following

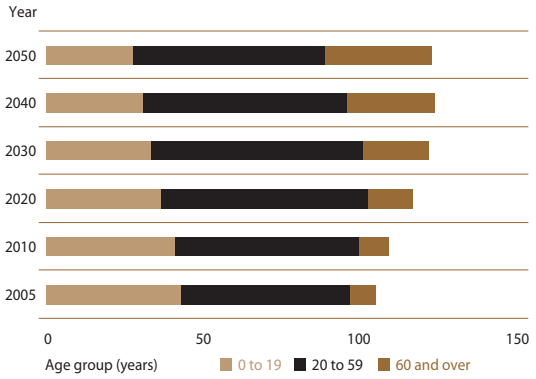
1 In the September 2008 edition of Real Estate Watch Mexico it was estimated that the housing backlog in Mexico in 2000 amounted to 4.3 million homes, of which 2.5 million related to needs for refurbishment and expansion, and the remainder to new housing. However, estimates by the SHF suggest that when housing built using deficient materials is included (even though they are not in a precarious condition and do not require urgent replacement), the current backlog (2009) amounts to 8.9 million homes (Cidoc/SHF, 2009).

Despite the crisis, investment in housing in 2009 was six times the level in 1999.
(Billions pesos, 2009 prices)



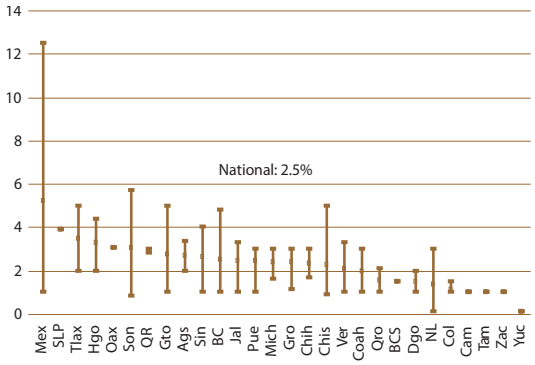
1 Includes: SHF, Sofoles and Commercial and Development Banks.
2 Includes Conavi, Fovim, Hábitat and Fonacot
Source: BBVA Bancomer with data from the Office of the President of the Republic

In terms of demographic structure, household formation will continue to grow rapidly until 2030
(million inhabitants)



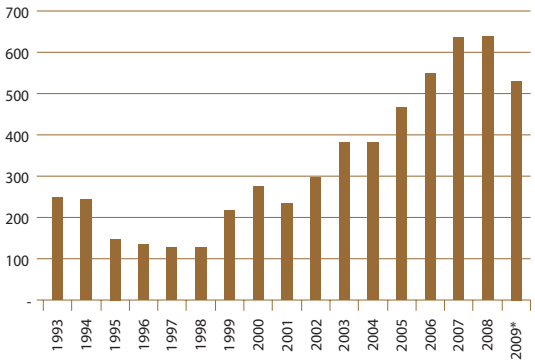
Source: BBVA Bancomer with Conapo data

Housing construction may have very high extraordinary costs*
(% of total costs, average and maximum and minimum)**



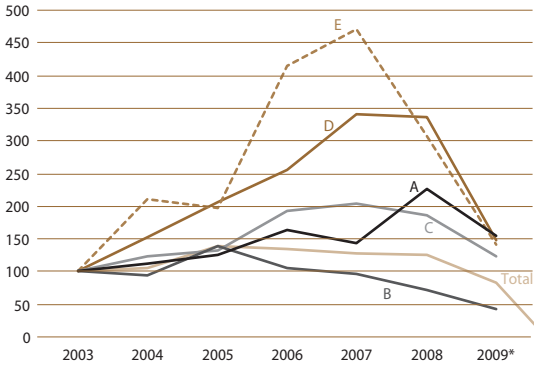
* Includes infrastructure, construction of health centers, schools and markets, urbanization of streets outside the development and donations.
** For housing in the price range 100 thousand to 250 thousand pesos
Source: SHF, cited in Cidoc/SHF (2009)

The rapid growth in housing sales slowed in 2008
(Thousand homes)



Note: Includes Infonavit, Fovissste and private intermediaries
* Estimated using data to October
Source: BBVA Bancomer with Conavi and AHM data

The highest income segments have been most sensitive to the economic cycle
(Housing sales, Index 2003=100)



* To the third quarter
Source: BBVA Bancomer with Softec data

the fall from 2001 to 2003) and 2008 an average of 424 thousand formal jobs were created annually in the private sector; this is similar to the rate in the 1990s (annual average of 460 thousand jobs), when the North American Free Trade Agreement (NAFTA) came into effect and manufacturing and other export-orientated industries received a major boost.

Changes in the institutional and economic environment have been equally important –particularly with regard to price stability- as has the development of new mortgage products. Average inflation over the period 2000 to 2009, for example, was 5.2% annually, compared to an average of 22% between 1996 and 1999 (which does not include the 35% annual inflation rate in 1995). In institutional terms, the creation of the SHF (the Federal Mortgage Society) in 2001 to replace the FOVI (Bank Finance and Operations for Housing Fund) gave an additional boost to the federal government's programs to meet the country's housing needs. In addition, in the legal sphere, reforms to the Guarantees Act in 2000 and 2003 made legal processes for the recovery of non-performing loans more responsive, and this in turn created better financing conditions for private intermediaries. Finally, developments in new mortgage products resulted in the average term of loans increasing 10 to 12 years at the end of the 1990s to 20 years in 2009; in addition, cofinancing, which was started by Infonavit in 2004, accounted for around 20% of total loans agreed by the industry in 2009, and more than 80% of the loans agreed by private intermediaries.

... although somewhat disorganized and with some excesses

Whilst the conditions have been ripe for the industry's growth, this has not taken the same form at every stage in the chain. Starting. for example, with the market for land, the rapid pace of building has not always been in accordance with land planning standards, regulations and processes. There was also a backlog in the development of urban infrastructure. Housing developments, some with as many as 15 thousand homes, were located ever further from urban centers, resulting in high costs for providing public services (public safety, electricity, drainage, drinking water, trash disposal, etc) and lengthy commutes for residents. This helps to explain the extraordinary costs which construction companies had to meet in the house building process, particularly in relation to the lowest income segments; of these costs, over 80% relate to infrastructure, paving, building schools, health centers and even markets.[2] (Cidoc/SHF, 2009).

Construction of homes in the low and middle-income segments was more geared to Infonavit's targets, determined by its members, than by market research based on effective demand and the needs of the population. For the high-income segment, the number of small-scale builders mushroomed, but many of these companies had limited experience and weak capital bases.

2 SHF estimates show that in 2008, extraordinary costs represented 2.5% of the value of housing in the social and low-income segments, although in some instances this figures reaches nearly 9%; this figure is equal to building 15 thousand homes in these segments.

Regulatory and supervisory activities were, however, overwhelmed by the rapid growth of the industry. For most of the decade, construction took place without reference to the accredited regulations and criteria of the three levels of government (federal, state and municipal) for urban planning and development. In 2007, Conavi (the National Housing Commission) published its Housing Construction Code, and in 2010 Sedesol (the Social Development Secretariat) established a range of federal measures applicable to the construction of housing developments in the context of Article 73 of the Housing Act.[3] Both of these measures were of fundamental importance, and the challenge now is to ensure that they are complied with and incorporated into housing programs at the state level. There was also a lack of supervision of operations and risk management by non-bank financial intermediaries; there is a noticeable difference in levels of non-performing loans between regulated and non-regulated entities (refer to the section on finance of sofoles and sofomes) [4].

The crisis has highlighted failings and accelerated adjustments

The imbalances created during the industry's period of growth were revealed in 2007 when the growth rate was at its highest; since then, the industry has experienced some major adjustments.

In 2008, as signs began to appear of over supply in some cities, the first signals were seen of the need to review the criteria for where and how much housing to build. With the global financial crisis, in the second half of the year restrictions on construction loans were added. These two factors combined to create a major fall in home building.

In 2009 the recession aggravated the problems, with increases in non-performing loans and liquidity problems for some construction companies and financial intermediaries, which in turn increased the limitations on financing. The government's support programs stimulated home building for the low income segment, but it was not ultimately able to make full use of the total finance available. Infonavit missed its targets by around 10% due to a lack of housing to sell; in addition, SHF credit facilities were not fully drawn down as a result of a lack of mechanisms for placing them, as most were placed through mortgage sofoles and sofomes.

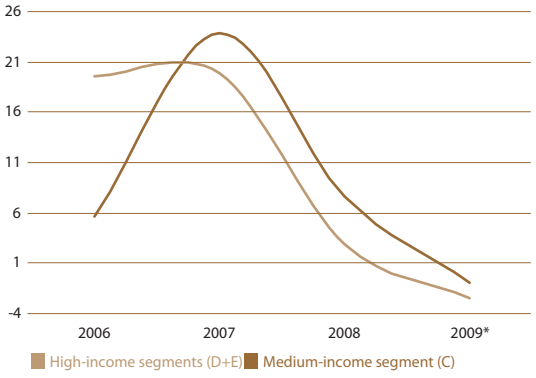
3 This article establishes that the land and housing actions undertaken with federal and other public resources which finance housing for workers should observe the guidelines for facilities, infrastructure and communications established by Sedesol.

4 We can divide the non-bank financial intermediaries involved into those which attract resources from the public (Sofoles) and those which use their own capital (Sofomes); the former should be supervised by the National Banking and Securities Commission (CNBV), whilst the latter should not. Edition 1 of Real Estate Watch Mexico in October 2009 featured an article on this issue.

In 2009, construction activity began to recover for low income segments.
(% annual change)

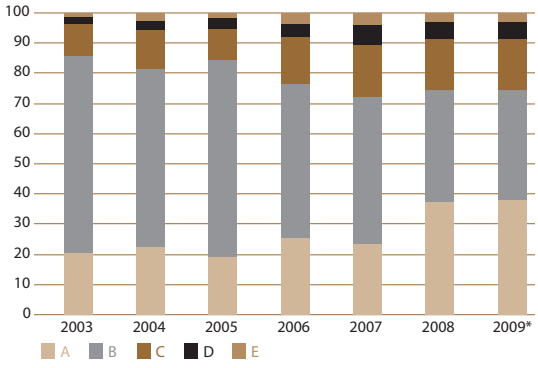
* Figures to November
Source: BBVA Bancomer with Softec data

… but not in the highest income segment, where the trend is still downwards
(% annual change)



* Figures to November
Source: BBVA Bancomer with Softec data

In 2008 and 2009 the relative weight of the low-income housing for sale segment increased.
(Distribution of sales %)



* Data to the third quarter
Source: BBVA Bancomer with Softec data

So, what can we expect in 2010?

There are a number of factors which will help in reactivating the housing industry this year; these include the economic environment (refer to the section on the macroeconomic environment) and actions taken by the federal government, housing organizations and even the banks (see the section on 2010 support programs). However, it still remains to be seen whether the adjustments in the industry have finished; in other words, are conditions now ripe enough to ensure a recovery in every part of the chain, or do some of the weaknesses which affected the industry in 2008 and, more seriously, 2009 still exist?

The key elements required for a sound and lasting recovery in housing include the speed at which financing mechanisms can be reestablished and can accelerate the house building process (see the section on construction loans). Secondly, the response of agents in the sector to the changed environment will be important: this includes, for example, the need for greater transparency and responsiveness in paperwork and legal proceedings (organization of the land market); development of new financing mechanisms (through resources such as Covered Bonds); the need for greater supervision of financial intermediaries; and the building of housing based on market research, which will help to identify effective demand for housing based on the needs and preferences of the final consumer.

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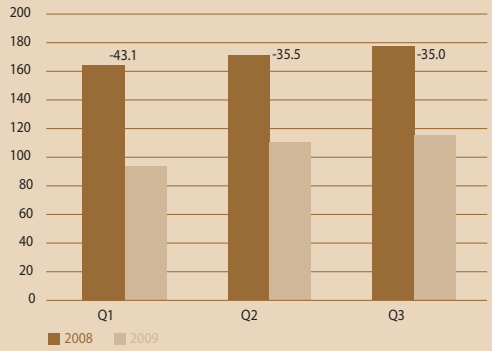
The Balance of the Crisis: the Concentration of Housing Developers. Opportunity or threat?

The 2009 economic crisis resulted in major adjustments in the housing industry. For home builders and developers in particular, the combination of lower demand and scarcity of finance was reflected in lower sales, delays in starting and completing projects, projects paralyzed, lower liquidity and losses of capital in many cases. Given the importance of these issues, in this section we analyze the concentration of housing developers in the country's major states by segments; we also describe potential implications for the sector which could result from these changes in the market structure.

Fewer builders and less housing

According to records from Infonavit's Registro Único de Vivienda (RUV – Single Housing Register), at the end of the third quarter of 2009 the supply of housing had fallen by 38% compared to the same period in 2008. In addition, the highest number of builders and developers (in this cycle) was in 2007 when there were 1,762 builders; by September 2009 this figure had fallen to less than half, with only 821 registered developers,[1] fewer than the levels before 2004.

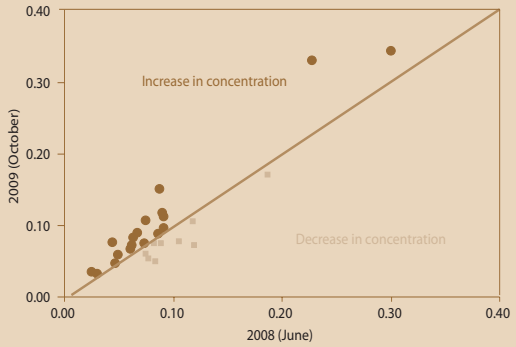
There has been significant contraction of the housing supply.
Thousand homes and % annual change*



* *In italics*
Source: BBVA Bancomer with Infonavit data

Another way of analyzing the scale of the adjustments is to examine indices of concentration in the industry, such as the Herfindahl-Hirschman Index (HHI), which is one of the most widely used internationally by a range of administrations and researchers as a standard indicator for measuring the degree of market competition. Taking into consideration that the mortgage crisis began to be felt with the greatest intensity in the second half of 2008, it is appropriate to compare the HHI for the period prior to the start of the adjustment process (June 2008) with the most recent 2009 HHI (October). The figures are conclusive; there has been an increase in concentration in most federal states[2]; in other words, there are now fewer developers in the industry, despite the adjustment resulting from the lower number of homes.

The 2009 crisis resulted in increased concentration in the housing industry
The Herfindahl-Hirschman Index (HHI)



This index is based on the market share of each construction company. Each observation represents a federal state (for the 27 for which there is information) and shows the concentration in both periods. Higher index values reflect greater concentrations. The chart can be interpreted as follows: observations above the diagonal represent states where the concentration of the industry increased in 2009 compared to 2008, and vice versa.
Source: BBVA Bancomer with Softec data

Taking into account states and segments, the value of HHI is generally between 0.1 and 0.5; this reflects differences in the structure of the industry. For example, the highest values –which show higher levels of market concentration- relate to the lowest value housing segments, which are also those which are produced on the largest scale by "mega-developers", which have sufficient access to finance to carry out their operations.

