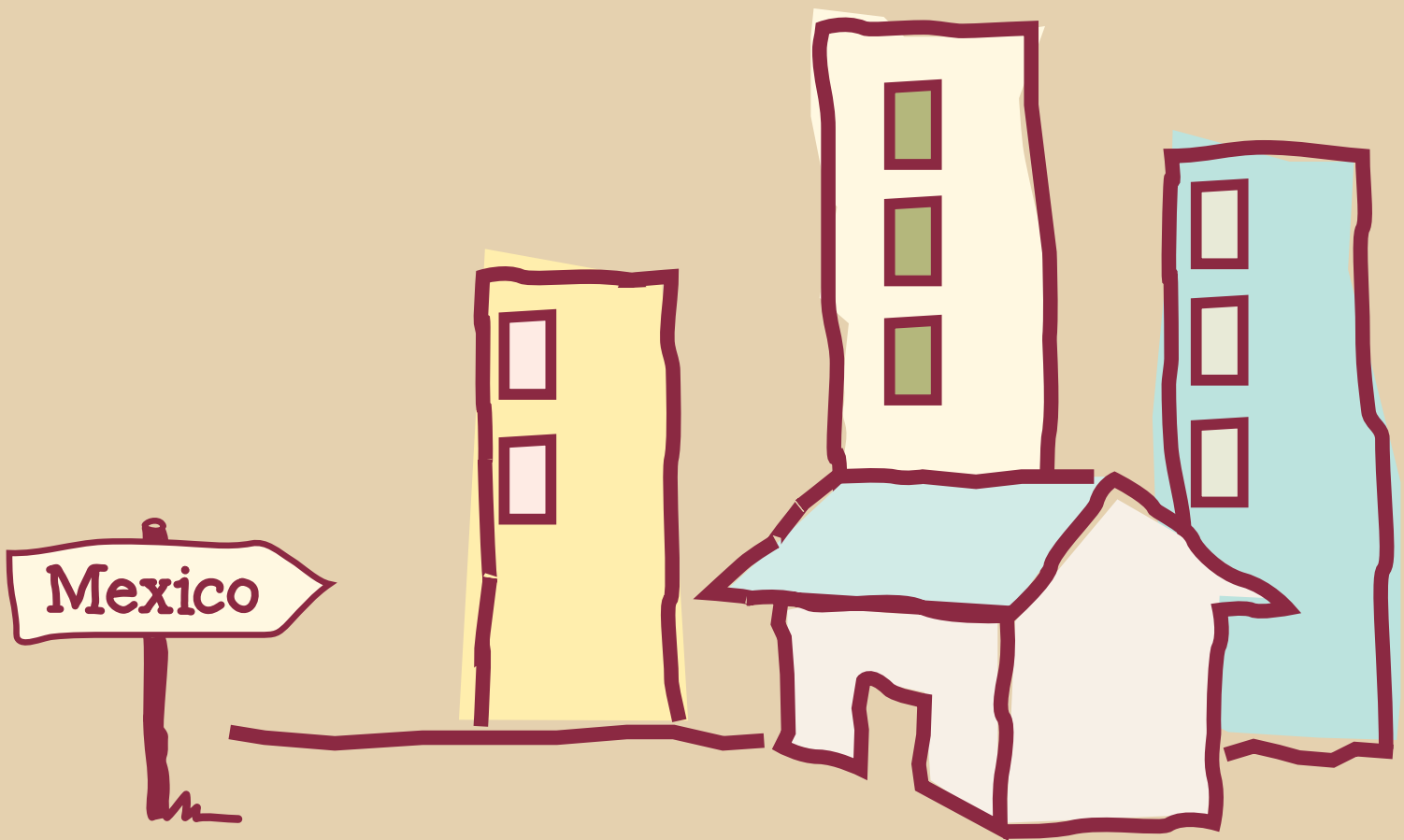


Real Estate Watch

Economic Research Department

September 2008



The Mexican real estate sector, like the rest of the economy, faces different challenges derived from the current situation. These challenges include the downturn in the U.S. economy and its transfer effect on Mexico, the rise in the prices of raw materials—which affects housing construction costs and families' payment capacity—, and more specifically, the persistence of an oversupply of housing, with significant changes compared to 2007. To try to respond to these challenges and consider their evolution, in this edition of *Mexico Real Estate Watch* we have included an analysis on the outlook for construction costs, of the behavior of housing oversupply from a regional perspective and by segments, and a detailed article on the structure and impact on mortgage loan securitization market in view of the subprime crisis in the United States.

It should be reiterated that we feel that the present period is marked by cyclical moderation and not a brake on real estate activity. In particular, the housing sector growth this year can surpass the increase in construction activity and average the economy. In addition, the sector is constantly providing signs of its consolidation: meeting the goals of the government's public agencies, an ambitious program for the six-year presidential administration, and contributions to the institutional framework—such as the modifications to the law that regulates SHF—, which contribute strength and the capacity for the financial system as a whole to be able to continue to offer investment flows.

Despite the problematic nature of the current situation, we should not forget structural issues that the sector faces and that at this point in time take on added relevance and that suggest the need to continue modernizing the institutional framework of this branch of economic activity. As we have mentioned on other occasions, a reconsideration of the urban development model would be advisable. We have called this a “new phase” that would facilitate a better synchronization of housing supply and demand, policies that would facilitate the generation of added value, with more comprehensive real estate developments, with more and better quality of infrastructure within and outside of such housing developments, which would permit a better interrelation with the population's needs—workplaces, entertainment, health, education, etc—.

In this context, to facilitate the new phase, in this issue we are emphasizing the importance of offering better “signals” for the agents in the sector. As part of such signals, a more consistent definition of the housing deficit and its frequency has a tremendous impact. We can confirm that there is an excess deficit that is more difficult to cover, in smaller cities, many of them located in rural areas, with a strong presence of the informal economy and which implies little credit experience. In addition, we are offering other approaches to the issue that can offer an interesting guide of opportunities for housing development. From this stems the importance of searching for more effective policies on subsidies for low-income families. Another topic that we will be discussing concerns indirect costs, such as the acquisition of land, subdivision and urbanization, housing construction, and property deeds. We will review their evolution on a regional level and offer some elements that would point to the benefits of a federalist system that would reduce these costs and ease the restrictions that the development of the sector faces in some cases.

Contents

Closing date: September 12, 2008

September 2008

Short-term

Macro Economic Atmosphere and Construcción Industry	2
Box: Evolution of Construction Costs and their Outlook	6
Evolution and Outlook for the Housing Market*	9
Once Again on the Question of Housing Oversupply*	12
Box: National Housing Program (PNV) 2007-2012	15
Private Sector Home Financing	17
Box: Infonavit, Counterweight to the Economic Cycle	20

Special Articles

Does a Housing Deficit Currently Exist?...	21
Box: Government Housing Subsidies	32
Indirect Housing Acquisition Costs	34
Box: Indirect Costs through Transaction Costs	35
Mortgage Securitization Market in Mexico	42

Statistical Appendix	49
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This publication was prepared by:

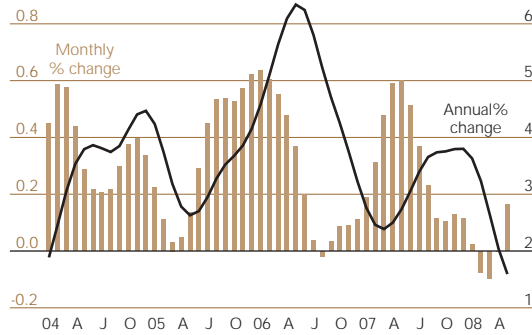
Editor: Adolfo Albo	a.albo@bbva.bancomer.com
Javier Amador	javier.amador@bbva.bancomer.com
Leonardo González	leonardo.gonzalez@bbva.bancomer.com
Octavio Gutiérrez	o.gutierrez3@bbva.bancomer.com
Ociel Hernández	o.hernandez@bbva.bancomer.com
Alma Martínez	alma.martinez@bbva.bancomer.com
Fco. Javier Morales	francisco.morales@bbva.bancomer.com
Cecilia Posadas	c.posadas@bbva.bancomer.com
Eduardo Torres	e.torres@bbva.bancomer.com
Art: Fernando Tamayo	fernando.tamayo@bbva.bancomer.com

Editorial Board:

Baralides Alberdi, Adolfo Albo, Eduardo Osuna, Víctor M. Requejo, Julio Sáenz, Ignacio San Martín, Isidoro Sánchez, Jorge Sicilia

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GEAI (Global Economy Activity Index) Trend



Source: BBVA Bancomer with INEGI data

The moderation will continue throughout the rest of the year; symptoms of a recovery for the second half of 2009

During the first half of this year, economic activity grew 2.7% —in a seasonally-adjusted series— slightly below annual growth in the second semester of the previous year (2.3%). The economy was characterized by a gradual slowdown in growth rates in all its sectors: agriculture, industry and services. The GEAI (Global Economy Activity Index) figures are showing a clear trend toward moderation that began at the end of 2007. Based on the new series (base 2003=100), the moderation in industrial production in the first half is clear, which had a bearing on that the average quarterly change in the first half of this year was zero.¹

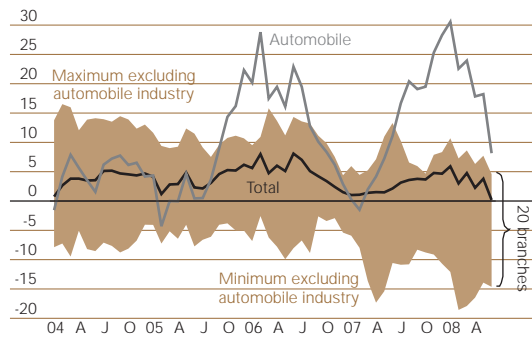
In the United States, the collapse in the real estate sector, which in the beginning had not translated into a strong adjustment in industrial production and employment in Mexico, is now beginning to be felt: the manufacturing industry has decreased in an annual comparison in the last four months, and non-farm employment practically did not grow in recent months. For now, the uncertainty regarding the strength of the recovery in the U.S. continues to dominate: even though consumption in that country has received a recent boost from tax rebates to families, the energy price rises, as well as more adverse credit conditions will continue to reduce families' purchasing power. U.S. data indicate that a significant slowdown will be registered instead of a severe recession: estimates by BBVA regarding the GDP growth rate in the U.S. for 2009 have gone from 1.6% in April to 1.0% in August.