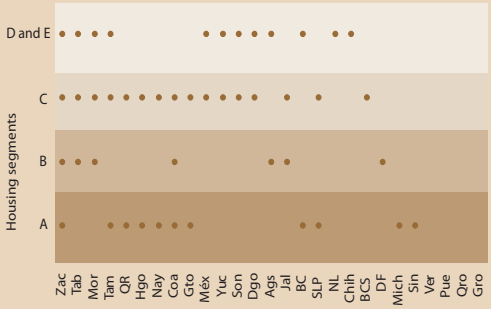
1 Infonavit Financial Plan 2010-2014, published in December last year, page 19.
2 The HHI shows increases in both periods in 18 of the 27 federal states covered by the Softec sample. There is no coverage for Campeche, Colima, Chiapas, Oaxaca and Tlaxcala states.

At the opposite extreme, the lowest values of the HHI are to be seen in the most expensive housing segments, where a large number of small-scale builders entered the sector, in many cases using their own capital; this segment also includes many niches which reflect consumer preferences.

Analyzing the results of the HHI for all segments and states, we can see that whilst there has been a general increase in concentration, this is more evident in the medium-income segment (C). In this segment, the HHI increased in 16 out of the 27 states considered. Although the figures could be viewed as being preliminary, the results suggest that in this segment large developers may have focused on medium size projects, which involve fewer homes, absorbing relatively small construction companies[3] in order to optimize the use of working capital and reduce investment in secondary infrastructure and urban development. In the other segments -high and low-income- the diversity of the results may suggest differences in the maturity of the industry, the size of the market and the existence of barriers to entry[4].

Where has concentration increased, and in which segments?

The Herfindahl-Hirschman Index (HHI)



The points show increases in the Herfindahl-Hirschman Index between June 2008 and October 2009. This covers the 27 federal states for which information is available.
Source: BBVA Bancomer with Softec data

3 This interpretation seems to be consistent with that of Infonavit in its 2010-2014 Financial Plan, which argues that large developers have reduced the size of their projects and absorbed the market share previously held by small and medium-sized developers.

4 In particular, in low-income segments access requires a substantial capital base, and in many cases construction companies already have territorial reserves.

5 Infonavit's 2010-2014 Financial Plan argues that, based on past experience, the adjustment process may take between two and three years.

Conclusions: an opportunity for the most efficient and most highly capitalized

Analysis of industrial concentration indices throws light on the adjustment in the real estate sector in Mexico as a result of the crisis. Perhaps the most evident cost has been that many construction companies have had to leave the sector, leaving the industry with the challenge of meeting housing needs with a smaller number of construction companies; this will not be easy and will take time[5].

The causes of the increased concentration include, on the one hand, the fall in housing demand and finance, which left construction companies without construction loans for projects which had already started. However, it also reflects the weakness of the capital structure of some companies; a lack of experience; the limited amount of work done by housing suppliers to analyze and understand the characteristics, trends and needs of the market; and the risk management of some participants, including non-bank financial intermediaries which specialize in the sector. In other words, this adjustment process can be considered quite normal and, in some cases, even desirable, from the point of view of the need for greater efficiency for consumers.

In this light, and taking a medium-term view, this crisis may bring benefits and generate attractive opportunities. Only the most efficient companies, with the most experience and/or the best capital structure are still in the market. In other words, the companies which have emerged from the crisis are the best managed. It may be that one of the lessons of the crisis is the importance of the requirement to find out about and understand every segment of the market and the nature of effective -in addition to potential- demand; in other words, demand has to be based on the purchasing power of potential buyers and the possibility of displacement of the housing which is being built in surrounding areas. It is worth mentioning that a substantial part of the market is still not being addressed, and this can be explored through greater understanding of the needs of the customer. On the other hand, the experience of the crisis will also probably lead to a review of processes in the search for lower costs.

In order to avoid the risks of an even greater concentration leading to increased market power to the prejudice of the customer, conditions must be generated which encourage competition in all segments; however, there must also be progress in ensuring that existing housing construction standards for zoning, materials and finishes, are applied. Consumers will have to be more careful and demanding in choosing their home. In conclusion, it is possible, and desirable, that this crisis will result in an industry which is more mature, more professional and which provides a better service to customers.

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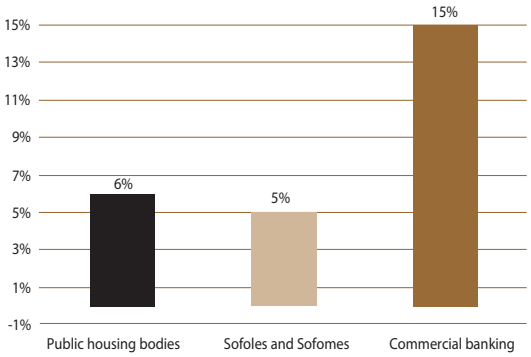
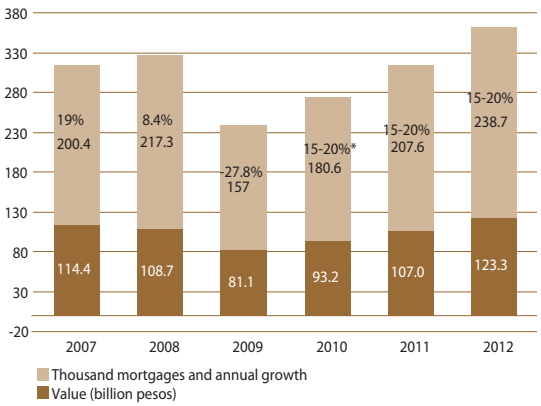
National Housing Finance Program: Main Actions 2010

Expected housing investment 2010
% real annual change



Source: BBVA Bancomer with data for Infonavit, Fovissste, Conavi, SHF, AHM and ABM
*Includes Infonavit, Fovissste, Conavi and SHF

The volume of mortgages forecast for private intermediaries



*Expected value 2010-2012
Source: BBVA Bancomer with ABM and AHM data

2010 is set to be a year of recovery for the housing sector in Mexico. The recovery in economic activity and employment, together with financial stability will be key factors, as will support programs planned by the federal government, public sector housing development bodies and commercial banks, in the upturn of the industry.

In this section we describe the actions promoted by the Comisión Nacional de Vivienda (Conavi – the National Housing Commission), the Sociedad Hipotecaria Federal (SHF – Federal Mortgage Society), Infonavit, Fovissste and the Asociación de Bancos de México (ABM – Association of Mexican Banks). This activity has three objectives: firstly, to reactivate activity in the sector following a period of a little over two years in which there has been a constant fall in the pace of housing construction and sales; secondly, to increase the availability of resources from commercial banks for the sector so that, in tandem with public resources and new financing patterns, they can meet financing needs for housing construction (construction loans) and mortgages; and, thirdly, to promote complementary activities such as the development of urban infrastructure and equipment.

Banks will increase the resources available

There are solid foundations to the housing sector which will enable it to maintain high growth rates over the coming years. The demographic structure, household formation and the backlog in accommodation will continue to be key factors in an administrative environment which is favorable to the development of activity, including support from the development bank and the robustness of the bodies promoting housing development. The increase in the range of products available, and their adaptation to the needs of borrowers, will facilitate a recovery in activity. Examples of this include an increase in the range of types of co-financing, products for refurbishing and modernizing housing, extension of life insurance and damage and unemployment insurance, etc.

In terms of private intermediaries, we expect banks and mortgage Sofoles and Sofomes to contribute over 40% of mortgage finance, and up to 70% of the finance required for house building. The ABM forecasts that growth in finance from private intermediaries will grow at rates of between 15 and 20% over the next three years.

Infonavit will boost activity throughout the housing production chain

The actions to be undertaken by Infonavit range from support for construction companies to plans for bringing the range of products available more into line with the needs of potential borrowers. One innovation is that they will try to complement their resources with investment from state governments.

The Institute estimates that there is a housing deficit in the segment of workers who form the basis of their lending objective (with income of up to four minimum salary payments) which is equivalent to 67% of borrowers ; for the remaining group (with income over four minimum salary payments), the deficit is between 37 and 39%. The first step will be to accelerate the pace of home building.

In order to expand access to construction loans for construction companies, the Collateral Letters program begun in 2009 will be strengthened. Collateral letters will be issued for construction projects with terms of up to 18 months for workers with income of between 4 and 11 times the minimum monthly salary. In addition, they will include information on potential demand in the location of the project. Information relating to the builders of each project will also be made available to financial intermediaries.

On the demand side, contact channels for potential borrowers will be reinforced (there are currently some 5.1 million workers who in principle could qualify for a loan but who have not yet requested one). A mechanism known as the "applicant pipeline" will be established in order to channel potential borrowers, so that they will be better informed and educated about financial terms.

State governments will be encouraged to take part in the home building program. The incentive consists of investing between 4 and 6 additional pesos for each peso which governments provide in subsidies to the home buyer; this may be in cash, land or administrative facilities.

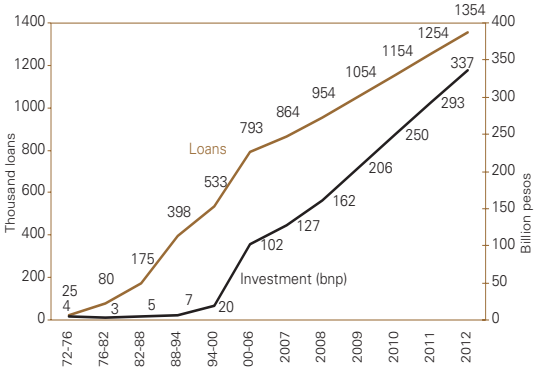
Finally efforts will be made to expand information supply of housing available. Through the Asociación Hipotecaria Mexicana (AHM – Mexican Mortgage Association), interested home buyers will be able to find out about available housing in the Registro Único de Vivienda (RUV – Single Housing Register), which will make it easier for them to search for and compare alternative homes. This will be complemented by a range of measures to be implemented by Infonavit to facilitate the registration of projects; for example, there are plans to modify the information included in the RUV to match the needs and interests of users, and to make verification optional[1].

Fovissste will maintain its targets for 2010

Fovissste has been improving and increasing its operations significantly over recent years, with greater transparency and ease of access to the credit which it supplies. In 2010 it will maintain its annual target of 100 thousand loans, as in the previous year. There is still a considerable backlog in coverage of its members: they estimate that at the current rate of expansion it will take them between 17 and 23 years to meet potential demand. Of the target set, it is estimated that 57% will be under the traditional scheme; 27.5% will be under the Aliad2 scheme; 7.5% will have subsidies; 6% will be for pensioners and the remainder will be for married couples and under the "respalda2" program. The placement is estimated at approximately 250 billion pesos in 2010, an increase of 21.11% on 2009.

1 Care will have to be taken through transparent verification mechanisms to ensure that these changes do not end up undoing all the efforts that have already been made to integrate high quality information, which is proving to be trustworthy . Enabling users (housing suppliers) to decide on the type and quality of information to be included in the RUV (Single Housing Register) may result in the system becoming less reliable over time. Appropriate supervisory mechanisms are required.

FOVISSSTE: Finance projections



Source: Source: BBVA Bancomer with Fovissste data

The SHF will promote new financing schemes

The priority for the SHF is to reestablish financing for home builders, or construction loans. As a result of the 2009 crisis, a substantial number of the finance lines available for housing were not exercised because of the financial difficulties of the institutions through which such funds are channeled, i.e. mortgage Sofoles and Sofomes. It has also been seen that the purpose of construction loans has spread; initially they covered just construction of the homes and secondary development, but increasingly they were also being used for land purchases, primary development, etc. As a result, three new programs have been proposed to help to restore the channels of finance.

Firstly, this will be through providing funds for projects which are currently under way or which are awaiting completion. This will take place through credit facilities, establishing criteria in relation to the viability of the projects, and recognizing that the additional finance will have priority of repayment compared to credit already in place.

Secondly, the SHF's collateral schemes for the banks which finance home builders will be strengthened. The criteria for this include relating the loan to 65% of the value of the property; the finance will be for a period of three years, with a possible one year extension; amortization will mirror that of the assets; the maximum value of the housing will be up to 500 thousand UDIs (index-linked accounting units). The objective is for 80% of the credit facility to be allocated through individual loans through Infonavit and 20% through Fovissste. The first of any potential losses will be the responsibility of the construction company, whilst the SHF will share the second losses in "pari passu" with the banks.

Thirdly, a structured product will be developed for a set of projects by various developers through UDI trusts. This will consist of packaging together a number of projects to obtain resources and funding them through a trust from four sources: the SHF, which will be responsible for the building and some of the secondary infrastructure; financial intermediaries, who grant construction loans with a "pari passu" guarantee from the SHF; capital funds, which will evaluate the projects and define the finance vehicles; and, the housing promoter, who will accept the initial losses. A cascade of payment levels will be established with priority rights, with the SHF and the financial intermediary being in first place.[2] There is a variation of this scheme under which various UDI trusts can be created to package specific projects.

In order to help to offset risks, administrative plans are established for the financial intermediary and the capital fund. In turn, the capital fund invests in the land for each project and recovers its investment when the construction loan has been repaid, which it protects during the process. The interest rate charged will depend on the level of risk of the projects.

2 This point refers to an innovative scheme which is promising as a lever for financing. We will have to monitor in detail how it develops and works in practice. This will start with monitoring the amounts of investment which it might channel. In addition, attention will have to be paid to criteria for evaluating projects, as they may result in projects from the most important developers being approved, as they will already have access to financing (debt issues, stock markets, etc); this may increase the divide in access to finance for large and small developers.

Conavi will accelerate execution of the budget

Conavi has planned a budget of 5.3 billion pesos for the current year, which represents 5% growth in real terms compared to 2009 (4.9 billion pesos). The actions to be implemented throughout the year include: firstly, more agile use of the budget. For example, quarterly objectives have been set for each state's budget, with the amounts only being available during the period in question; any remainder will be distributed among the states with the largest housing inventories which have used all of their budget. In addition, they aim to spend 60% of the annual budget in the first six months of the year. Secondly, they aim to triple the budget for sustainability activities, from 500 million to 1,500 million pesos through agreements with state governments.[3]

Conclusions

Evidence from previous economic crises shows that the housing industry may recover more slowly than the rest of the economy, mainly due to delays in reestablishing credit and finance for the various stages in the housing production chain and impact on the labor market. On this occasion, policies to normalize financing conditions will be essential (as we discussed in the macro-economic section) as the impact of this recession on employment has been less severe than in other similar periods. There can be no doubt that the measures taken to inject liquidity for both developers and consumers have played a key role in reactivating demand for housing in the market. Furthermore spreading coverage to larger segments of the population and other segments of the production chain through participation by commercial banks and development banks, and obtaining more information on land markets, prices and the characteristics of the homes required, will all be important tools in helping the industry to recover.

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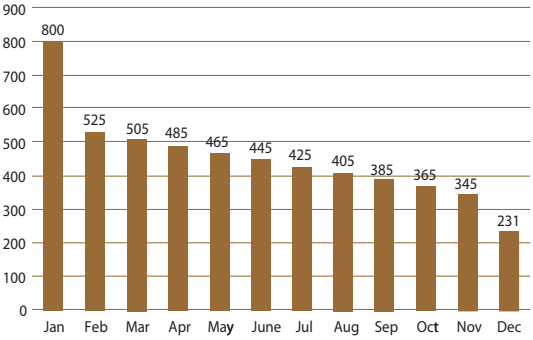
Monthly distribution of the "This is your house" program for 2010

Million pesos



Source: BBVA Bancomer with CONAVI data

3 Under this structure, Conavi will aim to increase the resources contributed by state governments by 50%, or at a ratio of 2 (pesos from the state government) x 1 (peso from the federal government).

CKDs: A New Financing Alternative

On 2 October 2009, the Mexican Stock Exchange opened a new segment for capital markets focusing on finance for projects with high growth potential such as, for example, infrastructure (roads, railways, ports, airports, etc.), energy (electricity generation, production of hydrocarbons, refinery construction, gas, petrochemicals), water (construction of water networks, water treatment, etc.), development and consolidation of industry (exporters, technology development, etc.) and support for various segments of the real estate sector, such as development, urban facilities, industrial estates, commercial developments, housing and the various stages in the building process, etc. The funds for this will come from private investors through new instruments known as **"Capital Development Certificates (CKDs)"**.

From a legal point of view, CKDs are fiduciary stock market certificates. In other words, the funds of investors are placed in a trust for a specific purpose, and a return is generated from the project's fund flows, which, by their nature, are uncertain and long term. They have a technical committee, 25% of the members of which are independent, which will be responsible for taking decisions, although it is also possible to have other members with a large share of the investment. The term of the project is specific but, unlike other financial instruments, the CKDs do not have a rating. The instruments will be priced by suppliers of prices and/or independent valuers. Given their nature, these instruments are not very liquid and they will therefore tend to be long term.

Given these characteristics, it is assumed that they will be bought mainly by institutional investors, such as Siefores, private pension funds, insurance companies and even high net worth individuals. These investors may be able to use these instruments to diversify their portfolios and increase their returns. Siefores have been able to invest in such instruments since 28 March 2008 when their investment regime was modified; they may now invest up to 10% of their portfolio in structured instruments such as CKDs.

So far there have been two such issues: the first was for the Red de Carreteras de Occidente (RCO – the Western Road Network) which won a concession under FARAC I giving it the right, and obligation, to build, operate, maintain and repair a group of four motorways: Maravatio-Zapotlanejo (309.7km), Guadalajara-Zapotlanejo (26km), Zapotlanejo-Lagos de Moreno (118.5 km) and León-Aguascalientes (103.9 km); the project also includes work to expand other stretches of motorways. The concession runs until April 2038. The second issue was for WAMEX Capital, which is for financing projects for small and medium-sized companies in the manufacturing and services sectors through a private capital fund. The term of this issue is until November 2019.

Three further issues are expected in the first half of 2010. One of these is for Prudential Real Investors (PREI) which is for industrial estates, including manufacturing premises and distribution centers, whether for the construction of such facilities or acquisition of ones which are already operating. The offer is expected to take place in the first half of 2010.

Positive assessment: a new instrument with benefits for both the investor and the issuer

The launch of CKDs is positive, as they will contribute to enriching the supply of finance for projects with high potential in the country, show a major backlog and require, therefore, a substantial need for funds. At the same time, CKDs offer an alternative for investors which, in addition to diversifying their portfolios, may offer higher expected returns, particularly when a long-term horizon is considered. Other alternative instruments for financing different stages in the development and infrastructure of the housing sector in Mexico also need to be explored: for example, funding is required to achieve a greater boost for land banks; the development of urban infrastructure and facilities; these are at a relatively early stage, but may represent opportunities for the development of other debt and private capital instruments, such as for example pre-operational bonds, which are well-known and successful in Chile or through the expansion of finance in the accommodation market through instruments such as Covered or Mortgage Bonds.

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Infonavit Financial Plan 2010-14: a Review of the Medium Term Strategy

Infonavit presents its Financial Plan in December every year; this year the Plan contained a number of interesting statements about the way that the Institute works which will have repercussions on the development of the real estate sector. As usual, the Plan details targets for loans; this year the Plan refers to the period 2010-2014. An important element in this year's Plan is an evaluation of the impact of the 2009 economic crisis on the housing sector and its prospects for a gradual recovery. Furthermore, it discusses important changes in its focus on demand, both in terms of how this is measured and the financial products required to meet the demand. In this section we discuss the main messages contained in the Plan, and the implications that these might have for the real estate sector in the short and medium-term.

The effects of the crisis on housing supply

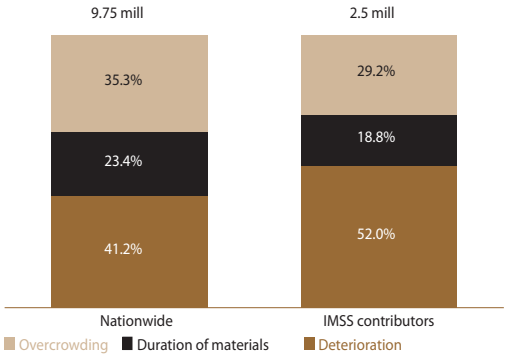
The diagnosis of supply identifies a major fall in home building (39% on an annual basis to the third quarter of 2009) and sales; there are substantial differences in sales depending on the size of the developers. Whilst construction companies which are listed on stock markets experienced a moderate 3% annual fall to the third quarter of 2009, other companies responsible for large construction volumes but with lower access to finance (e.g. large companies not listed on stock markets) suffered falls of 9%, whilst smaller scale companies experienced the largest falls at 21% in this period.

The Plan argues that a major part of the fall in housing construction was related to interruption to the availability of finance through construction loans. Looking to the future, and referring to other contractions which have taken place over the last 25 years, it is estimated that the recovery will take between two and three years to fully establish itself. Based on past experience, the trend seen in 2008 and 2009 of moderate house building may continue in 2010; however, this may be at a lower level than over previous years (i.e. compared to the highest part of the housing cycle).

The Institute finds that differences in the contraction of housing sales are a result of difficulties in accessing finance for construction and personalization, in addition to the fall in demand. In 2009, Infonavit's programs remained active, providing finance for mega- developers to build housing in the low-income sector –which is most influenced by preferential credit conditions and some subsidies, and there is a certain amount of unsatisfied demand- on which the largest construction companies focus[1].

Accommodation backlog: national vs. IMSS contributors

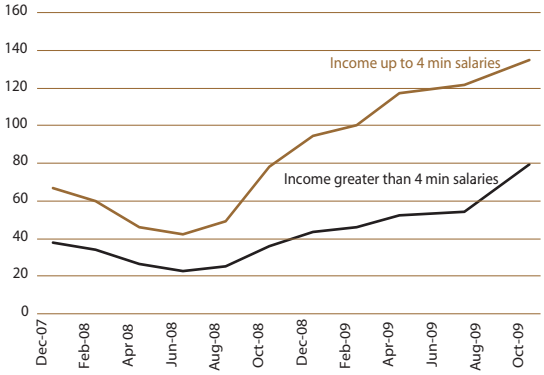
Millions of households and contribution



Source: BBVA Bancomer with Infonavit data

The increase in loans in the grace period has been more marked in the lower income segment

Thousand loans



Source: BBVA Bancomer with Infonavit data

A new focus for demand, which will have to be more precise

There have been some changes of focus in terms of housing demand. The Plan points to the need for a more precise diagnosis of housing requirements, which considers not just qualified workers who are yet to make use of their mortgage, but also –and most importantly- the fundamental characteristics of demand for accommodation among the population, taking into account demographics such as household formation and other basic components of demand. For example, the Institute argues that in its detailed analysis of household formation, those led by women are becoming increasingly important, although women still do not have the same salary levels or employment stability as men.

Based on its more detailed analysis of housing needs, Infonavit will also try to diversify its product range to cover refurbishments and extensions, in addition to housing purchases, on which it has concentrated to date. The Institute argues that around 50% of the accommodation backlog in the country of around 2.5 million homes for workers contributing to the IMSS social security system is related to overcrowding and materials with short life; in other words, these contributors require refurbishment and redevelopment solutions rather than to buy housing[2].

From our point of view, the Institute has a relevant message for housing developers, which is that it is becoming ever more important to have an in-depth analysis of effective housing demand, rather than potential demand. Decisions about the location and specifications of housing developments should take into account factors such as the payment capabilities of households, supply in the area of the development and other specific consumer preference factors.

One of the Plan's major conclusions, and which represents a position which will have an important effect in the future, is that housing demand estimates will now be prepared by Conavi (the National Housing Commission), and Infonavit will establish its finance targets based on these. This decision, which we have argued for as a necessary development (see **Real Estate Watch Mexico** October 2009), is a significant advance for the sector as it will focus public housing bodies on what should be their natural areas: housing finance for Infonavit, and public sector housing planning and coordination in the case of Conavi. This clearer definition of functions should make it possible to gradually spread targets and enable developers to produce better estimates of demand prior to building; in turn, this should bring demand and supply more closely into line, reducing the duration and scale of the periods of excess supply seen in the past. In addition, it will relieve Infonavit of its dual responsibility to guarantee finance and to quantify housing needs locally and by segment.

1 This statement simply emphasizes the effect on housing supply of differences in access to construction loans for construction companies, which, whilst in general was more selective, hit smaller scale developers harder.

2 For a more detailed analysis of housing needs, both in terms of purchases and refurbishments, see "Is there a housing deficit at present?" in Real Estate Watch Mexico October 2008, which provides a number of definitions and estimates for this deficit.

The lowest-income segments will continue to be the priority

Infonavit's Financial Plan restates the emphasis of its housing programs on the lowest-income sectors of the population. However, it also emphasizes the difficulty of simultaneously meeting the needs of this segment of workers whilst maintaining sufficient capitalization to maintain its own solvency. As a result of the economic crisis, the NPL and in grace period[3] portfolios have increased considerably (the number of loans in the grace period increased from 78 thousand in August 2008 to 234 thousand in October 2009), particularly in the lowest-income segments. In addition, workers in this segment have a higher risk of losing their jobs and suffer longer periods of unemployment, thus having the greatest risk of not making payments. As a result, whilst the expected loss on the loan portfolio of the segment with income in excess of four minimum salary payments is 1.5%, whilst it is 2.2% for the segment earning under this amount.

According to the Institute, crossed subsidies have been an important part of the strategy for providing support to the lowest-income groups without threatening its financial position: interest rates for this segment are 4%, and rise to 10% for the highest-income segment. The other equally important element in its strategy is payment to the housing sub-account, which has been defined at 3% for 2010, which is below the 3.3% forecast annual inflation rate[4].

Lending targets

Infonavit's lending target for 2010 is to organize between 475 thousand and 525 thousand loans, depending on demand and the availability of finance. This target is quite similar to the 2009 target range of 450 thousand to 500 thousand loans. The ability to meet this target will depend on home building returning to normal, and in particular on construction finance availability helping to reestablish the production chain. It should be highlighted that Infonavit has the financial resources to meet the targets set for the year.

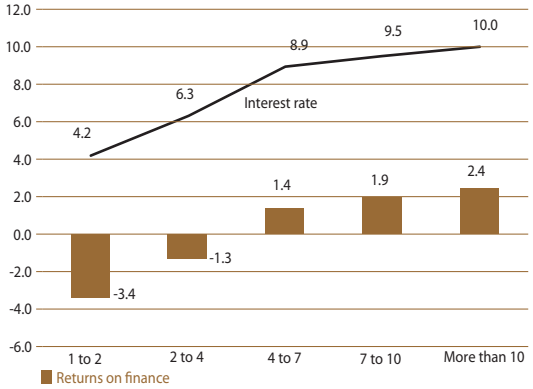
Regarding the distribution of the loans, 60% will be for the segment earning less than four minimum salary payments and 14% for the segment earning more than this amount; the remainder will be used for co-financing.

For the medium terms, the lending targets are expected to remain practically constant in 2010 and 2011, and to increase gradually thereafter. The Institute plans to organize 620 thousand loans in 2014, 18% more than planned for 2010.

3 "Grace period" for loans past due before they are considered to be non-performing loans. It should be noted that this treatment of the portfolio is an exclusive privilege of Infonavit.

4 In other words, workers with higher income in relative terms subsidize those with lower incomes through differences in the interest rates they pay on mortgages and by obtaining lower returns on their home buying account than they would from other savings or investment options.

Infonavit loans



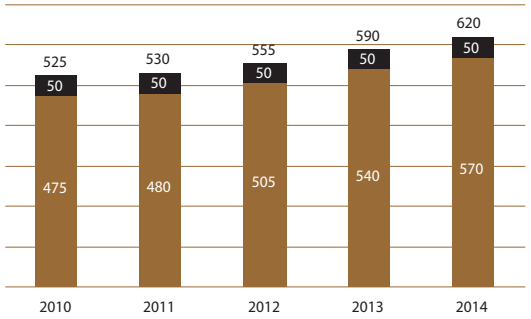
Source: BBVA Bancomer with Infonavit data

Infonavit lending targets 2010

Product	Thousands of loans	Share %:	Investment (mp)
Less than 2 min sal	80	17	12,734
2 to 4 min sal	205	43	45,315
Over 4 min sal	65	14	19,704
Infonavit Total	70	15	15,162
Cofinavit < 11 min sal	15	3	2,835
Cofinavit AG	10	2	1,665
Infonavit - Total AG	30	6	1,665
Total	**475**	**100**	**5,059**

Source: BBVA with Infonavit data
Note: mp = million pesos

Infonavit targets 2010 - 2014
Thousand loans



Source: BBVA Bancomer with Infonavit data

Conclusions: the Plan highlights the importance of more accurately modelling demand

The 2010-2014 Financial Plan contains diagnosis of the current crisis the conceptual framework for Infonavit's programs and policies over the coming years. Some of the approaches imply major changes in the way the Institute operates, and will have implications for the industry, although these will become clear gradually and will become more clear from 2011. These modifications include a change in focus on identifying the country's housing needs and the products required by the market. The objective is to improve the way that demand is estimated by all parties in the sector –particularly developers, which is likely to benefit the whole sector. Some of the benefits which will be seen over the medium-term as a result include better coordination between bodies, the development of new products and services for market niches which are current not being served. In the short-term, it will continue to boost the housing industry in 2010, seeking to reestablish the supply and condition demand conditions which affected it more strongly in 2009. In summary, the Plan has a positive outlook for the current year.

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Construction loans in 2010: A bottleneck for the housing industry once more?