In this sense it should be noted that given the close ties of Mexico with the U.S., industrial moderation in that country has implied a lower demand for Mexican products, In particular, in branches other than the automobile industry, with a high industrial participation, such as the manufacture of computer equipment and electronic accessories and metallic products, among others. The automobile industry deserves special mention because its dynamics have been a determining factor in recent years to sustain manufacturing growth. It should be mentioned that with regard to annual growth in manufacturing in the first half of the year (3.3%), the transportation equipment branch contributed 3.5 points, while contribution to growth by the rest of the branches was negative (-0.2 points).

Among the components of demand, the information available up to now in Mexico points to an important contribution to growth by domestic demand: private consumption barely moderated its expansion rate (4.3% and 4.1% in a seasonally-adjusted series in 4Q07 and 1Q08, respectively). The demand for new investment, with 3.9% growth, is showing symptoms of a slowdown since the middle of 2006: the contribution of this component to GDP has dropped from

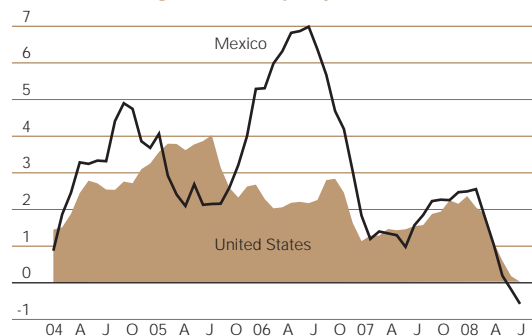
¹ As it was informed in a timely manner (Observatorio del PIB (GDP Observatory), April 29, 2008), the INEGI published new GDP estimates. The GDP reviewed-estimate includes a change of the base year (2003 instead of the previous 1993) with a new classification of the information. One of the more important results is that, with the new data, there are some changes in the structure and dynamism of the sectors with a greater weight in primary and secondary activities and lower weight in the tertiary. For the new classification of economic activities, only data as of January 2003 have been published, which is why the old series is not strictly comparable.

Manufacturing Production Annual % change, seasonally-adjusted



Source: BBVA Bancomer with INEGI data

Industrial Production Annual % change, seasonally-adjusted



Source: BBVA Bancomer with INEGI and U.S. Federal Reserve data

2.3 points to 0.8 points in the last eight quarters. Among the components of domestic demand, private consumption is probably what will mostly be affected in the coming quarters, derived from the gradual deterioration in total wages—both from employment volume and from real wages— as well as from factors such as stabilization of the expansion rate in financing for consumption. For 2008, we estimate that the employment creation rate will moderate from 530,000 new jobs in the formal private sector in 2007 to close to 480,000 this year.²

Due to the above, the outlook of a more adverse economic atmosphere has implied, in recent months, a review downward in the growth outlook for Mexico in 2008 and 2009 (see Situation Mexico 2Q08). Currently, we estimate an expansion in GDP for this year of 2.3% and close to 2.0% in 2009.

Inflationary pressures in the short term, a better panorama as of the second quarter of 2009.

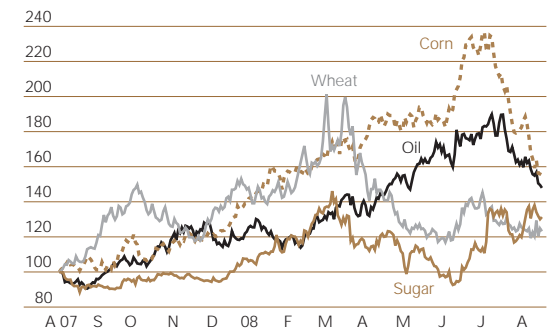
Since the end of 2007 and in particular in the first half of this year, international food prices —mainly grains and livestock— as well as energy, registered important rises. These increases have had their origin both in factors related with supply due to geopolitical conflicts—in particular, in the case of oil— and due to climatic reasons —recent price rises in corn are related to the expectation of a lower harvest in the U.S.— as well as of demand factors, among which the use of bio-fuel inputs in industry are noteworthy and the change in world diet, in particular, in countries like China and India, all of which have implied important demand pressures.

As in the case of growth, great uncertainty persists regarding the future evolution of inflation: there are doubts as to the behavior of international food and energy prices due to the magnitude of the shock, as well as its duration. However, there are symptoms pointing to lower pressure in 2009. Despite the fact that the economic slowdown mainly in developed countries will point to lower aggregate demand —limiting price increases—, on the other hand, it is foreseeable that demand from the emerging countries will continue to grow, although at lower rates, both for human consumption and for livestock products as inputs for the manufacture of bio-fuel products: It is pertinent to recall that the World Bank estimates that 70% of the variation in grain prices can be attributed to their greater demand for the production of ethanol.

International pressure has dominated the inflation dynamics. It should be mentioned that eliminating the inflationary effect in food and energy that is, processed food, livestock and government-regulated prices in the National Consumer Price Index (INPC for its initials in Spanish), inflation would stand at an annual 3.6%, instead of at 4.9% seen in July. For the near future, to the extent that the economic slowdown is more evident, there could be a drop in annual inflation. Also, long-term inflationary expectations are anchored at around 3.5%, and wage negotiations remain contained. The risks are con-

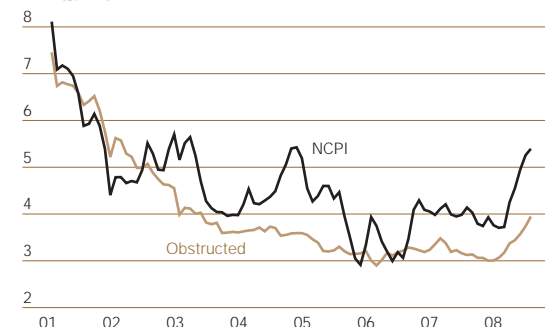
² The employment estimate already takes into account recent revisions in the number of affiliates to formal private employment by the IMSS: in the previous series, 756,352 new jobs were reported in 2007, while in the new series the number is 529,216 jobs in the same period. On average, the correction implied 223,000 fewer annual jobs in each month.

International Quotations: Oil and Selected Foods August 1, 2007 = 100



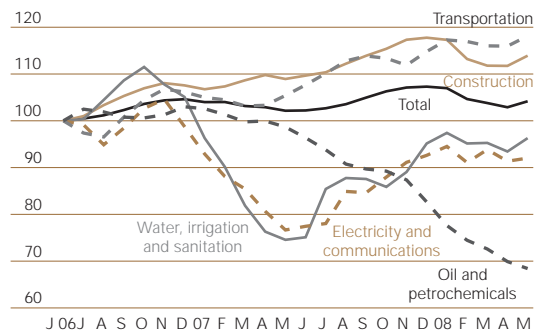
Source: BBVA Bancomer with Bloomberg data

Headline and Obstructed Inflation* Annual %



* Food, livestock and government-regulated
Source: BBVA Bancomer with Banco de Mexico data

Construction Industry: Components
Indices June 2006 = 100, seasonally-adjusted



Source: BBVA Bancomer with INEGI data

centrated in more severe reviews of public prices toward the end of 2008 and the beginning of 2009. Even then, there remain some short-term inflation risks, which has led us to review the inflationary course upward, a situation also recognized by the central bank. We expect annual inflation of 5.8% for the end of 2008 and of 3.6% for 2009.

The relative weight of construction increases despite its moderation

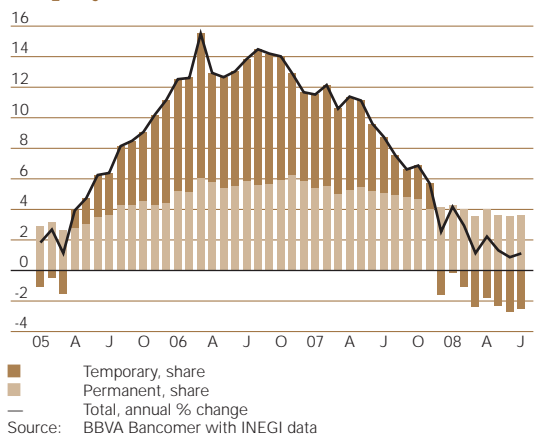
The construction industry was not exempt, in the first half of this year, from moderation in its expansion rate. Growth in the construction industry at an annual rate has fallen from 8% in 2006 to 3.0% in 2007 and practically to 0% in the second quarter of this year.

In terms of components, of note due to the strength of their contraction are oil and petrochemical³ components, with a negative contribution to the industry's growth since the end of 2006 and "in crescendo". As a result, this component is the one that has to a greater extent lost a share in industry: between 2004 and the first half of 2008; its contribution in the aggregate value of industrial production fell from 18.4% to 15%. We observe a contrary situation in the case of construction⁴, the share of which rose from 48.8% to 54.9% of industry in the same periods. Thus, the construction component has consolidated as the driving force of the construction industry by consistently surpassing aggregate growth in real terms since the middle of 2006.