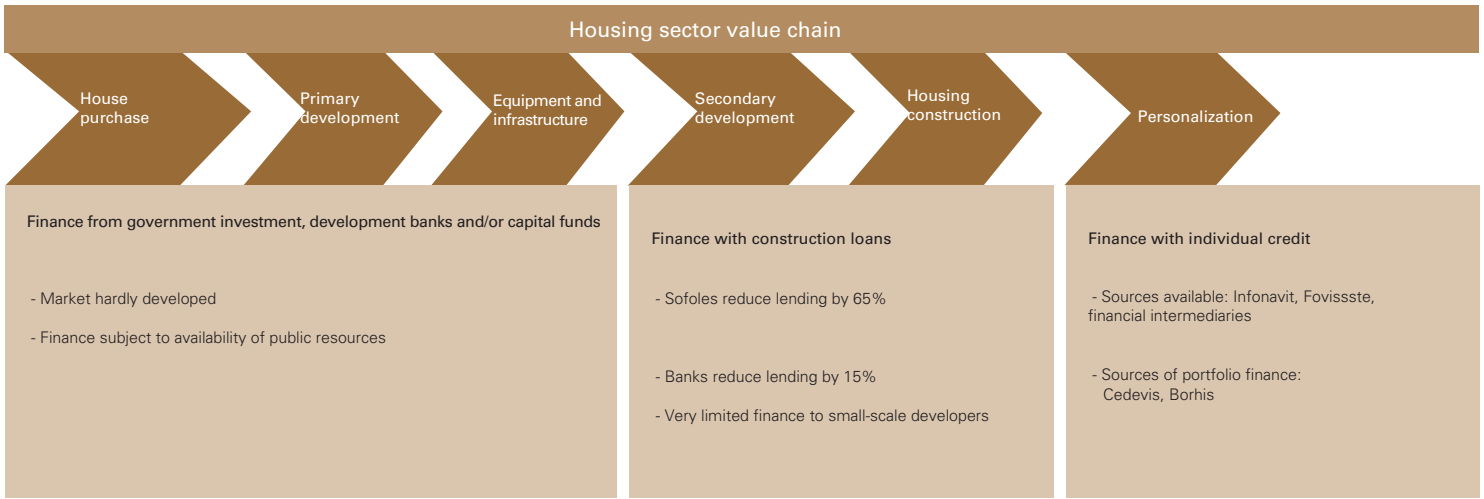
Finance for construction companies is a fundamental link in the production chain for the housing industry. It is widely accepted that part of the contraction in the mortgage market in 2009 was due to the difficulties which developers had in obtaining finance, which resulted in a decrease in the supply of housing, resulting in turn in accommodation shortages in some regions; this was in addition to the decrease in housing demand resulting from the crisis, which was the most obvious factor. This issue has not yet been fully overcome, and may continue to act as a brake on the real estate sector in 2010, as the finance channel has not yet been fully reestablished, especially for non-bank financial intermediaries. This article analyzes the main characteristics of construction loans, their role in financing the industry, the development of the lending portfolio, both by types of intermediary (bank and non-bank) and geographically, together with the outlook for 2010, in terms of values and the potential number of homes to be financed. This section also details a set of measures recently announced by the SHF (the Federal Mortgage Society) to relieve this situation.

What is it and how does it work?

Construction loans are given by financial intermediaries to house builders to build homes; it is used in some cases for developing secondary infrastructure and, above all, for building construction. The early stages of the housing production chain, which include land acquisition, development, facilities and infrastructure, rely on venture capital, government investment and development bank funds[1].

1 The institutional framework for generating land for housing development needs to be improved to make it more efficient, so that it becomes a driver of finance for all stages in the housing process. There is a study of the problem of establishing land for urban development in the October 2009 issue of Real Estate Watch Mexico.

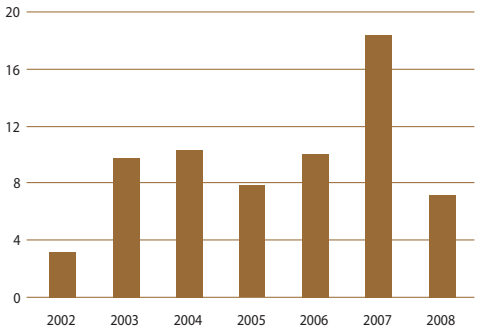
Housing sector value chain



Source: Infonavit

Stock market issues for construction loans dried up in 2008

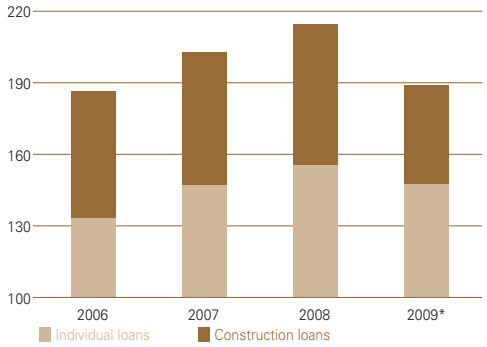
Total stock market issues*, Billion pesos



* Includes amounts in UDIs, dollars and pesos
Source: BBVA Bancomer with SHF data

The lending portfolio of Sofoles/Sofomes has reduced, mainly due to construction loans

Million pesos at 3Q 2009 prices



Source: BBVA Bancomer with AMFE data

We need to understand the characteristics of construction loans in order to understand how they have developed. Typically they covers an average of 65% of the value of the collateral, which usually consists of the land on which the housing is to be built, and it is granted in tranches as work progresses. The term of the loan is usually two years, which may be extended for a further two years; repayment of the loan is financed by selling the housing. These loans are mainly granted by non-bank financial intermediaries (mortgage Sofoles and Sofomes) and banks.

In turn, a large part of the initial funding for the construction loans is obtained through debt or stock market issues. Between 2006 and 2009, around 27% of the value of construction loans granted by Sofoles and Sofomes came through stock market issues. However, in 2009 finance for construction companies from these institutions fell considerably. At the end of the third quarter of 2009, the balance of the construction loan portfolio had contracted by around 30% in real terms compared to the end of 2008; the reduction in individual loans was much more modest at around 5.2%.

This behavior reflects the difficulties in placing debt issues backed by construction loans, and stock market issues. In 2007 the value of such issues amounted to close to twenty billion pesos, but in 2008 it was less than seven billion.

As a result, banks have increased their share of bridging loan finance; in 2009, the amount of construction loans from banks exceeded that from mortgage Sofoles and Sofomes. However, this was not sufficient to avoid a fall in the total finance granted: aggregating both types of intermediaries, the balance of construction loans in August 2009 was 17% lower than at the end of 2008[2].

This major fall in house building finance by non-bank intermediaries began in 2008 and accelerated in 2009 due to a combination of a number of varied factors. On the one hand, it was due to the major impact of the recession in the USA on the segment and the regions traditionally served by mortgage Sofoles and Sofomes. Compared to banks, these institutions have more geographically concentrated lending portfolios which are focused on states which have been affected by the recession as a result of the presence of manufacturing or automotive industry and tourism, all of which are most exposed to the USA. For example, whilst 14% of the portfolios of individual loans from mortgage Sofoles and Sofomes was in the states of Baja California, Sonora and Tamaulipas in 2008, the share of these states in bank portfolios only amounted to 7%; and Baja California Sur, Quintana Roo and Guerrero –which have large tourism and second homes sectors- accounted for 13% of the portfolios of mortgage Sofoles and Sofomes, but only 4% of bank portfolios.

2 It should be noted that, whilst the figures released by AHM correctly identify the trend, the amount of finance supplied from banks for housing construction may be higher than just the amount recorded as construction loans, as some such finance may be recorded as lending to companies or commercial lending.

The global financial crisis worsened the problem, as it increased risk aversion –particularly for instruments backed by the real estate market- and practically closed off access to international and, in part, domestic finance, both for placements of mortgages and construction loans. The last stock market issue backed by construction loans (including banks and mortgage Sofoles and Sofomes) took place in mid-2008, a few months before the financial crisis exploded globally with the announcement of the bankruptcy of Lehman Brothers in the USA.

Finally, the operational structure of construction loans accelerated the deterioration of the portfolio. These loans are granted as work on the housing construction progresses, so that a contraction in sales results in liquidity drying up, leading to in many projects remaining uncompleted, and therefore not sold, further reducing liquidity. As a result, any fall in the flow of finance to mortgage Sofoles and Sofomes from the placement of portfolios or sale of mortgages quickly translates into a rapid increase in the past due portfolio. In turn, any increase in the past due portfolio results in increases in reserves, shrinking liquidity even further. Support programs from the federal government, whilst useful, are not sufficient to reverse this fall in finance.[3].

At the start of 2008, the NPL index for the construction loan portfolio of mortgage Sofoles and Sofomes was around 5%; however, by the end of the year it was around 8%, and by the third quarter of 2009 it had increased to around 30%.[4]. Figures on a state-by-state basis show that the past due portfolio grew gradually in 2008, and that it became widespread in 2009. However, having said this, at the end of the third quarter of 2009, 50% of the past due portfolio was concentrated in eight states.

The importance of restoring construction loans

Figures for the placement of housing by Infonavit in 2009 are eloquent testimony to the implications of not having finance structures which adequately meet house building requirements. Due mainly to the shortage of housing supply, of the 500 thousand loan target for 2009, only 450 thousand were actually completed; of these, 30% were for existing housing, which usually accounts for less than 10% of total sales.

This means that the scarcity of finance in 2009 resulted in around 150 thousand homes not being built. We should add to this the behavior of the high value housing segment, which is not part of Infonavit's target market, but where there were also restrictions.

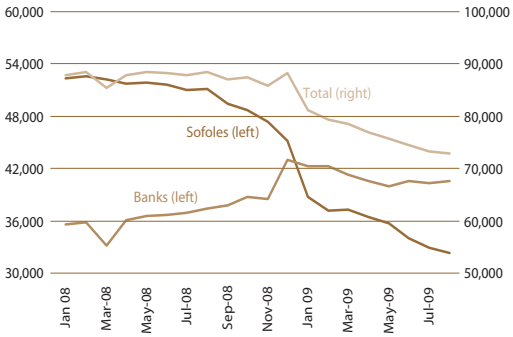
According to the AHM (Mexican Mortgage Associations), in 2008 and 2009, the share of construction loans or finance in the value of housing built was between 25% and 30%. Measured as a proportion of mortgages placed, finance of housing construction by bank and non-bank intermediaries stood at around 20% in 2008 and 17% in 2009.

3 Infonavit has made its conditions for construction companies to register their projects as available housing supply more flexible in terms of how far the project has advanced. Support from the SHF consists of a program of guarantees for those who provide construction loans.

4 It should also be noted that there are significant differences within the mortgage Sofoles and Sofomes sector in terms of the performance of the past due portfolio and administration of certain areas, such as collections; some institutions have suffered delays in these areas which have worsened their financial position.

Banks have not managed to offset the fall in construction loan contracts from Sofoles/Sofomes

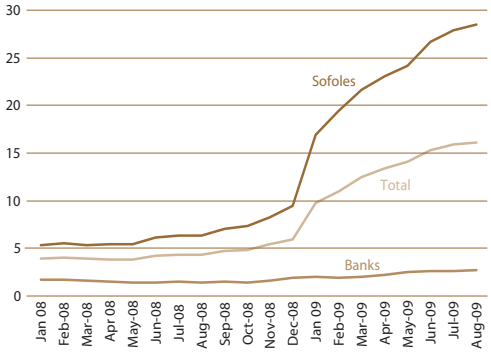
Current portfolio, million pesos, constant August 2009 prices



Source: BBVA Bancomer with AHM data

… for which collections have also become more difficult

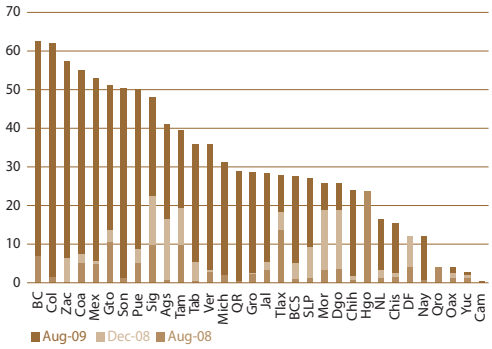
NPL*, %



* Past due portfolio/total portfolio
Source: BBVA Bancomer with AHM data

The red lights came on in the second half of 2008, and the problem became widespread in 2009

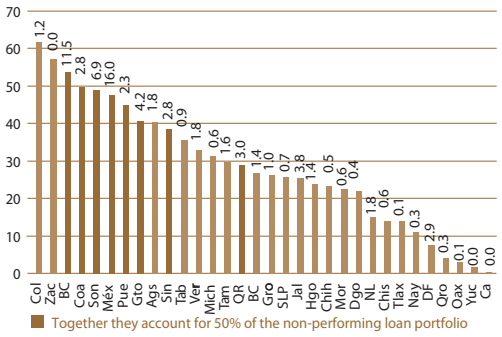
NPL index, %



Source: BBVA Bancomer with AHM data

Although the increase in NPL is general, the states with the heaviest weight in the portfolio are among the most problematic

NPL and % of past due portfolio*, August 2009



Note: The figures only consider the geographically distributed portfolio (27% of the total is not)
*Figures in italics
Source: BBVA Bancomer with AHM data

Construction loan investment required: 2010

(Million pesos)

	Low range	High range
Aguascalientes	729	838
Baja California	3,911	4,498
Baja California Sur	870	1,001
Campeche	296	340
Coahuila	1,159	1,333
Colima	352	405
Chiapas	319	366
Chihuahua	1,626	1,870
Federal District	6,284	7,227
Durango	383	440
Guanajuato	1,902	2,188
Guerrero	1,407	1,618
Hidalgo	696	800
Jalisco	3,059	3,518
Mexico	7,728	8,888
Michoacán	738	848
Morelos	645	741
Nayarit	447	514
Nuevo León	3,565	4,100
Oaxaca	214	246
Puebla	1,274	1,465
Querétaro	2,748	3,160
Quintana Roo	1,445	1,661
San Luis Potosí	738	849
Sinaloa	1,570	1,806
Sonora	1,683	1,935
Tabasco	711	818
Tamaulipas	1,290	1,484
Tlaxcala	24	28
Veracruz	1,226	1,410
Yucatán	1,187	1,365
Zacatecas	188	216
Total	50,414	57,976

Note: The estimates consider individual loans for new housing, the relationship between housing placed and that built using construction loans and the average amount of construction loans per home
Source: BMV and BBVA Bancomer

Based on the number of construction loans recorded, and the average value of these, in 2008 finance from financial intermediaries for house building amounted to 50 billion pesos, but this fell to 35 billion pesos in 2009.[5]. This information was used to estimate the financing requirements nationally for 2010.

Making estimates based on the targets for loans for Infonavit and Fovissste for 2010 –which were set at 500 thousand and 100 thousand mortgages, respectively- and considering a mixture of new and used housing similar to that seen in 2010, we find that the amount of investment for construction loans should be 50 and 58 billion pesos at 2009 prices[6].

The question immediately arises of where the funds for normalizing the finance and assignment of construction loans will come from, particularly when we take into account that non-bank financial intermediaries may continue to face difficulties in accessing finance. This would appear to be an attractive opportunity for well capitalized institutions –mortgage Sofoles and Sofomes and banks- although over the medium-term it is clear that the real estate sector faces a challenge to find better structures or models to meet the demand for long-term finance from all stages in the value chain appropriately.

In this context, the importance of the measures recently announced by the SHF to alleviate this problem appear to be significant, as they aim to normalize the financing conditions for construction loans (refer to the section on support programs from the housing sector in 2010).

The previous ***Real Estate Watch Mexico*** examined the topic of available finance structures and the need to develop new instruments such as covered bonds to meet medium term requirements. There is a need for public sector housing developers, the development bank and regulatory bodies to match their targets for granting loans to the availability of finance and support programs, in order to ensure that the numbers of homes needed to meet lending targets are built.

Conclusions: there is a need to continue exploring new financing options.

After a year of major adjustments on both the demand and supply sides, 2010 seems liked to be a year of recovery in Mexico's real estate sector. However, one requirement for this is a recovery in home building, which in turn requires financing channels to be reestablished. For some intermediaries this may be an opportunity for improvement, consolidation or expansion of their position in a market which is desperate for funds. However, it is becoming apparent that financing may act as a brake on the industry's growth rate. Meeting this need

5 Annualized figures based on results to the third quarter were used to estimate 2009 figures.
6 Based on an interval of compliance with the target for granting loans for both Infonavit and Fovissste of between 85 and 100%; and also considering the relationship between the housing sold and that built using construction loans, and the average amount of financing for each home built using construction loans.

with new financial instruments and well focused government support programs, together with programs such as those announced by the federal government and public sector housing bodies for 2010, will be of fundamental importance in guaranteeing the pace of sustained expansion in the housing sector over this and coming years.