Despite the better dynamics of construction, it should be pointed out that, in all the components of construction, moderation has been observed in recent months. This situation has already been evident also in job creation in the construction industry, where the incorporation of part-time workers (55% of total employment) has shown annual variations of negative growth since December. For July, the IMSS (the Mexican Social Security Institute) reported close to 30,000 temporary employees fewer than in the same period last year, and, even though close to 44,000 permanent jobs were created in industry, the net balance of job creation is of barely 13,000 employees, very much below the 95,000 workers incorporated annually on average in 2007.

In the outlook for construction in the coming months a determining factor will be the progress in public works announced by the National Infrastructure Program (the PNI for its Spanish initials). In said program, announced within the context of counter-cyclical fiscal policies by the Federal Government so as to face the current moderation in the economy, an investment is being planned of P\$2.5 billion (of 2007) between 2007 and 2012 (equivalent to 3.7% of GDP every year). The uniform distribution of this amount would imply an investment per quarter of around P\$106 billion. However, through the first quarter, only P\$10 billion had been spent. These delays in initiating public works have been attributed to regulatory processes in the

Employment in Construction



Source: BBVA Bancomer with INEGI data

3 Industrial production data.
4 As part of construction the Survey of Construction Companies considers housing works in single and multi-family homes, schools, office buildings, commercial and service buildings, industrial buildings in general, hospitals and clinics, and buildings for recreation and leisure.

corresponding government agencies, which have become “bottle-necks”, so we do not rule out that once the bidding processes have streamlined, investment in infrastructure will be a driving force for growth and a tempering factor for economic moderation. On the other hand, a greater delay in exercising these projects would tend to decrease the internal strength of the economy.

A factor to be considered and that might be relevant in the following months as it was in the first half of this year—see inset on the evolution of construction costs and its outlook—is the effect that high international prices of raw materials could have on construction costs. It is only necessary to recall that the sub-index of “construction material” reported by Mexico’s central bank, (the INPP, or National Producer Price Index, for its Spanish initials) indicates annual inflation of 12.7% in the 2Q08. Internally, of note are inputs such as “wire products” for which inflation in the same period averages 46.8%. Even though, as mentioned in the case of food inflation, the source of this inflationary dynamics is external, we do not rule out the fact that they have increased the cost to the producer and that it was transferred to some extent to the housing sub-indexes of the NCPI.

Outlook: construction will continue to be the shock absorber of activity

For now the main risks for economic activity lie in the dynamics of the external environment, both in terms of economic activity and in the magnitude and duration of inflationary pressure. In the central scenario, we believe that economic moderation will continue in the second and third quarters of this year in an atmosphere pressured by headline and core inflation. Within this context, the construction industry, as one of the pillars of domestic demand, will be key in tempering economic moderation.

Macro Economic Projections

	2007 ^a	2008				2008 ^a
		I	II	IIIe	IV	
GDP (annual % change)	3.2	3.3	2.1	1.8	2.0	2.3
Employment (top, eop)	556.2	450.8	328.9	277.0	267.3	331.0
Inflation (eop, %)						
Headline	3.97	4.25	5.26	5.61	5.78	5.04
Core	3.99	4.34	5.02	5.26	5.04	4.83
Interest rates (eop,%)						
Bank funding	7.22	7.50	7.75	8.25	8.25	7.84
28-day Cetes	7.19	7.48	7.78	8.22	8.22	7.81
10-year Bond	7.84	7.49	8.74	8.45	8.38	8.23
Exchange rate (ppd, eop)	10.94	10.64	10.31	10.30	10.24	10.41

a Annual average estimate as of the third quarter 2008
 e top thousands of persons
 eop end of period
 ppd pesos per dollar
 Source: BBVA Bancomer

Evolution of Construction Costs and their Outlook

The construction sector in Mexico has not been unaffected by the international rise in prices of raw materials. According to the Banco de México, the increase in construction costs through July 2008 was an annual 8.81% on average, twice as much as the growth in headline inflation in this same period (4.45%). Furthermore, the trend year to date in the fluctuation of Construction Costs Index (CCI) it has been on the upside (13.3% in July in annual terms). This situation imposes challenges for the construction companies that—in addition to assuming higher costs— must also deal with a lower rhythm of economic activity than was the case a year ago.

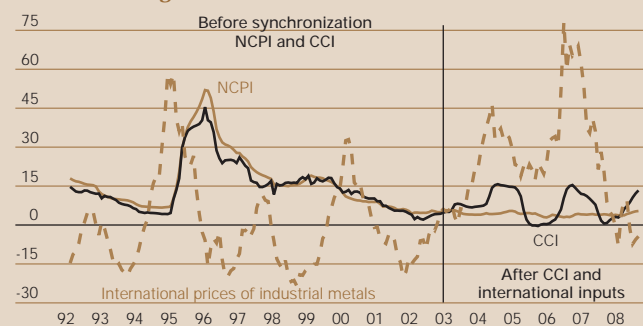
This period marked by higher costs and weakness in demand make it critical that the construction companies undertake a more efficient management of their resources and place special attention on their projections for the next few years. With this in mind, we will point to the main factors that have determined construction costs in recent years, as well as the direction that they might take in the future.

Construction costs are increasingly tied to international factors

Before 2003, the evolution of construction costs approximated the country's inflationary dynamics. This suggests that common factors influenced the determination of both construction as well as general prices in the economy.

NCPI, CCI, and International Prices

Annual % change



Source: BBVA Bancomer with Banco de México and IMF data

The high inflation levels prevailing before 2003 generated “distortions” in the markets to such an extent that determining prices for construction inputs could have expressed uncertainty on costs and the expectations of high inflation more than the relative shortage of such building supplies. This would explain why the growth in the Construction Costs Index would be more in line with the NCPI—before 2003— than with international price references.

Once headline was stabilized within the ranges established by the central bank—during 2003—, the variations in construction costs began to approximate the fluctuations in the corresponding international prices. This evidence suggests that the domestic prices of construction materials better reflect the conditions of supply and demand. For example, the rise in the Construction Costs Index in 2004 and 2006 corresponds to higher reference costs of materials coupled with rising demand in response to the expansion of housing construction. In contrast, during 2005 and 2007, the moderation in international prices translated into lower growth in costs for construction companies in the country.

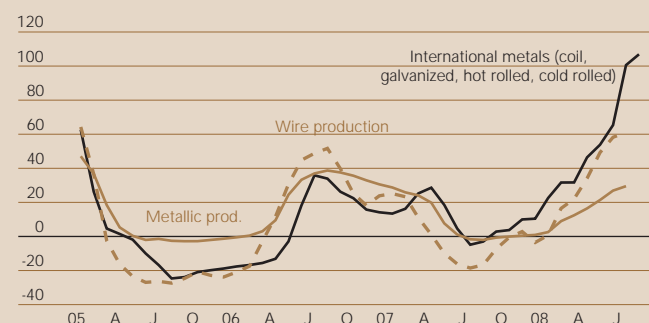
From this flows the conclusion that the prudent management of the country's fiscal and monetary policy will continue to contribute to fluctuations in construction costs, continuing to reflect the conditions—international and local— of supply and demand for inputs.

Greater inflation in construction materials related to metallic and energy inputs

Recently, important increases have been registered in international prices of metallic and energy products. These are reflected in differences in price growth in the construction sector in Mexico. Thus, the recent dynamics of internal prices respond more to international supply factors than to greater domestic demand. In July, international prices for iron products increased an annual 106% (v.gr. hot and cold galvanized rolled steel coil and wire), while copper rose 5.3%, aluminum 12%, and steel 66%. A large part of these increases were due to the worldwide rise in energy prices, with annual growth of 79.9%, 167.4%, and 78.2% in WTI, coal and natural gas, respectively.

Inflation in Prices of Metals used in Construction

Annual %



Source: BBVA Bancomer with Banco de México data

Inflation in Construction Materials

Annual % change; averages

	2007	1Q08	2Q08	July
Materials	4.9	6.3	12.3	16.0
Non-metallic materials	4.1	6.5	7.0	6.3
Cement and concrete	3.1	5.4	4.6	7.4
Agglutinants	3.4	6.1	7.0	8.3
Plaster	5.2	7.4	7.7	8.2
Clay-based items	5.8	4.0	4.3	4.8
Brick & flat brick	6.5	4.5	4.8	5.2
Concrete-based products	4.6	4.1	4.2	3.8
Structured concrete parts	5.4	6.0	7.8	9.0
Other concrete products	4.8	3.5	4.7	6.2
Other non-met. min. prod.	3.4	0.5	1.3	1.9
Wood products	3.5	3.2	3.8	4.0
Plywood	-0.1	4.3	4.6	4.0
Paints and related items	1.7	2.8	4.6	6.3
Vinyl paint	1.2	0.4	2.3	3.6
Waterproofing	1.7	4.2	6.2	7.3
Plastic products	-0.7	-0.2	3.5	5.6
Plastic pipes	4.2	2.0	5.6	7.9
Other chemical products	13.7	3.2	7.0	16.2
Metallic products	8.7	8.0	21.6	29.5
Metallic structures	4.5	11.0	33.1	48.5
Wire products	-0.8	13.1	47.2	61.1
Rods	-1.4	12.9	45.5	59.3
Electrical equipment	8.7	5.1	4.7	5.7
Water pumps	9.5	7.1	6.4	7.4
Electrical accessories	9.7	7.7	8.2	6.8
Electric cable	6.2	8.1	8.7	7.3
Furniture and accessories	7.5	5.1	7.0	6.9
Bathroom fixtures	6.9	4.8	6.2	6.0
Other mat. and accessories	3.8	5.6	12.4	15.5
Glass	4.5	5.7	6.4	4.5

Source: BBVA Bancomer with Banco de México data

In Mexico, this environment has translated into higher price growth of metallic products (an annual 29.5% in July) and wire (61.1%), particularly in metallic structures with a 48.5% increase and rods, the cost of which rose 59.3%. Other inputs that experienced relative upside price pressures include chemical products —asphalt, plastics, and waterproofing materials—as well as electric cables.

Components of Construction Costs

Annual % change; averages

	2007	1Q08	2Q08	July
Construction Costs Index	4.7	5.8	10.5	13.3
Materials	4.9	6.3	12.3	16.0
Mach. and equipment rental	2.6	2.5	2.6	2.9
Wages	4.2	4.1	3.7	3.3

Source: BBVA Bancomer with Banco de México data

With regard to the other components of costs, it should be emphasized that: (1) the increased prices of the rest of the materials were still contained, with the exception of oil by-products; and (2) the costs for machinery rental

and wages posted slight increases —close to 3%— that are in accordance with the cycle of lower growth in the economy and, in particular, with the downtrend in the construction industry registered in the course of the year.

Potential evolution of construction costs

In the next few months, the evolution of construction costs will be subject to multiple factors that affect prices in different ways and that, ultimately, imply greater uncertainty regarding their potential trajectory. Nevertheless, we feel that those factors tied to the international supply of inputs will continue to have a greater effect than those related to internal demand. In particular, those construction materials linked to the international cycle of energy costs will be more susceptible to experiencing the greatest adjustments in 2009 —v.gr. metals and chemicals— in which the main internal risk is associated with an increase in government managed and regulated energy prices, such as high electricity consumption, natural gas, and petrochemical inputs.

Up until now, the growth of the Construction Costs Index has been marked by regular cycles since 2003, in which its “peaks” in annual inflation have been up to 15.7% and its “slumps” have descended to -0.4%. It should be emphasized that the length of time between the maximum growth in the Construction Costs Index —“peaks”—and its minimum levels —“slumps”— have been between 12 and 14 months. In response to this regularity and under the current costs cycle, the maximum growth rate for input prices —up to an annual 15%— could occur in the final quarter of the year and it could begin its gradual downward cycle at the close of 2008. If this pattern continues, the costs of construction materials could diminish throughout 2009 in such a way that they would average an annual increase of close to 5.5%. Furthermore, these cyclical factors could lead to an annual growth in construction costs below the increase in headline inflation —measured by the NCPI— during a couple of quarters of 2009.

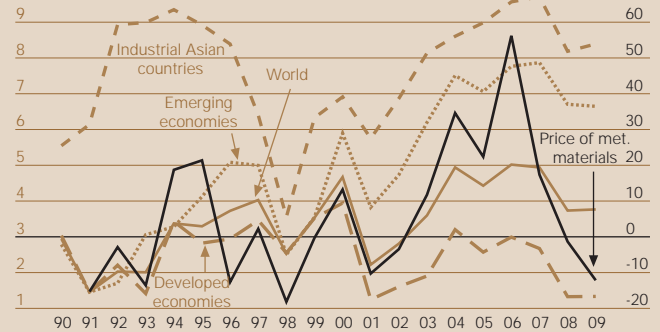
For the time being, in case no additional surprises emerge in the international markets, in the next 12 months we could begin to see reductions in annual inflation toward average ranges of 8.8% on metallic products—vs. the current annual 29.5% level— and 15.2% for wire —vs. the current 61.1%—. In contrast, the prices of products of petrochemical origin —plastic pipes, chutes, asphalt, vinyl paint, etc.— could continue to increase during the

rest of this year and not slow their annual growth rate until the second quarter of 2009. In the case of cement and concrete products, the downside adjustments could be subtle and could respond in 2009 to certain upside pressures if public spending on infrastructure were to expand.

Despite these factors, the regularity in the cycle of construction costs could be interrupted in the event that the worldwide increases in steel prices that we have seen recently were to continue. This could be sparked by high international growth—not seen thus far—and, simultaneously, a rise in the price of energy inputs. This could lead the decrease to be much more moderate than in past cycles to the extent that average annual inflation could be between 7% and 9% in 2009.

Even though this scenario cannot be ruled out, for the time being the international evidence points to reduced growth in economic activity. The risks of a greater international downturn have increased not only for the United States, but also for other developed and emerging economies. This situation will lead to a reduction in downside pressures on international demand for productive inputs, especially those earmarked for durable goods, such as metals for the auto industry and construction. Thus, the external determining factors in construction costs point to less pressure for 2009.

GDP Growth by Regions and Inflation
Annual % change



Source: BBVA Bancomer with IMF data

At the same time, internal determining factors will also allow for a drop in the prices of construction materials in 2009, in light of the recent low growth in the demand for inputs for the construction industry. Even though a rebound in this sector is likely due to public infrastructure work projects, this increase will be partially offset by the lower growth in other privately constructed building projects that are in line with the rhythm of the world cycle.

Octavio Gutiérrez

o.gutierrez3@bbva.bancomer.com

Evolution and Outlook for the Housing Market During 2008

Following a period of strong expansion and consolidation in the past few years, in 2008 the real estate sector is experiencing an adjustment, in which it will be important to anticipate market trends in order to take advantage of the opportunities with the greatest potential. Factors such as the downturn in the economic cycle, some inflationary pressures, and a slower recovery for the U.S. economy than originally expected, will take on added importance throughout the year and will require a reconsideration of the expectations of the real estate market toward lower but still significant growth rates.

Seen from a general perspective, the real estate market is experiencing an adjustment in accordance with the downturn of the economy; albeit with differences between segments and regions. For example, in higher and lower price segments, the contraction has been more significant than in the medium-value range. This can partially be attributed to the greater flexibility for financing and to the improvement in the past few years in conditions of accessibility and demand from this segment. For example, the *Infonavit* (workers' housing fund agency), the largest supplier of mortgage loans on a national level, maintains the goal of granting 500,000 loans in 2008, with growth expectations of around 24% in co-financing programs and a 15% increase in loans for those earning up to three times the minimum wage. Differences can also be seen regionally, with the greatest impact in localities tied to the United States, specifically the northern border area and beaches. So even in the current context, the outlook of the real estate market contains strong and weak points. What is important is to identify and quantify them, by segment¹ and by region.

Low-cost housing²: re-dimensioning the market

In the low-cost housing market, that is, the "A" and "B" segments, important changes have been underway in the recent period. Among them are the contraction in sales since the beginning of 2007, which indicates a re-dimensioning of the market. In the *Infonavit* July report on how many loans had been granted, this segment had registered the least progress in relation to the annual goal. This lag has occurred despite the possibility of obtaining subsidies for borrowers who earn less than two times the minimum wage.

There are supply and demand factors that explain the contraction in the "A" segment. First of all, there are signs of a certain degree of saturation of the market. Even though a high percentage of the workforce is concentrated in the lowest income strata of the population (close to a third of the workers in the formal sector receive less than two times the minimum wage) what is important is accessibility to credit or the borrower's payment capacity to acquire a home. Most of the housing deficit is concentrated in rural areas —see article on the housing deficit—, where formal employment is scarce and average incomes are comparatively lower.³

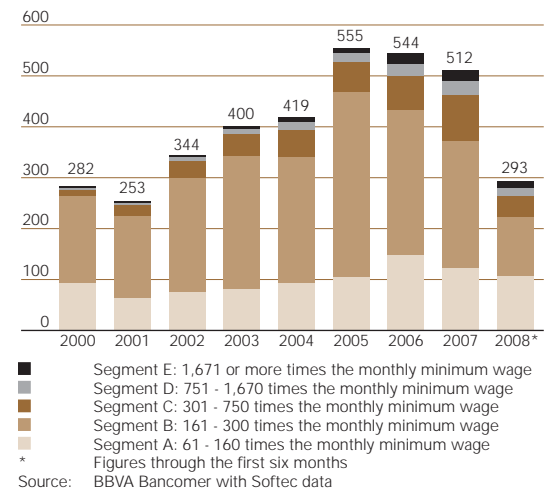
Second, the downturn of the economy, especially in the states tied to the United States, has negative implications on the rhythm of job creation and the evolution of wages. Then there is also the current

1 Throughout the text, segments "A", "B", "C", "D", and "E" are identified as entry level, low-cost, mid-range, residential, and high-end housing, respectively.

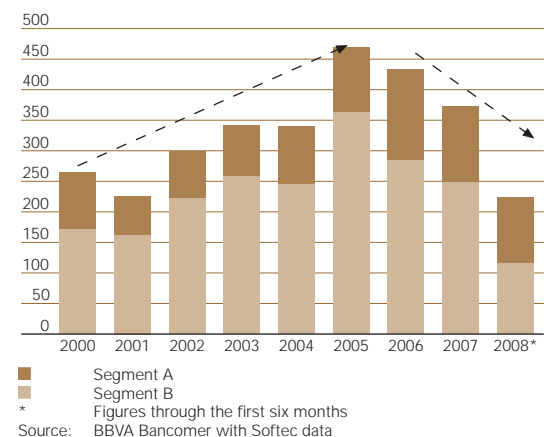
2 Whose prices are below 260,000 pesos and from 261,000 to 480,000 pesos, respectively.

3 According to the 2006 Income-Spending Survey (the *EINGH* for its Spanish initials), rural households represent 22% of the country's total, and their monetary income is just half of the average received by households in urban areas.