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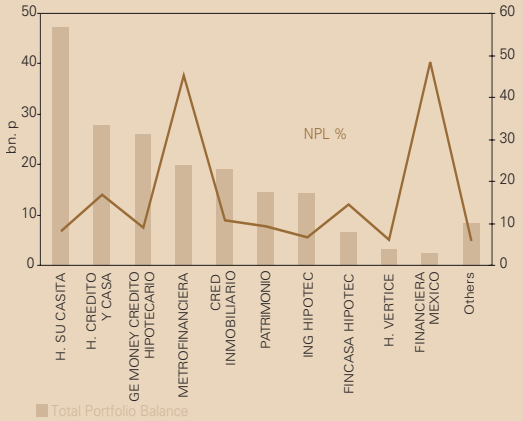
Some financial indicators for the main mortgage Sofoles and Sofomes

The role played by mortgage Sofoles and Sofomes must be examined in any analysis of the housing industry during 2009, particularly with regard to construction loans. In this section we present a summary of the main financial indicators for the most representative of these non-bank financial intermediaries.

Whilst it should be remembered that whilst not all the mortgage Sofoles and Sofomes were in the same situation prior to the crisis, and that some have handled the recession better than others, the figures show a high correlation between larger market share and higher levels of NPL. In other words, a positive relationship can be identified between the size of the portfolio and the rate of default; this suggests that the largest financial intermediaries took on greater risk, such as construction loans and market segments which are more vulnerable to changes in the economic cycle.

NPL in Sofoles and Sofomes is high

Total portfolio in billion pesos and % NPL*, 3Q09

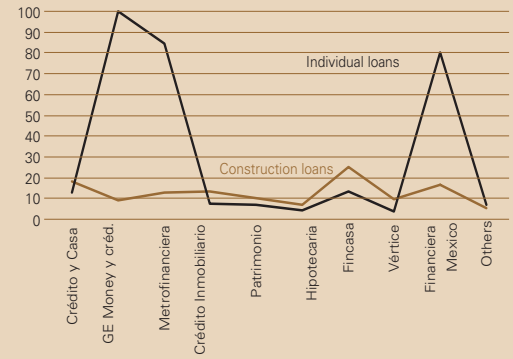


* Past due portfolio/total portfolio
Source: BBVA Bancomer with AMFE data

In addition, there are also major differences depending on type of credit involved. In general, NPL is higher for construction loans than for individual loans; this is logical if we consider that in the latter the collateral consists of the home itself and that this can be sold, therefore offering greater liquidity than earlier stages in the housing production chain, such as land or projects which are already underway, particularly at times of economic crisis. As a result, when finance is agreed for projects which have not yet been concluded, the construction loan structure is more vulnerable (refer to the article on the performance of construction loans); it seems that this is what has happened to some institutions.

There is increased NPL in construction loans

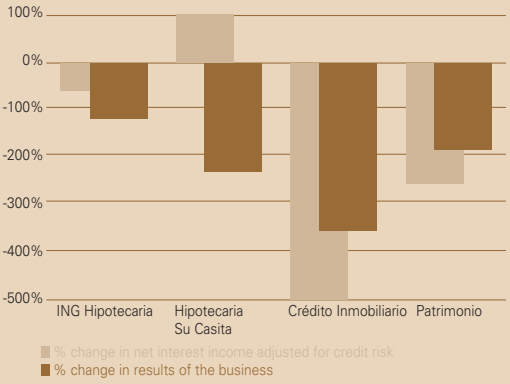
% NPL*, figures for 3Q09



* Past due portfolio/total portfolio
Source: BBVA Bancomer with AMFE data

The reports published by these intermediaries to the stock market also provide a perspective on how 2009 has affected their financial positions. It is clear that their financial positions deteriorated throughout the year, mainly due to the increase in finance costs and increased reserves. With the exception of H. Su Casita, all other mortgage lenders suffered a major fall in their net interest margin adjusted for credit risks and operating income.

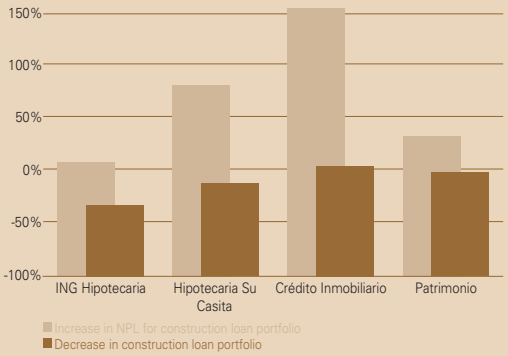
Net interest and operating income



Source: Reports to the BMV to 3Q09, BBVA Bancomer, Latin American Market Strategies

The decrease in net interest margins adjusted for credit risks originates in the increase in the lending portfolio. In this context, NPL in the construction loan portfolio practically doubled in the 4 mortgage lenders during the first 9 months of 2009, from 6.1% to 12.2%. This resulted in a decrease in granting such loans (4.3% annual), particularly in the current portfolio (-10.6% annual).

Construction loan portfolio performance



Source: Reports to the BMV to 3Q09, BBVA Bancomer, Latin American Market Strategies

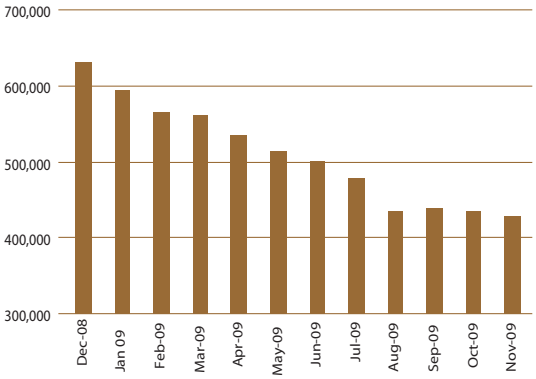
In this situation, the credit market has been cautious in taking risks with this type of bond; this has limited placement of long-term bonds. Access to credit has mainly been through issue of short-term debt with a partial guarantee from the SHF. In other words, no structured bonds, whether backed by individual loans or by construction loans, have been placed in the market since the start of the crisis. Furthermore, some of these structures have seen their ratings fall sharply, and in some cases -mainly subordinated instruments- analysts have warned of risks of non-payment.

Conclusions: the sector requires better financial intermediation practices

The 2009 economic crisis has made it clear that, under current conditions, the structure and functioning of mortgage Sofoles and Sofomes is vulnerable to changes in the economy. However, non-bank financial intermediaries still need to be well financed to meet the financial needs of the sector, both on the side of house builders and on that of low-income buyers. One of the challenges in 2010 will be to find better structures to cover the financing gap which has emerged.

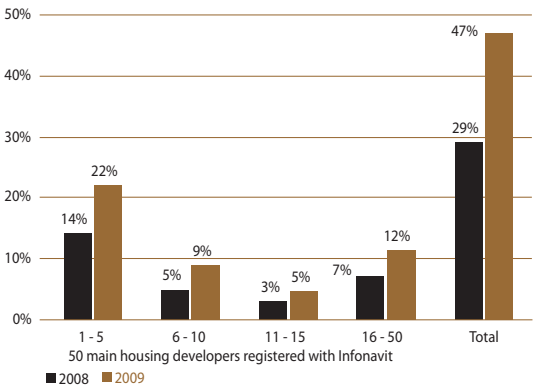
2010: Moving Towards a Year of Growth for Home Builders

New housing starts
Accumulated housing starts in last 12 months



Source: Single Housing Register, Infonavit

Shares for main developers based on the number of loans formalized with Infonavit 2008-2009



Source: Infonavit

Starting from a year when there were major adjustments in the sector

Difficult macroeconomic conditions and a scarcity of finance resulted in consolidation and a certain degree of cleansing in the housing sector in 2009. The largest developers increased their market share and had relatively stable revenue, operating income and financial cycles. However, the situation for small and medium-sized developers was very different: many halted their expansion plans, others temporarily ceased their activities whilst some left the market altogether.

Whilst the Single Housing Register shows a 38% annual contraction in new housing starts to November 2009, it should be noted that stock market listed "mega-developers" only reduced their new housing starts by 3%, and large developers not listed on the stock market cut housing starts by 9%.

This weak financial situation and limited access to credit markets led many small and medium-sized developers to leave the market. There were 821 developers recorded by Infonavit as having housing packages in September 2009, 47% fewer than in 2007 before the global crisis in the mortgage sector.

Economies of scale and access to credit markets: the keys for large developers

At a time of economic crisis and volatility in financial markets, we consider that the main strengths of large housing developers compared to the rest of the sector are: the ability to generate economies of scale; financial soundness; low exposure to construction loans from mortgage Sofoles and Sofomes; and access to a range of sources of finance. As a result, mega-developers were able not just to survive the difficult economic conditions, but actually increased their market share.

An overview of the housing developers listed on the Stock Market

In general terms, the housing developers listed on the Mexican Stock market (Ara, Geo, Homex, Sare and Urbi) performed well during 2009. From January to September 2009, the volume of houses sold by these companies remained stable, and their total revenues fell by only 2% compared to the same period in 2008. This contrasts with an 8.1% fall in GDP and a 37.5% fall in the supply of housing nationally over the same period.

Whilst these developers have all used different strategies to handle the crisis, we can identify the following elements which are common to all of them:

a) **A slowdown in growth rates in 2009.** Faced with the difficult economic conditions and the scarcity of credit, public developers opted for business plans which did not threaten their financial positions. The best placed companies aimed to increase their revenues by between 8% and 10% on an annual basis, well below the growth rate seen in previous years. Those companies with tight liquidity adopted business plans which involved contractions in revenues of between 15% and 25% on an annual basis.

b) **A focus on low-income and social housing.** The proactive role played by Infonavit, Fovissste and commercial banks (through co-financing products) made these segments into a defense against the economic slowdown. As a result, developers focused almost 90% of their output on low-income and social housing, compared to over 80% in 2008. This enabled them to achieve stability in the volume of houses sold and to maintain practically stable prices in real terms.

c) **Economies of scale and control of operating expenses.** Building of massive projects results in economies of scale which, in turn, have been complemented by tight control of administrative expenses. This has enabled companies to maintain their operating profitability.

d) **Lower purchases of land reserves.** In order to protect their liquidity, developers reduced their land purchases by 65% compared to 2008. Companies limited land purchases to replacement of land used during the year. Whilst this decision reduced cash outflows, it also increased the effective tax rate paid by developers, as land purchases are one of the main sources of tax offsets for companies.

e) **Reduction of expansion plans (Capex).** Companies have moderated their investment in new construction technology (such as steel and aluminum moulds) together with plans to expand to new zones in the country. Some public developers have closed locations which are not profitable.

f) **No exposure to finance from mortgage Sofoles/Sofomes.** Developers listed on the stock market have not been exposed to these institutions since the end of 2007.

g) **Replacement of bank finance with stock market finance.** Given the improvement in conditions in credit markets, some developers issued bonds in international markets, with terms of up to 10 years. The companies have used the funds attracted in this way to pay down bank credit with a shorter term, thus significantly improving their debt repayment schedules.

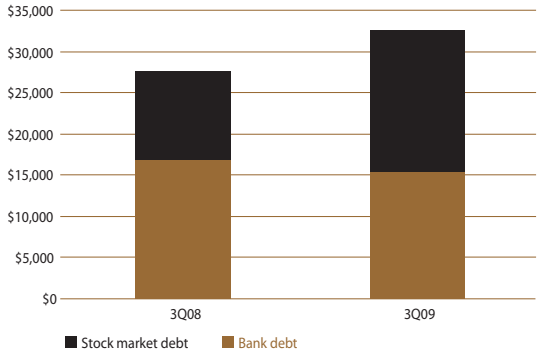
Developers listed on the stock market: Financial performance

	3Q08	3Q09	% Change
Volume of sales	129,899	130,445	0%
Social	104,749	112,258	7%
Social / Total volume	81%	86%	
Mid-income and residential	25,150	18,187	-28%
Mid + resid / Total vol	19%	14%	
Average price (P$)	354,144	362,206	2%
Figures in P$mn			
Revenues	44,719	43,733	-2%
EBITDA	10,625	10,413	-2%
EBITDA margin	24%	24%	0%
Net income	5,275	4,675	-11%
Operating income	12%	11%	-9%
Financial cycle (days)	489	554	13%

Source: BMV and BBVA Bancomer

Developers listed on the stock market: Debt with costs to September 2009 and 2008

Billion pesos



Source: BMV and BBVA Bancomer

At the company level

Consorcio Ara. In 3Q09 the company emerged from the crisis caused by the lack of permits and licenses in Mexico State, a situation which had been caused serious delays in starting new projects and seven consecutive quarters of falling revenues. Ara has improved its management of permits and has returned to growth, which we expect to accelerate during 2010; the company has forecast a 10% increase in sales for the year. This growth will be accompanied by disciplined use of working capital, generation of free cash flow and reduced gearing levels.

Corporación Geo. This company's focus on low-income and social housing enabled it to continue growing in 2009. Geo has forecast that its revenue will grow by between 7% and 11% on an annual basis in 2010, which we consider will be complemented by stable profitability due to the economies of scale generated by its mega-projects and the construction of prefabricated buildings. It recently issued bonds with a value of US$250m in international markets, which has significantly improved its debt repayment schedule. The financial cycle will tend to stabilize through slower purchase of land from capital.

Desarrolladora Homex. As with Geo, Homex was able to continue growing in 2009 due to its focus on social housing. The company was also able to establish its presence in the Brazilian market, where its pilot project has achieved satisfactory results. In 2010, Homex has set a 12% to 14% annual target for increasing revenue, which we consider will be accompanied by profitability and a stable financial cycle. A recent US$250m bond issue has removed all short-term debt maturities, providing the company with sufficient resources to consolidate its expansion in Brazil.

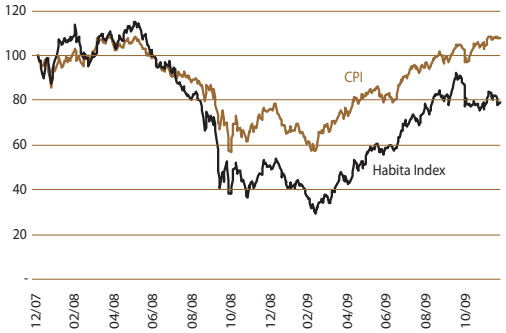
Sare. This company's major focus on medium-income, residential and tourist accommodation (where much of the business is focused on vertical constructions with a longer financial cycle) resulted in liquidity problems during the second half of 2008 and the first half of 2009. Whilst Sare has successfully restructured its bank debt, its limited liquidity has resulted in a significant reduction in its turnover. We expect the company's 2010 results to be stable compared to 2009, with a gradual rebound in sales volumes resulting from recovery in the medium-income and residential segments.

Urbi. In 2009 the company decided to slow the pace of work carried out in order to focus on cash generation and strengthening its financial position. Given the improved outlook for the housing sector, Urbi has decided to start growing again in 2010, and is aiming to increase revenues by 10% on an annual basis. This growth will be accompanied by stable profitability and a continuous improvement in its financial cycle. The company will continue to use an innovative location director-partner and land owner-partner structure to expand into new areas and make efficient use of its resources.