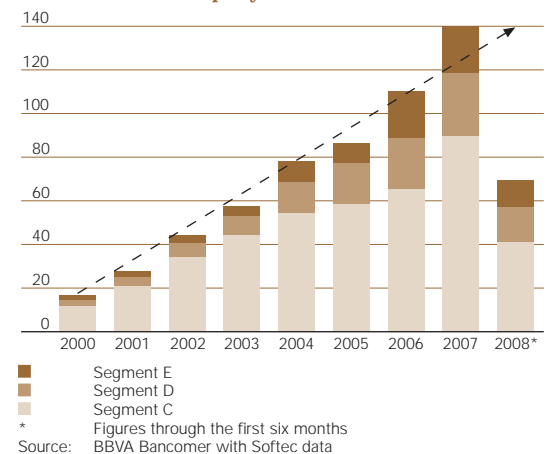
Total Housing Sales per Segment Thousands of units per year



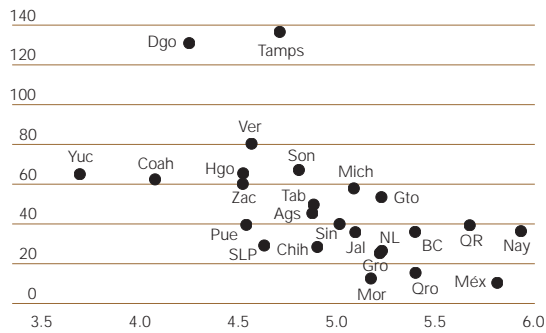
Segments "A" and "B" Housing Sales Thousands of units per year



Segments "C", "D" and "E" Housing Sales Thousands of units per year

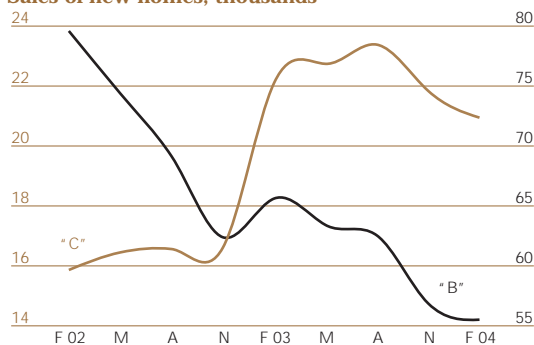


Do Prices Influence Infonavit Credit Goals?
Segment A: % compliance with financing goal* vs. prices/m2, figures through 1H08**



* With respect to the annual goal in loans for the salary bracket of up to two times the minimum wage
 ** For prices per square meter with figures through May
 Source: BBVA Bancomer with Infonavit and Softec data

The Market Moves toward Higher Price Housing
Sales of new homes, thousands



Source: BBVA Bancomer with Softec data

The U.S. Cycle Influences the High Income Market
Sales of new homes, thousands



Source: BBVA Bancomer with Softec data

inflationary process, mainly spurred by food prices, which have a greater impact on the lower income brackets of the population, who must earmark a higher percentage of their earnings for such items. Thus, for example, from January to August 2008, headline inflation averaged 4.7%, but, for the population with income less than three times the minimum wage, the corresponding figure was 5.5%.

On the supply side, the higher price of land is beginning to be a restriction. The shortage of land with public services at competitive prices, as well as restrictions of a legal nature —zoning limitations— result in real estate developments relatively far from the urban centers, which tends to boost the cost of providing services —electricity, water, transportation, security, and garbage collection, among others—. The limits implied by the price of land —and in any event, construction costs— for the supply of “A” type housing takes on even greater importance when the results of the granting of *Infonavit* loans are analyzed by state. In 10 of the country’s 32 states —with Mexico City included in this category⁴—, more than 5% of the annual goal had been reached at the close of the first half of the year. In the vast majority of the cases, the common denominator is that the price per square meter is comparatively low in relation to the rest of the country. Given that the costs of construction materials, labor, and equipment rental have little variation on a regional level, the variable that can make an important difference in construction costs and therefore on prices per square meter, is the price of land.

In terms of segment “B”, sales have also decreased, but the explanation in this case could be somewhat different. The modifications to *Infonavit*’s financing policies and products that increase the amounts loaned and make it easier to prove income levels, allow families to access more expensive homes than in the past, in addition to expanding demand and making it more flexible. This could explain why while sales in this segment are on the decline, in the following category, “C”, they are on the rise.

Downturn in high-income strata and in regions tied to the United States

For the more expensive housing segments, “D” and “E”, the evolution of the market began to provide signs of a downward adjustment in sales during the first half of 2008. Both segments follow a similar trend and reveal that growth practically stopped by the middle of 2007, which coincides with the subprime crisis in the United States, but, nevertheless, distinctions should be made. If within segment “E” we separate the sales in cities or towns typically oriented to foreign residents that are particularly located in beach areas (Los Cabos, Cancún, etc.), it can be noted that the drop in sales has been consistent since the second half of 2007. On the other hand, for the same segment, in Mexico City, the State of Mexico, Nuevo León (Monterrey), and Jalisco (Guadalajara) —that together represent around 75% of the market, once the locations catering to foreign residents are excluded—, the evolution of sales even showed a moderate uptrend until the close of 2007, with a downturn beginning to appear this year. The months of inventory, which show the estimated time to exhaust the available supply of new housing, are another indicator that confirms the differences between both markets. For example, while for Mexico City, this indicator fluctuated in the second quarter between 9 and 11 months, for Puerto Vallarta, Nuevo Vallarta, Los Cabos, and Cancún, the range was 17 to 25 months.

4 Coahuila, Durango, Guanajuato, Hidalgo, Michoacán, Sonora, Tamaulipas, Veracruz, Yucatán, and Zacatecas.

Nevertheless, it should be mentioned that the market for foreign investors is far from having lost its attractiveness due to its medium-term potential. It is enough to consider that in 2007 close to 12,000 units were sold with an approximate value of 7.00 billion dollars, which represents 13% of the country's total real estate investment. Its size continues to be relatively small compared to the strength of the U.S. market, where around one million homes of this type are sold each year and in Canada, with sales of 50,000 such units. Therefore, it is felt that Mexico represents a market with broad potential. The country has 9,000 kilometers of beachfront and only 200 km have been developed. In the past few years, a strong expansion has taken place, especially in areas located in northern and western Mexico. This can be attributed to the demand from American retirees and those with high income —baby boomers— who consider these areas to be ideal for their retirement for different reasons, such as the climate, price, hospitality, distance from their places of origin, etc. Within this market, Los Cabos is particularly important, due to its high prices. While the average price per square meter in beach venues on a national level averaged around 30,000 pesos, in Los Cabos the corresponding figure was 43,000 pesos.

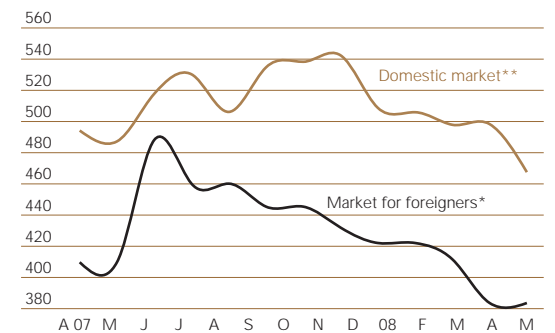
Another element that could help us understand what is happening in the segments preferred by North Americans is the investment flow earmarked for developing this residential beachfront niche. During 1Q08, private tourist investment topped two billion dollars, which compares with the 1.5 billion dollars invested in the same quarter of 2007. Thus, it is believed that the adjustment in this market is transitory and contrary to what is occurring in the United States, whose market continues to strongly depreciate—following a prolonged uptrend in prices for more than 10 years—investments in a second home in Mexico have preserved their value.

Outlook: cyclical downturn, not a halt

The short-term expectations in the housing market and for credit have declined, and although they remain positive, better planning and implementation are required. At the same time that the sector shows some effects of the economic downturn, important changes also appear in some segments, partially associated with new financing policies and products as well as the particularities of demand. In any event, it is clear that the evolution of the market varies based on its segments and within them, by region. The cities with the highest degree of ties to the U.S. economic cycle, either due to industrial activity —manufacturing or maquiladoras— or services —tourism and residential beachfront developments— have most felt the effects of that country's situation. In the states in which the links are comparatively weaker, the positive effect of the government's programs to boost construction of and access to housing for the medium and lower-income strata of the population can be appreciated.

In line with the countercyclical fiscal measures, we should emphasize the importance of the National Infrastructure Program (*PNI* for its Spanish initials) and the state public works programs, which we expect will facilitate the expansion of an adequate supply of land and along with it, alleviate one of the main bottlenecks in housing construction, in particular, housing earmarked for the lower income strata of the population. At the same time, the *PNI* will allow sufficient and quality services to be offered to strengthen housing segments for retirees and vacationers.