Habita index: In full recovery

In 2008 the performance of the Habita index was worse than that of the IPC Mexican stock market index (-50% vs. -24%, respectively). This performance reflected the punishment meted out by the markets to highly cyclical markets and, in particular, the loss of confidence in the mortgage sector globally. In 2009 the Habita Index recovered strongly as investors began to take a better view of the housing market. As a result, the Index rose by 60%, higher than the IPC's 42% (based on figures to 21 December). The outlook for 2010 is positive, backed by a gradual recovery in activity, a reevaluation of expectations about the long-term growth prospects of companies and a larger reduction in the risk premium for financial markets.

Habita Index vs. IPC Mexican Stock Market Index 2007–2009 (Dec 2007 = 100)



Source: Bloomberg
Note: The Habita index consists of housing developers listed on the Mexican stock exchange: Ara, Geo, Hogar, Homex, Sare and Urbi. As the share price of each company is weighted by its market capitalization, Hogar has a very light weight in the Index.

What Has Determined the Behavior of Housing Prices in Mexico?

Attributes of the Hedonic House Price Model used in Mexico

Structural characteristics	Location	Time identifier
Built area	Urban	
	Proximity	Age
Usable built area	Population density	Days
		Quarter
	Degree of development in the State and Municipal area	
Rooms		
Bathrooms and toilets	Urban facilities	
Parking		
Floors		
Elevator		
Class of property		
New or used		

Source: SHF (Federal Mortgage Society).

There has recently been an increase in the number of indicators relating to the housing sector, and the coverage and quality of existing indicators has also improved. One of these new indicators is the housing price index recently developed by the SHF (the Federal Mortgage Society), which is both welcome and necessary. This indicator meets the need for a clear, reliable overview, which shows changes in property values in Mexico on a periodic basis. This enables us to measure such things as regional gains on property, so that we can take better short and medium-term decisions, rate the risk on operations and mortgage collateral, and determine the duration of housing cycles.

In this article we first analyze the characteristics of the new housing price index and its advantages, and we also refer to methods used in other countries. Secondly we review the results of these indicators from various points of view -national, regional, by housing segment, etc. Thirdly, based on the results from this new indicator we present a number of econometric exercises to identify and quantify the factors which determine housing prices in Mexico.

The index of housing prices in Mexico.

There are a number of difficulties in comparing house prices, as the products are very varied and their differences tend to sharpen over time as their characteristics change –for the better in some cases- as a result of refurbishment and expansion and other factors which generate capital gains; however, other factors, such as depreciation, push prices down. This problem is not restricted to the housing sector, as many other products and services change in value significantly over time; it is always difficult to compare products with different characteristics. Examples of this include products which are based on technological advances, such as computers, communication equipment and electronic devices, whilst in terms of services this applies to medical and financial services, for example.

In its initial phase, the SHF housing price index was built taking this problem into account based on a model which associates the value of homes with their attributes; this is known in the economic literature as a "hedonic model". The objective of such models is to make comparisons by standardizing diverse attributes or characteristics through the use of a range of statistical and econometric techniques. However, as the pricing model was developed and more information became available, it was combined with the "repeat-sales" model which includes information on price changes for a particular house over time. In the future this will result in a mixed house price model, which is internationally recognized as being one of the best available practices (see the section of house price models commonly used in other countries).

The SHF price index includes consumer preferences which are classified into three groups of essential attributes: the structural characteristics of the house; its location; and its age. In total 15 attributes are considered. The nine structural aspects include: the total built area, the usable built area, the number of rooms, bathrooms and toilets, parking, the number of floors, the availability of an elevator, the housing segment, and its condition, i.e. whether new or used.

The four attributes related to location include: closeness to an urban centre, population density, the degree of economic development in the area (state, municipal), and the level of urban facilities. In terms of age, the attributes considered measure the number of years since the building was built. Finally, it should be stated that this is a nominal price index, as is the common practice with similar indicators[1].

The SHF index is built on information from over 2.3 million records of new housing sales nationally from 2005 to 2009. It is updated quarterly and is currently representative at the state level; it will shortly be representative at the level of the country's main municipal districts. The coverage includes single houses, condominiums and apartments. Social and middle-income housing contributes some 84.3% of the national total. This implies that the index most accurately reflects prices of middle and low-income and social housing.

The advantages of price indices

There are many advantages for the economy –at both the macro and micro levels- in having house price indices. In the macroeconomic context, such an indicator can be used as an approximation of family wealth, and also acts as a benchmark for identifying any misalignment of prices with fundamental values, etc. There are also many advantages at the microeconomic level. Such indices make it possible to identify differences between regions and segments; to quantify the returns on real estate investment; and they help in the design of better policies for such purposes as urban planning, setting charges and infrastructure construction. In addition, having a better valuation of assets facilitates the operation of a number of financial instruments, and indices also provide tools for guiding investment decisions, both for purchasers and for developers.

The main results of the SHF house price index

a) National results based on demand

We should make a number of points before we analyze the results of the SHF Index. Firstly, we should reiterate that, as a result of its structure (which in turn reflects the structure of house sales in the country), the Index essentially measures the performance of prices of new housing for the low and medium-income segments. Secondly, in order to make comparisons with the general rate of price increases in the economy, we recommend using the National CPI (National Consumer Price Index) excluding imputed rent (which contributes around 2.5% to the general index); an even better and more robust measure for deflating prices is to use prices associated with private consumption. This second indicator, known as the Broad CPI (the index of implicit private consumer prices) is recommended by the OECD as a deflator of housing prices as it contains a wider range of goods and services than those included in the basic basket or the National CPI, despite this using a larger sample. (SHF, 2009).

1 Because of the way that the SHF House Price Index is constructed it is difficult to identify a direct relationship –in the short-term at least- with the general price index for the economy (SHF, 2009).

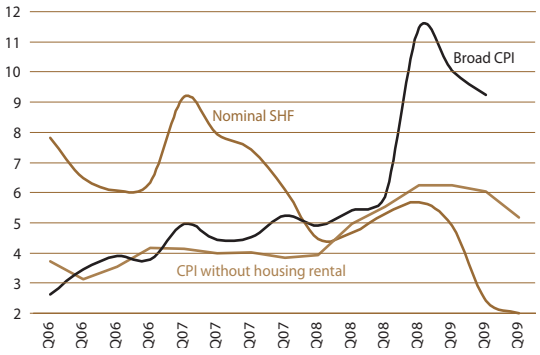
Economic advantages of the house price index

Macroeconononomic	Microeconomic
An indicator of construction performance	Indicator of regional development: e.g. establishing regional risk levels
Wealth in housing can be used to estimate family wealth	Enables planning of urban infrastructure
Makes it possible to identify price bubbles	Facilitates analysis of returns on real estate investment
Produces information for tax decisions, surveys	Facilitates investment decisions in the sector

Source: BBVA Economic Research Department, Mexico

House price increases by price cycle

House Prices, SHF Index, annual % change nominal



Source: BBVA Bancomer with SHF data

House price behavior*

Accumulated	% Change	% Change
Average change		
Expansion 2006-07		
Nominal	19.5	7.2
Real (a)	8.1	2.9
Real (b)	8.0	3.2
Slowdown 2008-09*		
Nominal	3.5	4.2
Real (a)	-6.6	-3.0
Real (b)	-3.8	-1.2
2005-09*		
Nominal	27.3	5.8
Real (a)	1.7	0.4
Real (b)	5.4	1.2

(a) Deflated by the broad CPI
(b) Deflated by the national CPI without housing rental
* To the second quarter of 2009
Source: BBVA Bancomer with SHF data

House price behavior by state, 2005-2009[a]

		Accumulated % change		Average % change	
State	Region	Nominal	Real*	Nominal	Real*
Tab	B	39.0	10.6	7.9	2.4
DF	I	38.8	10.6	7.2	1.7
Cam	B	35.7	8.0	7.5	2.1
Ver	B	35.1	8.1	7.3	1.8
Pue	I	33.7	8.1	7.3	2.1
Hgo	I	32.8	4.8	6.9	1.4
Gro	B	32.4	6.5	6.8	1.4
Mor	I	31.9	5.7	6.9	1.8
SLP	I	31.7	5.1	6.7	1.3
Nay	B	31.4	4.0	6.4	0.7
Col	B	30.1	2.4	4.2	0.5
Tlax	I	29.8	3.8	6.4	0.9
Sig	B	29.7	3.2	6.1	0.6
Yuc	B	29.5	1.8	5.8	0.0
Mex	I	28.7	3.7	6.5	1.5
Oax	I	28.5	1.3	5.3	-0.5
NL	F	27.4	1.6	5.7	0.1
Dgo	I	26.6	1.1	5.5	-0.2
Mich	I	26.4	1.6	5.7	0.2
Ags	I	26.4	1.4	5.7	0.2
QR	B	26.2	1.0	6.2	1.1
Chis	I	25.6	-1.9	5.2	-1.2
Coah	F	24.9	-0.3	4.7	-0.3
Gto	I	23.9	-0.2	5.2	-0.3
Son	F	23.6	-1.7	5.0	-0.5
Jal	I	23.5	-0.8	5.2	0.0
Tam	F	22.8	-2.7	4.7	-0.8
Qro	I	22.8	-1.8	5.2	0.0
Zac	I	22.4	-2.5	4.5	-1.2
BCS	B	20.7	-4.4	4.4	-1.0
Chih	F	19.3	-5.9	6.1	-1.2
BC	F	17.6	-6.2	4.2	-1.0

a=Second quarter
*Deflated by the index of implicit private sector prices
I=Interior. F=Border. B=Beach
Source: BBVA Bancomer with SHF data

The SHF Index shows that house prices clearly increased by more than the two reference indicators (National CPI and Broad CPI) between 2006 and 2007. This was the period of greatest growth in house sales, and also a time of economic expansion when we were at the high point of the cycle. However, in 2008 the trend reversed, and the SHF Index grew more slowly. At the end of 2008 and the start of 2009, exchange and interest rate volatility increased the Broad CPI over the short term; this was accompanied by lower demand in the market and lower house price increases. These initial indications reveal that the behavior of real estate prices may be associated with the performance of the real economy.

Although housing appreciated in nominal terms by 5.8% between the first quarter of 2005 and the third quarter of 2009, the real appreciation was only 0.4%. Prices started to slow in 2008, and since then there has been a clear trend of depreciating house values in almost half the states in the country. Some of the largest losses were in states on the border (Chihuahua, Baja California and BCS).

Despite these housing price moderations in Mexico, the change, which is still positive, is in contrast to the experience in the USA, where housing prices actually fell; many consider this to have been a correction to a housing bubble in the country[2].

b) Results by housing type

Another interesting criteria we can use in evaluating the behavior of house prices is the type of accommodation; here we find that the greatest gains were for apartments, followed by condominiums and finally individual houses. This may be due to consumer preferences, which appreciate certain characteristics associated with apartments most highly.

c) Regional results

In parallel to the SHF Index, the states with the highest real estate prices are the Federal District, Mexico State, Baja California Sur, Nuevo León and Jalisco, which have the highest urban concentrations in the country; the exception here is Baja California Sur, where the explanation is related to the segment to which the housing market is aimed. The states with the lowest house prices are: Tlaxcala, Durango, Colima, Hidalgo and Tamaulipas, which are the states with the fewest urban zones. This trend matches the share of both groups of states in the housing market. Between 2005 and 2009, the first group contributed 33% of Infonavit sales, whilst the second contributed 12%.

However, the fact that some of these cities have the highest house prices in the country does not necessarily mean that they have seen the highest price increases. In fact the most expensive states have also generally displayed greater vulnerability since the start of the economic crisis in 2008. Demand in these regions –which had contributed to the high prices- has decreased and this has affected price rises. As a result, the general index, which is a weighted average for all cities, is below that in some regional price samples.

2 The house price index used in the USA (Case-Shiller) fell by 11.6% on an annual basis to the third quarter of 2009, whilst in Mexico the house price index rose by 2%.

As a result, figures nationally and regionally tend to point to a direct relationship between economic activity and/or the growth rate and house prices; this is evaluated through a number of econometric exercises in the following section.

Regionally, since the last real estate expansion in 2007, the growth rate in house prices has been on a downward trend. In this process, prices in interior and beach regions have tended to rise more than border states. All regions converged on what appears to be a turning point in the third quarter in 2009; as a result, we expect greater appreciation in 2010 as aggregate demand consolidates.

Price cycles have tended to be less regular since 2008. Some regions in the country have recorded lower rates of price increases than the national average, whilst others have not only matched, but have even exceeded the general index. We can therefore expect that the sensitivity of this indicator to some of its determining factors will also be different.

Analysis of the main determinants of price

Based on estimates for the European Union, it has been possible to identify and quantify the effect of some economic variables on housing prices. Research has found that consumer prices and income are two of the main determinants of house price increases[3].

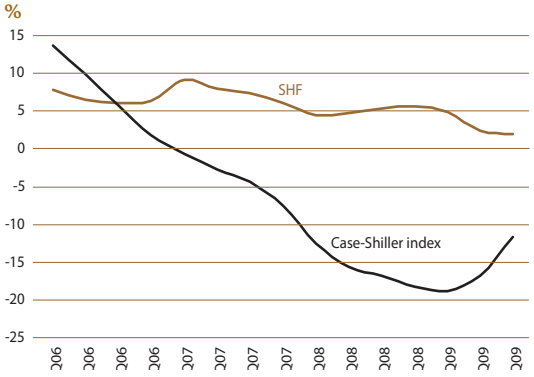
In order to check the relevance of these variables in the Mexican real estate sector, in this section we present the results of analysis of economic information at the state level and how this relates to house prices. For purposes of interpreting the results and making them representative, the figures are aggregated by geographic region, covering border states, the interior and the beach. The state data series are used to produce estimates for the period 2005 to 2009, through which we measure the sensitivity of housing prices to changes in a number of indicators suggested in the economic literature as factors which determine prices. These variables include: an index of manufacturing volume; the electricity index; housing loans granted by commercial banks; and the local price index.

We then use three methods to estimate the models: fixed effects (FE), random effects (RE) and the generalized least squares (GLS) methods[4]. In order to standardize the series, the data was expressed as logarithms, so that the coefficients reflect the sensitivity of housing prices to economic activity and consumer prices.

In order to be more robust, for the aggregate model, three models were estimated. However, for regional estimations, the fixed effects model produced the best results for sub-samples. Of the variables considered, the most significant were economic activity and local consumer prices (state CPI)[5].

3 Tsatsaronis K. and Zhu H. (2004)
4 Fixed effects: these assume that the structure of the information remains constant. Random effects: this considers the dynamics to be a function of a stochastic component. Generalized Least Square assumes constant panel variance in the estimate.