Localities for Foreigners have been the Most Affected
Sales of new homes, thousands



* La Paz, Los Cabos, Riviera Maya, Nuevo Vallarta & Puerto Vallarta
 ** Monterrey, Guadalajara, Mexico City, and the State of Mexico
 Source: BBVA Bancomer with Softec data

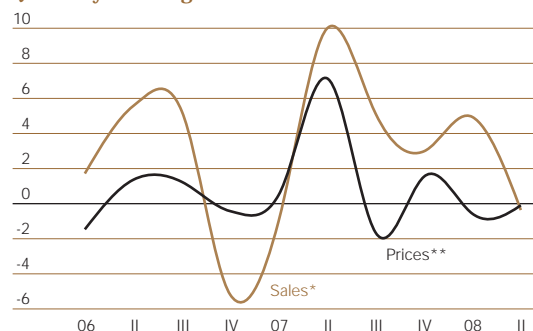
Number of Loans granted by Housing Agencies
Thousands of loans per year

	2000	2007	2008 goal	1H08	Progress vs goal
Total homes acq.	326.4	815.2	932.7	444.3	47.6
Entry level	325.6	708.6	721.7	286.4	39.7
Infonavit	250.1	440.7	500.0	234.3	46.9
SHF	46.7	32.6	108.0	15.3	14.1
Fovissste	24.3	55.0	113.7	33.3	29.3
Fonhapo	4.5	180.3	217.8	3.5	1.6
Mid-range & res.	0.8	63.1	155.0	73.5	47.4
Banks & Sofoles	0.8	63.1	155.0	73.5	47.4
Others		43.5	56.0	84.5	150.9
Reduction*		-181.3	nd	-126.6	
Equivalence		633.9		317.7	

* This refers to loans that are considered in two or more institutions
 Source: BBVA Bancomer with Conafovi data

The Slowdown Reaches the Real Estate Market

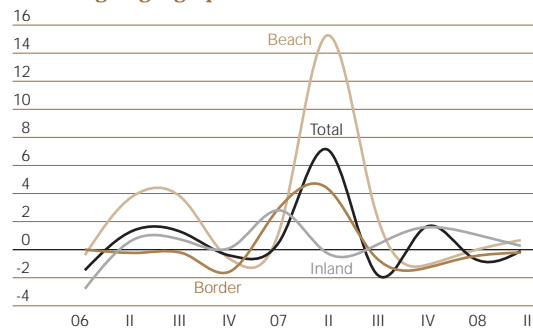
Quarterly % change



* New homes
 * Pesos per square meter, valued at constant prices
 Source: BBVA Bancomer with Softec data

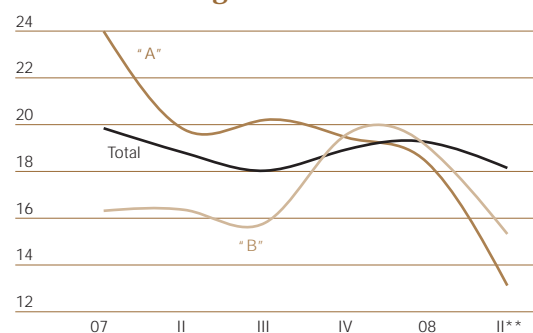
Regionally, the Impact Depends on Ties with the U.S.

Quarterly % change in prices* according to geographic location



* Pesos per sq. meter, valued at constant prices
 Source: BBVA Bancomer with Softec data

Inventories* Decline in the Low-Income Segments



* Measured in months required to sell, at the rhythm of current sales, the housing stock in each development
 ** Figures through May
 Source: BBVA Bancomer with Softec data

During the current year, the downturn in economic activity and its effect on the real estate sector have been unmistakably clear, even though, as was described in the previous section on housing activity, the situation has been marked by strong regional disparities and differences by segment. In this context, some additional questions arise: has the trend that we have been observing in the housing oversupply increased due to the economic downturn in the United States? does this dynamic have an effect on housing prices?, what are the differences by segment and region?

Has the economic cycle in the U.S. had an impact?

From a Mexican standpoint, the dynamics of the real estate market show generalized signs of a downturn since the second half of 2007, coinciding with the intensification of the mortgage crisis in the United States. The downturn has been gradual and moderate. Indeed, through the second quarter of this year, sales had posted increases in four of the previous five quarters, with the figures declining and a slight contraction in the most recent period.

The relationship between the Mexican real estate market and the economic cycle in the United States can be more clearly appreciated when analyzed from a geographical standpoint. Using changes in prices¹ as a reference point, in the states located along the northern border with the United States (Baja California, Coahuila, Chihuahua, Nuevo León, Sonora, and Tamaulipas), the adjustment has been more pronounced, with negative variations in the past four quarters. In beach localities where there is a strong presence of real estate developments for the American investor market (Cancún, Los Cabos, Puerto Vallarta, Nuevo Vallarta, Ixtapa, and Acapulco) the increase in prices during the second quarter of 2007 was the most significant and since then they have been adjusted downward. Finally, in inland cities, relatively less exposed to the U.S. economic cycle, the adjustment has been moderate and in these states a contraction has not been registered in housing prices.

Inventories, meanwhile, showed strong differences between segments. Even though mid-range housing on a national level has remained relatively stable, in the low-income "A" and "B" segments the trend is on the downside, which suggests that in these segments the evolution of the market is relatively favorable². In the high income "D" and "E" segments, the market downturn is pronounced and shows stronger signs of an increase in inventories. Regionally, there are also important differences that can be observed in inventories, depending on whether the cities are inland, along the border, or are beach resorts.

In terms of bank activity, the downturn in the real estate market has not only implied a lower rhythm of growth in credit, but also an increase in loan delinquency rates. It is interesting to note that throughout 2008, the states in which housing inventories have expe-

1 Prices per square meter, in constant prices.
 2 As was described in the section on Housing Activity, in these segments a re-dimensioning can be noted; a possible explanation of the drop in inventories could come from better planning in response to the saturation of markets in the months prior to the emergence of the symptoms of the economic downturn in the United States and a certain movement of clients toward the mid-range housing segments due to better conditions of accessibility (for example expansion of the upper limits on loans obtained with the support of Infonavit), which have been identified by developers and home builders.

rienced the greatest growth are also those where the non-performing mortgage loan portfolio has increased most dramatically. It is also interesting to observe that the list is headed by the states where the link with the United States is important, such as Baja California Sur, Quintana Roo, Sinaloa, and Jalisco.

Has the housing oversupply intensified?

But, to what extent does the downturn in the United States increase the housing surplus and does it generate a more severe adjustment in the sector? The current indicators offer a first response, with significant adjustments —on the downside— in prices and sales, and —on the upside— in inventories³. If sustained over a period of time, they could be interpreted as indicating a deeper adjustment in those markets. Following the evolution in the first half of 2008 —the January-May period— in the three indicators previously referred to with regard to the average in 2007⁴ and the housing segments according to their value —“A”, “B”, “C”, “D”, and “E”—, it was possible to identify those that were significantly —more than one standard deviation— at variance with the national average. Thus, for each state considered in the sample, a total of three indicators reflecting a supply surplus for the five housing segments were obtained, that is, a total of 15 indicators were analyzed.

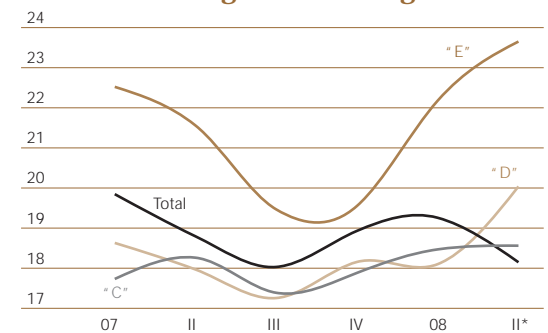
Although in the current context marked by an economic downturn it is natural that different states will diverge from the national trend in relation to at least one indicator⁵, it is interesting to note that in some cases, the signs of oversupply repeatedly appear, either in different segments or on more than one occasion within the same segment. This was considered to be the criteria to discriminate against isolated cases, to take only those states in which the signs were persistent: in two of the three indicators, or in three of the five segments. Thus a total of 12 states were included in this category; namely, Baja California, Baja California Sur, Guerrero, Nayarit, Michoacán, Morelos, Querétaro, Sinaloa, Sonora, Tabasco, Veracruz, and Zacatecas. Viewed by segment, the housing oversupply is relatively concentrated: half of the cases occur in the “D” and “E” segments —residential and high-end— whose combined percentage share of the available supply in the market is below 15%. In some states, repeated signs of oversupply appear in more than one segment, as, for example, in Tabasco —“A” and “D”—and Baja California —“D” and “E”—.

What factors could help explain the housing oversupply?

Is there some common element in the states where signs of housing oversupply repeatedly appear? To some extent, practically all of them have strong ties with the U.S. economy. They can be grouped in three categories: those where the industrial integration with the United States has been on the rise; those with important real estate developments in beach areas; and finally, those that are important recipients of family remittances. The first block of states included Sinaloa, Hidalgo, Baja California, Coahuila, Sonora, and the State of Mexico. The first three were in the top positions in terms of the increase in integration with the United States during the current decade,

3 Through the months required, at the current rhythm of sales, to exhaust the housing stock of each development.
 4 Based on the information obtained from Softec on a national level. The sample covers 36 of the country's cities, encompassing most of Mexico's states. The states not included in the sample are Campeche, Chiapas, Durango, Oaxaca, and Tlaxcala.
 5 A total of 20 states appeared listed in at least one of the indicators.