House prices in Mexico and the USA, annual % change



Source: BBVA Bancomer with SHF and S&P data

House price behavior by type of house*

Variable	Share of the SHF index	Annual average growth 2005-2009
Single houses	27	6.1
Condominiums	30	6.9
Apartments	43	10.0
Total	100	8.4*

a=first quarter
*Weighted average
Source: BBVA Bancomer with SHF data
Preliminary figures

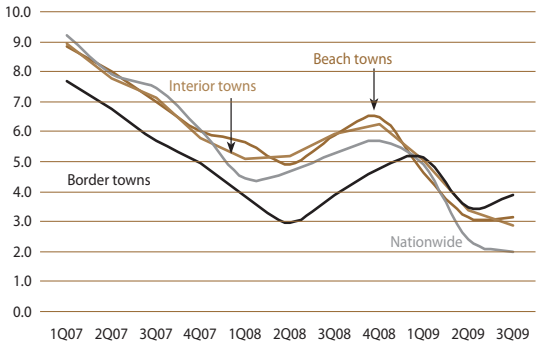
Average prices and appreciation of housing

	Average price	Accumulated % change	Average % change 2005-2009.3
Nationwide	407,241	27.3	5.8
F.D.	843,181	38.8	7.2
Mex	431,239	28.7	6.5
BCS	430,468	20.7	4.4
NL	418,484	27.4	5.7
Jal	410,367	23.5	5.2

Note: Nominal changes
Source: BBVA with SHF data

House price increases in regions of Mexico

House Prices SHF Index, annual % change, 1Q 2007=100



Source: BBVA Bancomer with SHF and Banco de Mexico data

Panel for the 32 states and their sensitivity in percentage points*

Variable	FE (1)	RE (2)	GLS (3)
Economic activity	0.08	0.08	0.10
Inflation	1.23	1.21	1.08

Source: BBVA Bancomer. Estimation using panel model for 2005-2009
Notes:
(1) Fixed effects
(2) Random effects
(3) Generalized least square
* P.P. change for each change in the explanatory variables

Panel for geographic regions, sensitivity in percentage points*

Variable	Nationwide	Border	Beach	Interior
Economic Activity	0.08 0.08	0.09	0.05	0.08
Inflation	1.23	0.89	1.24	1.32

Source: BBVA Bancomer. Estimation model with fixed effects 2005-2009
* Percentage point change for each change in the explanatory variables

In all the estimates, economic activity was found to be strongly related to rising house prices. The coefficients were higher in the interior of the country and border states, which were above the national average. In these areas, for every percentage point increase in economic activity, housing prices increased more than proportionally. Beach zones were below the national sensitivity level.

In addition, we found that consumer prices were passed on in housing prices, and that the scale of which was more than proportional[6]. This is understandable if we consider that the SHF price index consists for the most part of low-income and social housing, which has low prices, and the rate of construction of which is strongly influenced by sources of finance and the targets set by public housing bodies (Infonavit, Fovissste and Orevis). As a result, developers have an incentive to set a minimum ceiling for low-income segments. Interior and beach regions are more affected by this, whilst in border states the effect was less than proportional.

Conclusions: the SHF house price index is a useful addition

House prices are a clear indicator of the performance of the mortgage market, as they guide the decisions of parties involved in the sector, including purchasers, builders, intermediaries, developers and regulatory bodies. The SHF Index meets the need for an indicator of this type which is reliable and appropriate, and which provides national coverage.

Many have argued that housing is one of the safest instruments for increasing long-term household wealth. The results of the SHF Index support this. Nevertheless, we should make clear that -based on the estimates in this article- increases in house prices are subject to two conditions from a macro point of view: increasing economic activity and price stability. These elements, together with a higher level of competition between developers, are of fundamental importance if housing is to be an active generator of value for families. Other elements which also need to be evaluated include the micro factors which display relevant importance in generating house price increases, such as, for example, location, the urban infrastructure, access to community services, and other factors such as safety and security. There are also other factors which may contribute to gains, including the development of a deeper and more active secondary market for housing, in which information and transaction costs are limiting factors.

Furthermore, detailed analysis of the transmission mechanism for activity and house price inflation supports the results previously obtained about the capability of construction companies to pass price increases on more than proportionally in house prices. In the past, targets for granting mortgages by public bodies –in both number and volume of finance- have generated incentives to establish a floor for housing prices, particularly in the low and middle-income segments. With more information –such as that provided by the SHF Index and other indicators such as housing quality (ICAVI), purchasers will have more tools for making better informed decisions.

5 We use the index of the volume of manufactured goods as an indicator of economic activity and as a proxy for income.
6 In this context, we recommend the article "How will fuel and electricity prices impact on the housing sector?" in Real Estate Watch Mexico, October 2009.

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Methods for Constructing Price Indices

The SHF house price indicator is an important contribution to creating appropriate and high quality indicators of the development of the real estate sector in Mexico. In this section we detail the technical elements involved in the calculation of this index, and we compare this to a number of other methodologies. Finally, we present a comparison of the methods used in other countries. The methods most widely accepted internationally for constructing house price indices are the hedonic method, the repeat-sales method, and a hybrid or mixed model combining the two. We will now summarize both of these methods.

1. Repeat-sales. This index is based on transactions involving houses which have been sold at least twice. In the first stage, a regression is estimated between the change in value from the first sale to the second[1]. This first step in the calculation is expressed as follows:

$$\Delta V_i = \sum_{\tau=0}^{T} \beta_\tau D_{i\tau} + \varepsilon_i$$

Where:
ΔV_i = is the increase in value of the home *i*
$\Delta \beta_x D_{ix}$ = Estimated coefficient for each house sold at least twice multiplied by the identifier.
ε_i = residuals of the expression
In this estimation, the value of the parameter for the first period is zero, and this is taken as the base year.

In the second stage, a vector is taken of the residuals of the above expression to carry out a new calculation. These are weighted by squaring a constant term, the period between the two sales (t-s) of each house to capture the values of the interval, and this term is also squared $(t\text{-}s)^2$. The constant is an estimator of the variance of the random error for a house ($2\sigma_N^2$). The slope of the equation estimates the variance in a quarter[2]. This process is expressed as:

$$E\left[\varepsilon_i^2\right] = A(t-s) + B(t-s)^2 + 2C$$

In the third stage, a generalized least square regression is carried out to replicate the initial estimate. However, this time the weightings of each observation are used with the square root of the adjusted value from the second stage. The result is:

$$\frac{\Delta V}{\sqrt{\hat{d}_i^2}} = \sum_{\tau=0}^{T} \beta_\tau \frac{D_{i\tau}}{\sqrt{\hat{d}_i^2}} + \frac{\varepsilon_i}{\sqrt{\hat{d}_i^2}}$$

Finally, the index is generated using the formula:

$$I_t = 100 * e^{\hat{\beta}_t}$$

Where $\hat{\beta}_t$, t= 1,2,3,…T are estimated using generalized least squares.

The main usefulness of the repeat-sales model lies in using values for the same house at two points in time, and knowing the changes in value which occur. This is done without having to estimate directly marginal contributions to the value of the property. However, as this methodology produces a standard error for each estimate, the bias in the method may increase as the sample size increases. Using this method, Case and Shiller (1987, 1989) assumed that house prices change in a stochastic diffusion process. Based on this, Freddie Mac created the first repeat-sales index in 1989, and Case and Quigley (1991) suggested the first hybrid model.

2. Hedonic prices. This method makes statistical estimates for some of the physical characteristics of houses and assigns a value to each attribute. This can be expressed through linear, log-linear and double logarithmic functions. As an example, below we use the last of these functional forms, which has been demonstrated to be the most efficient empirically[3]:

$$P_{it} = \gamma_0 + \delta_t + \beta m_{it} + \sum_k \alpha_k c_{idt} + e_{it} \quad (t=1,\ldots T)$$

Where P_{it} is the price of a house in *t*; m_{it} is the logarithm of the surface area of the house in square meters *i* for the period *t*; c is a set of dummy variables indicating other characteristics of the house, such as garden, garage, age, floors, swimming pool, etc. The terms d_t are coefficients for fictitious time variables to control changes compared to the base year value γ_0.

1 Homes which have been subject to at least two transactions are marked with a value, whilst those that have not are marked with a zero. This identifier is known as the Dummy variable.
2 An estimator is a function of the sample which is used to understand a parameter of the population.
3 The functional form depends on the values taken by the attributes. If some take the value zero, then the functions have to be estimated by levels or semi-log basis.

The specification is a function of the regional attributes, which can change based on market tastes and preferences. Once the estimation has been carried out, the index can be calculated using the following formula:

$$I_t = \frac{\exp(\hat{\alpha} + \sum_{J=1}^{n} \hat{\beta}_{Jt} \overline{LnX_{JO}})}{\exp(\hat{\alpha}_0 + \sum_{J=1}^{n} \hat{\beta}_{J0} \overline{LnX_{JO}})}$$

Where $\overline{LnX_{JO}}$ is the average value of the characteristic *j* in the base year. When there are significant changes in properties, it is appropriate to use variable characteristics[4].

The main disadvantages which may arise with this method include problems of autocorrelation between the dummy variables and the constant, which can affect the quality of the estimators.

3. The hybrid, combined or mixed method. This is a combination of the repeat-sale and hedonic methods. It was suggested by Case and Quigley in 1991 and achieves better estimates of changes in prices related to attributes. It consists of structuring a system of equations with a restriction for common parameters. The first equation estimates the total transactions carried out once in the period studied, whilst the second estimates pairs of consecutive transactions. In other words:

$$LY_t = LA + \beta_1 LX_{1t} + \beta_2 LX_{2t} + \sum_{n=1}^{t} \gamma_n + \varepsilon \quad (1)$$

$$LY_t = LY_\tau + \beta_1 L(X_{1t}/X_{1\tau}) + \beta_2 (X_{2t} - X_{2\tau}) + \sum_{n=1}^{t} \gamma_n + \varepsilon \quad (2)$$

The term Y_t is the price of the transactions which are carried out only once (equation 1) or the price at the time of the second in any pair (equation 2). The term A is the constant; Y_τ is the price at the time of the first transaction in the pair of consecutive transactions; X_{1t} and $X_{1\tau}$, are the common characteristics of the property; X_{2t} and $X_{2\tau}$, are the discrete characteristics of the property (rooms, garage, bathrooms, etc). As the results of the equations, the price index is given by the vectors of coefficients composed of estimates of the change in the price index in each period $\gamma_n, n = 1,...,k; n = 1,...T$.

As a result, the first equation groups the components of the hedonic model, and the second the repeat-sales model for the changes in attributes of the homes.

International experience shows that there is no generalized method which is accepted as the most efficient, as this depends on the availability of information in the countries. The following table shows the main indicators used for house prices in a representative sample of countries.

House price indicators in selected countries

Country	Name	Description
USA	HPI (House price Index)	Repeat-sales weighted by mortgage records (Federal Housing Finance Agency). An adaptation of Case-Shiller.
	Median sales price index	The average price of residential transactions (National Association of Realtors)
Canada	NHPI (House price Index)	A monthly data series which measures changes in sale prices by builders for residential sales, where the detailed specifications remain constant over two consecutive periods. This is also used for determining land prices.
Mexico	SHF Housing Price Index	This quarterly index is based on structural attributes, location and environment. It is based on a hedonic model, but aims to be mixed in the medium term. The average national price relates to a middle-income home.
Argentina	Price index	This takes into account property valuation indicators to prepare parameters based on area (m2) and location and characteristics. The sample represents around 35% of the houses and 65% of the total number of apartments in the country.

Source: BBVA Bancomer with SHF data

4 The most common is the chain-linked Laspeyres index.

Conclusions: full and timely information on house prices is fundamental for decision making

The key element in constructing house price indices is the availability of information which is consistent, timely and accurate. The index produced by the SHF is a major step forward; the next step is to increase the coverage of the index to include new housing and break it down by segment. The more robust the indicator, the better the tools for all parties in the industry –builders, purchasers, developers.

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The Case-Shiller Home Price Index method

The Case-Shiller (1987, 1989) home price index is the most representative method in the United States, as it started as a hedonic model, and subsequently combined this with a repeat-sales method to create a hybrid model.

Construction of the Case-Shiller price index. This index is based on changes in house prices in the USA classified into 10 regions[1]. Data is obtained for a month based on a moving average over three periods. This process quantifies the number of times that a house is sold in comparison with the previous two months. As a result, the data for each month also includes the changes in the two previous months. The method (repeat-sales) is used to capture transactions which could be delayed in being accounted for, so as to maintain a database which is sufficiently large to capture changes in real estate prices.

Using the data collected, the change in price is identified for each transaction involving a particular asset. The information is usually collected in regional offices throughout the country, and includes the address of the property, the date of purchase and sale, the property type and, in some cases, the name of the owner and seller and the value of the mortgage.

This method is successful because, even if the data has not been updated in the current month, the search period also includes the two previous months, which makes it possible to identify whether the house has been sold two or more times. We can identify the change in value of the house resulting from depreciation and/or refurbishment from each pair of sales, maintaining the quality and size of each property.

The information sample is subsequently analyzed to detect any atypical variables[2] and, once the data has been cleansed, the ten regional indices for the USA are aggregated to obtain a weighted average for the whole market and to create a national value.

Possible restrictions on its development. One of the challenges for standardizing this method is efficiently weighting the statistical distribution of houses, as, in some cases, the presence of atypical behavior may have a considerable effect on the process. This is mainly due to factors such as:

a) **Price anomalies:** When there are extraordinary increases in the value of a property; this may be caused by refurbishment, reconstruction, accounting errors, etc.

b) **Frequency of sales:** Houses which are sold more than once in less than six months. It has been found historically that these cases occur when the property is refurbished or when the transaction is fraudulent.

c) **Changes to sale intervals:** As the pairs of transactions are weighted in periods (between the first and second sales). The longer it takes, the more likely it is that there will have been a physical change to the property.

d) **Initial house price value** Each pair of sales is assigned a weighting factor equivalent to the initial sale price, to ensure that the indices capture the average aggregate value of all homes. This can increase the risk of not choosing the appropriate weighting factor.

According to research by S&P, the index includes over 85% of the sales made in each period. However, the integration of the data for each date in each region depends on specific market conditions and the efficiency of the public institutions involved. For this reason, the quality of this indicator relies to a larger extent on the clarity and speed of data collection, rather than on the methodology itself. It is therefore necessary to carry out periodic reviews every 24 months, so that appropriate adjustments can be made for latent omission of information.

1 The ten regions cover the following metropolitan zones: Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco and Washington, D.C.

2 Atypical observations may relate to effects such as expansions or refurbishment of property, subsidies, family inheritance, natural disasters etc, and/or any factor with an irregular effect on property values.

Conclusions: the Case-Shiller index is the standard reference for house prices in the USA

Having information which is detailed, timely and accurate about house prices is a basic requirement for understanding the performance of the housing industry. The SHF price index is a major step forward and should be recognized as such. The future development of the index towards greater geographic coverage (at the city level) and to include both new and used housing depends on the availability of more information and, above all, having appropriate communication among all participants in the industry. In this way, this tool will be able to establish itself as a reliable instrument for investors and consumers.