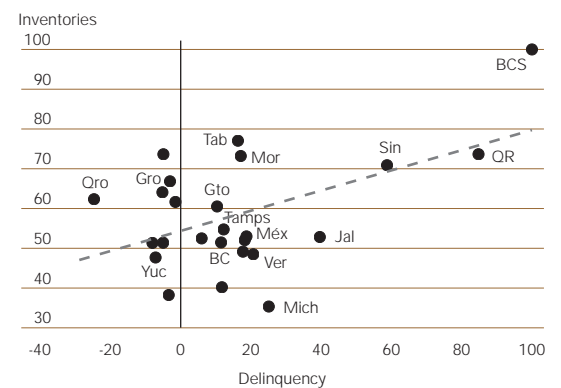
... but Increase in the Medium and High-Income Segments



* Figures through May
 Source: BBVA Bancomer with Softec data

Will the Real Estate Slowdown have an Impact on the Banking Sector? Inventory Accumulation vs Mortgage Loan Delinquency

Indices based on annual % change, 2008 vs 2007 avge.*



* For both indicators, the increase in 2008 compared to the average for the January-May period vs. the average registered in 2007 was considered
 Source: BBVA Bancomer with information from BBVA and Softec

Sizing Up Housing Oversupply*: What States and What Segments

	Housing segments				
	"A"	"B"	"C"	"D"	"E"
Baja California				X	X
Baja California Sur			X		
Guerrero			X		
Michoacán	X				
Morelos					X
Nayarit					X
Querétaro					X
Sinaloa		X			
Sonora			X		
Tabasco		X		X	
Veracruz		X			
Zacatecas				X	

* Significant deviation compared to the national average in 2008 vs 2007 variations in prices, sales, and inventories
 Source: BBVA Bancomer with Softec data

**Sizing up the Housing Oversupply*:
What Explains It?
January-May 2008**

Housing investment in beach areas ²	Integration with the U.S. ¹
Gro (7)	Son (12) BC (4)
Sin (8)	Coah (7) Sin (1)
Nay (2) BC (6)	Hgo (3) Méx (16)
BCS (1)	
Tab	Ver (6)
	Mor (14)
	Méx (4)
Other factors ⁴	Remittances ³

* Significant deviation with respect to the national average in 2008 vs 2007 variations in prices, sales, and inventories

Note: Figures in parenthesis indicate relative position of the state in the respective indicator

1 States that in the 2001-2006 period increased their linkage with the U.S. economic cycle

2 Accumulated foreign direct investment flows in Housing Trusts in Restricted Zones

3 Total remittances received by state

4 In Tabasco, housing oversupply can be explained by the damages in Villahermosa with the flooding that occurred at the end of 2007

Source: BBVA Bancomer with data from INEGI, Banco de México, and the Ministry of the Economy

and the three remaining states already had a strong integration with the U.S. economy since the beginning of NAFTA in 1994.⁶

The second group was comprised of Baja California Sur, Nayarit, Baja California, Guerrero, and Sinaloa, where throughout the decade, real estate projects for the American investor market have experienced important growth. A third block corresponded to states that receive significant amounts of remittances, which is the case of the State of Mexico, Veracruz, and Morelos. Only two states appeared in more than one block: Baja California, where the integration with the United States has been important and in which major investments have been undertaken in what are known as Housing Trusts in the Restricted Zone, and the State of Mexico, which also has strong ties with the United States and is among the first places on a national scale in terms of income from remittances. The only state that does not fit into the previously mentioned factors is Tabasco, although there the explanation seems to be related with the damages that the state capital suffered in the 2007 floods.

What about the market “signals”?

But it can be argued that the cycle isn’t everything. Those are also the “signals” that the public housing agencies send to the market through their goals or amounts of authorized credits for each locality and that represent an important reference point for the number of homes to be built in each market, especially in the “A” and “B” segments. The market needs to have additional indicators that are timely, reliable, and offer a high degree of consensus among the participants and that are the basis of the investment required per segment and locality. Sectoral policies could also help correct the recurring imbalances between real estate supply and demand; for example, speeding up budget spending in activities that complement housing, such as providing infrastructure and public services. By the same token, the synchronization between construction cycles and sales would help.

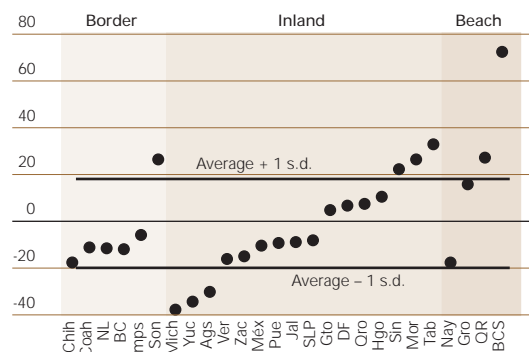
Conclusions

The context marked by the slowdown of the Mexican economy has had important implications for the real estate sector, which has felt its effects, especially in the segments linked most to the U.S. economic cycle. Even though in each market or region the real estate sector has been gradually adjusting to the trend in activity on a local level as well as to the U.S. economic situation, the emergence of some signs of excessive slowness in some markets makes us wonder what they are and what they can be attributed to.

Based on inventory accumulation, the speed at which sales are made, and prices in real terms, during the first half of 2008, a total of 12 states on a national level showed repeated signs of housing oversupply. In most of the cases, some link could be established with the United States, through industrial integration, the market for U.S. residents —baby boomers—, as well as remittances. Thus, the signs of a downturn are not perceived as structural or systemic but rather it could be said that they are of a situational nature, and will dissipate to the degree that the U.S. economy also shows signs of a recovery, which will accelerate the growth of the Mexican economy and the country’s real estate sector.

⁶ This indicator was used as a reference point to explain the increase in the degree of integration with the U.S. economy in the present decade. For further details, consult Regional Sectoral Situation May 2008.

**In What States have Inventories Grown?
2008 vs 2007 % change**



s.d. standard deviation
Source: BBVA Bancomer with Softec data

2007-2012 National Housing Program (PNV): Toward Sustainable Housing Development¹

Goals

The current presidential administration not only wishes to continue with the growth of the housing sector that we have seen since 2002, but wants to speed up progress in order to build six million homes during its period in office (2007-12). This goal is mainly based on the formation of households (3.9 million) flowing from the demographic trends and on the objective of covering a part of the historically accumulated deficit (2.1 million additional homes). In addition, the program goes further, based on the idea that the housing stock that is built, remodeled, or upgraded should follow sustainability criteria with the rational use of resources to improve the country's assets and urban development. Finally, the program also poses the need to consolidate the National Housing System through a new institutional model that reorders and adapts its powers and attributions among the different levels of government in order to more effectively and sustainably promote the housing sector.

Special mention is made of low-income families. According to the program, 50% of the demand for housing due to demographic trends during the current administration will come from households with income levels below four times the minimum wage (mw), slightly more than a third will correspond to income equivalent to three times the mw, and 20% to those earning less than two times the mw.

In this context, the 2007-2012 National Housing Program (PNV) establishes four basic strategies to achieve the previously mentioned goals: (1) to increase financing for housing, particularly for low-income families. The idea is to achieve a better synchronization between the allocation of mortgage loans and families' payment capacity; (2) to promote sustainable housing development by defining new environmental-friendly criteria, based on international experiences; (3) to implement a better public manage-

ment that would allow for the consolidation of the National Housing System with improved coordination of the three levels of government in order to diminish transaction costs and make the construction of the country's housing stock more efficient; and (4) to facilitate and promote policies on subsidies and urban infrastructure.

Strategies and lines of action

1) Financing for families

The development and adaptation of funding instruments is a priority in order to expand the coverage of mortgage loan financing. The PNV mentions the intention of promoting mortgage portfolio securitization programs in the secondary mortgage market, continuing to foster co-financing between commercial banks and the public housing agencies, in particular for low-income families, and encourage greater foreign direct investment in the construction industry. At the same time, strengthening families' savings capacity will be carried out based on offering an expanded supply of used and semi-new housing,—developing the secondary housing market— a greater availability of new housing, and providing cutting-edge technologies in the construction industry. The modernization of the system of public property registries and official property valuation records will be key in the PNV and will be undertaken with policies for quality certification and the regularization of property ownership.

2) Sustainable housing development

Sustainability criteria are based on new official standards that stimulate vertical housing construction with protective measures against climate changes and the launching of "Green Mortgages". Plots of land will also be set aside with a greater participation on the part of the federal, state, and municipal governments; better prototypes of master plans for urbanization

¹ The executive version of this program can be consulted at www.conavi.com; a detailed version of this program is expected during the second half of 2008.

Home Financing Program (PNV)

Thousands of loans

	2007	2008	2009	2010	2011	2012	2007-12
Total	790.0	850.0	900.0	1,050.0	1,200.0	1,350.0	6,140.0
Household formation	662.0	663.3	664.0	663.7	663.6	662.6	3,979.2
Deficit coverage	128.0	186.7	236.0	386.3	536.4	687.4	2,160.8
By number of times the minimum wage							
More than 4x	331.0	331.7	332.0	331.9	331.8	331.3	1,989.6
Less than 3X	220.7	221.1	221.3	221.2	221.2	220.9	1,326.4
Less than 2x	132.4	132.7	132.8	132.7	132.7	132.5	795.8

Source: BBVA Bancomer with Conavi data

will be designed, and the paperwork procedures for obtaining permits and licenses for housing construction will be simplified. New building codes will be defined to encourage better environmental criteria that improve housing quality.

3) Public management of the Natl. Housing System

A priority has been placed on improving the prevailing model of urban zoning regulations and land classification through designing juridical-administrative options to integrate the sector and strengthen the multi-dimensional nature of government actions on the three corresponding levels—municipal, state, and federal—that would avoid duplicating functions and increase the effectiveness of the institutions. In this sense, the National Housing System is the body that will coordinate the implementation of these new government models. At the same time, the National System of Housing Information and Indicators (*SNIIIV*) will play a priority role in order to facilitate more efficient decision making through greater access to information for the sector's clients and participants.

4) Policies on subsidies and urban infrastructure

There will be a better flow and focus of information for the population on the subsidy programs, the use of protective measures in response to the phenomenon of climate change, and a better use of the existing infrastructure, water, and energy. The use of new parameters of urban resettlement will also be encouraged based on municipal government programs. This goal also poses the need to define better incentives for the use and administration of land through the use of land reserves in the country.