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Statistical Appendix

Annual macroeconomic indicators

	2001	2002	2003	2004	2005	2006	2007	2008	2009est	2010 f
Real GDP										
Annual % change	-1.0	0.1	1.3	4.0	3.2	5.1	3.3	1.3	**-6.8**	**3.1**
Private consumption, real										
Annual % change	2.5	1.6	2.2	5.6	4.8	5.7	3.9	1.5	**-7.6**	**3.2**
Government consumption, real										
Annual % change	-2.0	-0.3	0.8	-2.8	2.4	1.7	2.1	0.6	**1.7**	**2.7**
Investment in construction, real (annual % change)	-4.6	3.5	3.2	5.1	4.1	7.8	5.1	-0.4	**-4.4**	**3.9**
Residential				3.7	2.5	8.9	3.4	-1.1	**-6.3**	**3.4**
Non-residential				6.1	5.2	7.0	6.2	0.1	**-3.1**	**4.3**
Formal private-sector employment (IMSS), total										
Million people, average	12,381	12,279	12,255	12,522	12,898	13,508	14,043	14,358	**13,927**	**14,261**
Annual % change	0.2	-0.8	-0.2	2.2	3.0	4.7	4.0	2.2	**-3.0**	**2.4**
Average salary of contribution (IMSS)										
Nominal pesos per day, average	146.2	158.0	168.4	178.6	188.9	198.5	209.2	220.3	**230.2**	**242.7**
% real annual change	6.0	2.9	1.9	1.3	1.7	1.4	1.4	0.2	**-0.8**	**0.8**
Real Wage Income (IMSS)										
Annual % change	6.2	2.1	1.7	3.5	4.8	6.2	5.4	2.4	**-3.7**	**3.2**
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	**3.8**	**5.2**
Average 28 day equivalent interest rate	12.9	8.2	6.8	7.1	9.6	7.5	7.7	8.1	**4.5**	**4.5**
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**	**7.7**

Annual Construction and Housing Indicators

	2001	2002	2003	2004	2005	2006	2007	2008	2009est	2010 f
Construction GDP, real (annual % change)	-3.4	2.0	3.3	5.3	3.9	7.6	4.4	-0.6	**-7.1**	**3.9**
Building	-3.5	2.6	3.3	3.6	0.7	9.6	3.6	-0.9	**-6.5**	**3.8**
Civil engineering and major works	-2.5	1.0	3.3	7.8	12.3	5.1	6.3	0.2	**-7.6**	**4.3**
Specialist construction work	-5.2	0.7	3.3	10.5	-0.6	2.7	4.0	-1.8	**-10.8**	**3.6**
Construction employment (IMSS)										
TOTAL (thousand people, average)	934.2	937.5	945.5	969.4	1,020.1	1,133.1	1,203.8	1,209.5	**1,101.7**	**1,149.1**
Annual % change	-1.1	0.4	0.8	2.5	5.2	11.1	6.2	0.5	**-8.9**	**4.3**
Hydraulic cement production (tons)										
Annual % change	-4.3	2.4	0.8	4.0	11.1	7.7	2.0	-3.0		
Domestic cement consumption (tons)										
Annual % change	-5.5	1.2	-0.3	2.9	10.1	6.7	1.1	-3.8		
Construction companies[1]										
Real value of production (annual % change)										
Total				1.7	4.2	7.5	2.8	-0.8		
Building				16.2	9.0	9.5	9.2	-0.9		
Public works				-6.0	0.2	8.7	-3.2	-0.2		
Water, irrigation and sanitation				31.2	-1.3	-18.5	-22.0	4.9		
Electricity and communications				-15.3	-28.4	12.5	-15.2	19.6		
Transport				-16.8	6.9	6.9	7.8	13.7		
Oil and petrochemicals				-0.2	5.7	26.3	-5.6	-26.3		
Other				-16.4	-0.8	-6.9	-5.8	-3.3		
Residential construction prices (annual % change)										
General	3.5	3.5	6.9	12.2	-0.4	8.5	3.0	9.6		
Construction materials	2.2	2.7	7.2	14.8	-1.6	10.0	2.6	11.4		
Labor	10.1	7.6	5.4	4.4	3.7	4.0	4.4	3.5		

e estimated
f macroeconomic and construction industry forecasts, under review with upside bias
1 Considers companies which are affiliated and not affiliated to the Mexican Chamber of Construction Industry
Source: Source: BBVA Bancomer with Banco de Mexico, Conasami, INEGI and IMSS data

Annual Housing Market Indicators

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[2]
Housing sales (thousand 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 price (thousand constant pesos[1], average)											
Average**	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
House price per M^2 (constant pesos[1], average)											
Average**	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 of house prices in Mexico.											
Annual % change								6.7	7.6	5.0	3.1

Annual Housing Finance Indicators

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009[3]
Number of Loans and Subsidies Granted (thousands)											
Total	214.0	275.2	230.8	289.5	378.6	397.8	469.5	587.3	716.8	752.4	535.0
Infonavit	195.4	250.1	200.5	268.7	291.4	300.8	371.7	418.0	456.0	494.1	350.9
Fovissste	17.9	24.3	26.6	11.1	66.4	59.4	48.7	76.5	70.5	90.1	78.9
Commercial banks and Sofoles	0.8	0.8	3.7	9.7	20.7	37.5	49.0	92.8	190.3	168.2	105.2
Reduction***							-52.8	-77.7	-181.0	-130.0	92.3
Equivalent purchases	214.0	275.2	230.8	289.5	378.6	397.8	416.7	509.6	535.8	622.4	442.7
Finance flow (billion pesos*)											
Total	62.8	73.1	64.4	83.7	110.9	123.3	162.0	229.5	256.6	252.5	169.0
Infonavit	56.9	66.7	53.8	70.6	73.6	74.4	94.2	106.9	114.6	115.0	81.8
Fovissste	5.1	5.4	7.2	4.9	23.0	21.5	18.5	29.4	25.0	37.0	37.1
Commercial banks and Sofoles	0.9	1.0	3.4	8.2	14.3	27.4	49.3	93.2	116.9	100.5	50.1
Commercial Bank Current Loan Portfolio[3]											
Balance at end of period (bn p*)	91.7	83.1	78.8	77.1	80.0	91.7	169.1	229.4	275.9	314.8	322.1
NPL index (%)	22.3	13.7	12.6	11.2	8.4	6.1	3.2	2.9	3.1	3.6	4.2

Note: Price ranges expressed in multiples of min. monthly salary (vsmm). Seg. A (61-160 vsmm); B (161-300); C (301-750); D (751-1,670) and E (1,671 and over). SMM = 1,748 pesos in 2010 in zone "A"
* November 2009 pesos
** Weighted by volume of sales
*** Refers to finance (loans and subsidies) counted in two or more institutions
1 Producer Prices (construction cost index) November 2009
2 Third Quarter
3 To October for the number of loans and finance flow. To November for the loan portfolio
Source: Source: Bancomer with Banco de Mexico, Softec, CNBV, Conavi and SHF data

Quarterly Macroeconomic Indicators

	Q107	Q207	Q307	Q407	Q108	Q208	Q308	Q408	Q109	Q209	Q309
Real GDP											
Annual % change	3.0	3.0	3.5	3.7	2.6	2.9	1.7	-1.6	-7.9	-10.1	-6.2
Private consumption (real)											
Annual % change	4.9	4.1	3.5	3.6	2.8	2.7	2.2	-1.3	-8.7	-9.6	-5.2
Government consumption, real											
Annual % change	0.8	1.3	3.5	4.4	0.9	1.1	0.3	0.1	3.7	1.0	2.6
Const. investment, real (annual % change)	7.3	4.0	4.3	4.7	0.6	2.1	0.1	-4.3	-5.2	-4.8	-5.0
Residential	6.2	2.7	2.2	2.8	-0.2	1.3	-0.8	-4.7	-7.0	-8.6	-6.3
Non-residential	8.0	4.9	5.9	6.1	1.2	2.7	0.7	-4.0	-3.9	-2.2	-4.1

Quarterly Construction and Housing Indicators

	Q107	Q207	Q307	Q407	Q108	Q208	Q308	Q408	Q109	Q209	Q309
Const. GDP, real. (annual % change)	6.1	3.6	3.7	4.3	0.7	2.0	-0.7	-4.4	-7.2	-8.7	-6.6
Building	6.4	2.7	2.6	2.8	0.1	1.9	-0.8	-4.5	-6.6	-8.1	-6.1
Const. eng. work and major works	6.2	5.5	6.3	7.0	1.5	2.0	0.7	-3.4	-6.9	-8.7	-7.1
Specialist const. work	3.3	3.4	3.0	6.6	2.2	2.3	-4.3	-7.7	-13.1	-13.2	-8.2
Construction companies[1]											
Real value of production (annual % change)											
Total	3.7	2.3	2.3	2.8	0.4	1.9	-1.8	-3.2	-5.0	-6.3	-7.5
Building	10.5	9.3	8.6	8.6	5.2	3.1	-4.0	-6.7	-18.6	-19.4	-13.5
Public works	-1.9	-4.3	-3.5	-2.8	-5.0	0.3	1.1	2.3	18.1	18.4	7.1
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
Electricity and communications	-10.4	-26.5	-10.1	-12.0	3.2	31.7	8.5	32.5	58.0	34.7	26.3
Transport	5.8	4.0	17.3	4.4	12.0	14.9	14.2	13.4	30.0	19.1	4.9
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
Other	-7.2	-6.6	-6.3	-3.6	-4.4	1.9	-1.7	-7.9	-21.5	-37.9	-40.3

Quarterly Housing Market Indicators

	Q107	Q207	Q307	Q407	Q108	Q208	Q308	Q408	Q109	Q209	Q309
Average house price (thousand pesos[2], end of period)											
Segment A	243.1	242.4	233.7	238.3	230.3	221.8	217.8	217.7	224.7	228.4	232.9
Segment B	382.4	387.7	391.4	397.3	389.6	368.6	363.7	357.8	366.5	373.1	377.5
Segment C	807.0	807.5	823.0	815.1	807.0	760.4	753.7	748.4	768.0	765.0	783.9
Segment D	1,882.9	1,847.9	1,855.6	1,855.6	1,801.8	1,745.3	1,733.9	1,741.0	1,886.9	1,906.8	1,909.5
Segment E	4,330.0	4,592.6	4,668.4	4,805.2	4,710.5	4,559.7	4,482.0	4,531.5	4,580.1	4,619.1	4,783.9
Average house price per M^2 (pesos[2], 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
Segment B	6,409	6,488	6,710	6,776	6,682	6,361	6,305	6,140	6,430	6,494	6,504
Segment C	8,285	8,279	8,442	8,454	8,451	8,174	8,006	8,000	8,425	8,441	8,755
Segment D	11,829	12,252	12,472	12,368	12,165	11,965	11,706	11,862	13,438	13,550	13,823
Segment E	18,107	19,668	19,571	20,076	19,283	18,579	17,613	18,554	21,217	20,851	21,415
SHF index of house 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

Quarterly Housing Finance Indicators

	Q107	Q207	Q307	Q407	Q108	Q208	Q308	Q408	Q109	Q209	Q309
Commercial Bank Current Loan Portfolio											
NPL index (%)	3.0	3.1	3.1	3.1	2.9	3.1	3.3	3.6	3.8	4.3	4.2

1 Considers companies which are affiliated and not affiliated to the Mexican Chamber of Construction Industry. Real value of production (annual % change)
2 Producer prices, November 2009
Note.: Price ranges expressed in multiples of min. monthly salary (vsmm). Seg. A (61-160 vsmm); B (161-300); C (301-750); D (751-1,670) and E (1,671 and over). Min Monthly Salary (SMM) = 1,748 pesos in 2010 in zone "A"
* November 2009 pesos
Source: Source: Bancomer with INEGI, Softec, Bank of Mexico and SHF data

Monthly Macroeconomic Indicators

	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09
IGAE (Economic Activity Index)											
Annual % change	-9.1	-10.3	-4.8	-12.1	-10.9	-7.8	-6.8	-7.0	-5.5		
Construction volume, real (annual % change)	-8.3	-10.7	-2.6	-11.6	-9.0	-5.4	-4.8	-7.6	-7.1	-9.9	
Building	-7.8	-10.0	-2.0	-11.3	-8.1	-4.7	-4.2	-7.2	-6.7	-9.1	
Civil engineering and major works	-8.0	-10.5	-2.2	-10.8	-9.6	-5.7	-5.3	-8.3	-7.7	-11.7	
Specialist construction work	-13.8	-17.2	-8.4	-17.3	-13.2	-9.1	-7.8	-8.9	-7.9	-9.3	
Formal private-sector employment (IMSS), total											
Total (thousand people)	13,934	13,877	13,881	13,850	13,775	13,794	13,808	13,839	13,901	13,980	14,087
Annual % change	-1.7	-2.6	-2.6	-3.4	-3.9	-4.1	-4.1	-3.8	-3.7	-3.4	-2.2
Average salary of contribution (IMSS)											
Nominal pesos per day	230.3	232.0	228.6	228.5	231.2	230.7	231.5	230.9	229.4	227.9	229.5
% real annual change	-0.2	-0.1	-1.6	-1.5	-1.2	-1.1	-1.3	-1.1	-0.9	-0.8	-0.2
Real Wage Income (IMSS)											
Annual % change	-1.9	-2.7	-4.2	-4.8	-5.1	-5.2	-5.4	-6.2	-5.4	-4.7	-2.4
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
Consumer prices (end of period)											
Annual % change	6.3	6.2	6.0	6.2	6.0	5.7	5.4	5.1	4.9	4.5	3.9
Average 28 day equivalent interest rate (%)	8.4	7.9	7.6	6.7	5.8	5.3	4.9	4.9	4.9	4.9	4.9
10 year interest rate, 10 year Govt bond (M10)	8.0	8.2	7.8	7.8	7.6	8.2	8.1	8.1	8.0	8.1	7.8

Monthly Construction and Housing Indicators

	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09
Construction employment (IMSS)											
Total (thousand people)	1,101	1,094	1,102	1,101	1,099	1,113	1,120	1,121	1,110	1,119	1,120
Annual % change	-7.1	-8.8	-7.4	-9.4	-10.1	-9.4	-9.9	-10.1	-10.5	-9.5	-7.2
Hydraulic cement production (tons)											
Annual % change	3.9	-5.4	1.8	-9.8	-1.5	6.1	1.1	-7.5	-5.2	-12.0	
Cement consumption per inhabitant (kg.)[1]											
Annual % change	3.4	-5.8	1.1	-10.4	-2.1	5.3	0.2	-8.3	-6.2	-12.9	
Residential construction prices											
General (annual % change)	6.8	4.6	4.0	1.8	-1.0	-2.6	-3.4	-2.7	-1.8	-2.1	-2.8
Materials (annual % change)	7.8	4.9	4.0	1.1	-2.3	-4.5	-5.5	-4.6	-3.3	-3.8	-4.5
Labor (annual % change)	3.5	3.4	3.5	3.8	3.6	3.7	3.8	3.8	3.7	3.5	3.1

Monthly Housing Finance Indicators

	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09
Commercial Bank Current Loan Portfolio											
Balances, billions pesos*[2]	298.4	299.9	302.2	302.3	305.5	307.1	308.9	303.2	305.9	307.7	322.1
Annual % change	6.3	5.6	7.0	5.8	5.1	4.7	4.2	3.0	3.0	2.9	7.3
Mortgage Sofoles Loan Portfolio											
Balances, billions pesos*	54.6	54.5	54.2	54.2	53.3	53.0	52.3	51.9	51.3	50.9	
Annual % change	-29.0	-31.6	-31.5	-31.0	-32.0	-33.2	-34.9	-36.2	-37.1	-6.9	
Average Annual Total Cost	14.66	14.69	14.87	14.77	14.77	14.78	14.74	14.79	14.77	14.80	
(Average Total Cost) in pesos at fixed rate											

1 The volume of cement production is used as a proxy for consumption
2 The increase from October to November probably reflects changes in the classification of the portfolios of some institutions from pesos to UDIs
* November 2009 pesos
Source: Source: BBVA Bancomer with Banco de Mexico, Conasami, INEGI, IMSS and CNBV data

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* Documents available at http://www.bancomer.com
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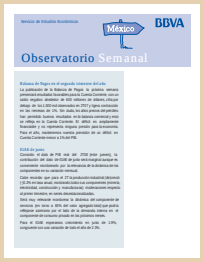

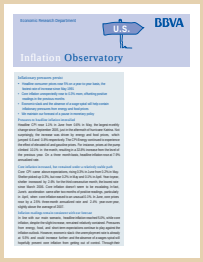

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