Is the 2007-2012 PNV feasible?... an appraisal

The current six-year housing program is very ambitious. At the same time, it should be characterized as very positive, since it tries to resolve an underlying problematic situation, not just continue with the existing housing policies but to go further, by redefining the current urban growth and development paradigm based on environmental criteria that would improve housing quality and along with it, provide greater sustainability to the sector in the long term. In this sense, the PNV is positive, although its feasibility will partially depend on the integration of the sector and the improvement of the regulatory framework under a new institutional plan that will respond more efficiently to the new needs demanded by the housing market.

The improvement of financing for low-income families — above all for households that receive less than four times the minimum wage— will depend on multiple factors. These include a better synchronization between households' payment capacity —the use in some cases of subsidies— the design

and adaptation of the existing mortgage instruments, and the development of new mortgage programs that facilitate greater accessibility to housing. In addition, in response to liquidity restrictions and the limited payment capacity of these families a more active strategy should be put into place to promote savings that would facilitate the acquisition of housing.

The federal government's subsidy goals require greater informational promotion on the availability of these resources to achieve a better allocation of them among the low-income population. To promote sustainability criteria, a rapid adaptation of new technologies that complies with standards on the savings and efficient use of energy and water will be indispensable. A greater coordinated participation of the public sector is also required in its different levels and areas of activity to define the building codes and the technologies that are appropriate to the reality of the housing sector in Mexico—such as, for example, building in "safe" areas—. The consolidation of the National Housing System requires greater training of the public officials involved and a greater commitment on the part of the population to care for the environment.

A consensus exists among analysts that the main restriction for the urban development of the sector lies in the current state of the market for land. Some actions in addition to those outlined in the PNV must be emphasized, such as the following:

- A greater presence of added equity value indicators that would identify the characteristics of the urban infrastructure that is provided and the supply of available housing in the SNIIIV, so that better signals are offered to home builders and those seeking housing.
- Based on a long term outlook, it is also necessary to establish restrictions to excessive population growth and irregular housing construction, as well as to generate incentives to abandon the informality that exists in the housing market, in a context of sustainable urban development.
- To design a periodic program to monitor and follow-up on compliance with the goals of the 2007-2012 PNV.

Finally, the 2007-2012 PNV should be the basis for the design and implementation of the next 2013-2018 National Housing Program, so as to prevent a break in continuity in the development and in the strategic lines of the country's current plan and to take advantage of the experience acquired in this period. To summarize, the PNV will be valued favorably because it seeks to strengthen the positive trends that we have seen in the development of housing in the country in the past few years.

Leonardo González leonardo.gonzalez@bbva.bancomer.com

Private Sector Home Financing: Abundant Supply Continues

Bank credit: downturn mainly as a result of reduced demand

Since the expansion of home financing from commercial banks began in 2004, its performance has been favorable, with an abundant supply of such credit. Its dynamism has been reflected in high growth rates, which have facilitated an increase in its current balance as a percentage of GDP. Thus, at the end of 2004 the percentage share of GDP was 0.8%, while for the second quarter of 2008 the corresponding figure was 2.3%.

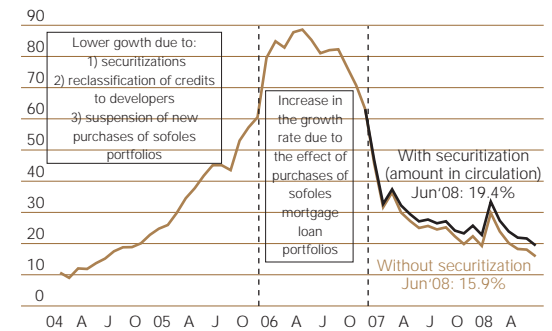
It should be mentioned that the purchases of Sofoles (special purpose financial institutions, or niche lenders) mortgage loan portfolios made by some banks at the end of 2005 and part of 2006 had the transitory effect of increasing the growth rate of their balance. Once these institutions stopped buying Sofoles loan portfolios, their balance growth rate decreased. Toward the end of 2006 balances returned to levels similar to those registered previously. In this context, it is important to emphasize that the monthly financing flows remain relatively high. For example, in 2006 the average monthly financing flow was 5.6 billion pesos, which in 2007 declined to 4.5 billion pesos, and for the first six months of 2008 rose to 4.6 billion pesos.

Despite the positive performance of the financing flows, from the beginning of 2007 until June 2008 the rhythm of growth of the balance of bank mortgage loans has slowed down. This has been the result of different factors, some of which were economic. These include the economic slowdown, which has implied less job creation; the rise in prices of raw materials, which has reduced families' payment capacity; progress in covering the housing deficit where families had borrowing capacity¹; and a moderate increase in interest rates for this type of credit. In addition, there were other effects, more of a financial nature, such as some securitizations of mortgage loan portfolios made by some banks. The graph shows that if the securitizations of outstanding mortgage loan portfolios held by banks are factored in, the real annual growth rate of housing loans would be somewhat higher than if the mortgage loan issues were not considered. Thus, in June 2008 the annual real growth rate of bank mortgage loans was 15.9% without securitizations and 19.4% with these included.

Sofoles mortgage loans: a sharper decline

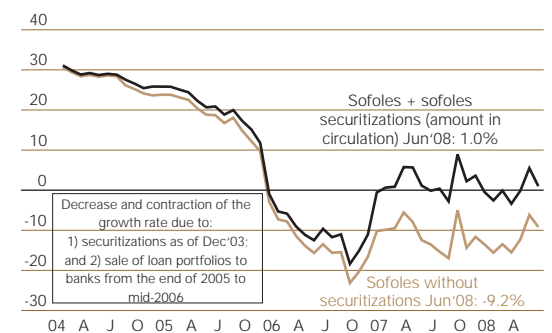
The balance of housing loans granted by Sofoles Mortgage companies since December 2005 shows negative real annual growth rates. This has also been the result of the previously commented on reasons in the case of the commercial banks —economic slowdown, inflation, hedging of the housing deficit, higher interest rates— coupled with the effects of the securitizations of housing loan portfolios held by different Sofoles Mortgage companies. Furthermore, it should be noted that some of these institutions have faced difficulties in obtaining resources. This was an important reason behind the decision to modify the Law on the Federal Mortgage Association (the SHF for

Current Bank Mortgage Loans Real annual % change



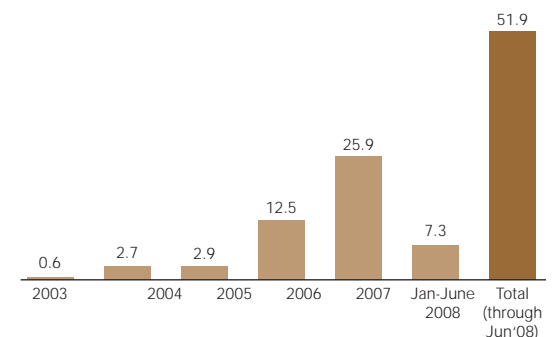
Source: BBVA Bancomer with Banco de México data

Sofoles Mortgage Companies Real annual % change in the balance



Source: BBVA Bancomer with Banco de México and SHF data

Securitizations of Mortgage Loans Annual flows and accumulated balance in billions of current pesos

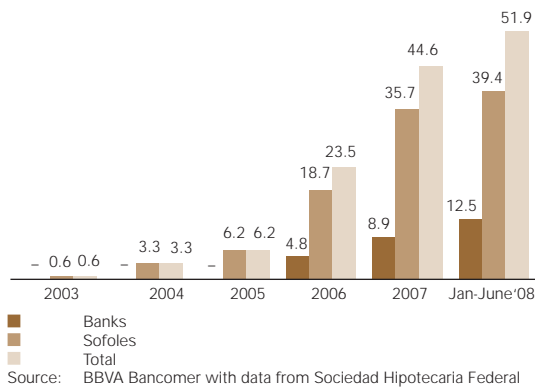


Source: BBVA Bancomer with data from Sociedad Hipotecaria Federal

1 See article in this edition: Does a housing deficit still exist?...

Securizations

Balances in billions of current pesos



its Spanish initials) to continue to grant financing to these non-bank institutions and expand the range of funding to others, such as the Sofomes (multiple purpose financial institutions). These reasons explain why, in June 2008, the real annual growth rate of the balance of the Sofoles Mortgage loan portfolio was -9.2%, as can be seen in the graph.

If the balance of these Sofoles loan portfolios is added to the securitizations that they have made and that are outstanding, the weakening of their balance is less pronounced and it has only been affected from a financial standpoint, mainly due to the sale of loan portfolios. The graph indicates that the real annual growth rate in June 2008 of Sofoles Mortgage companies considering securitizations was 1%.

Securizations of Mortgage Loan Portfolios²: a market with medium- and long-term potential

Banks and Sofoles Mortgage companies have securitized part of their housing loan portfolios as a measure by which these private sector financial institutions have been able to obtain fresh resources in order to continue granting new loans. The Sofoles began to securitize mortgage loans as of December 2003 and in the same month of 2006 the first securitization by a bank was made. Through June 2008, of the total balance of securitizations 76% were those undertaken by Sofoles Mortgage companies and the remaining 24% by banks.

To the extent that mortgage loans granted by private institutions keep growing at high real rates, the banks and the Sofoles will continue to consider the advisability of securitizing part of their mortgage loan portfolio. Short-term factors, such as transitory increases in the main benchmark interest rates of the securities issues and reduced investor interest—as occurred recently—can delay some mortgage-backed securities issues. Once international financial conditions tend to normalize, given the sector's solid bases and the structure of the securitizations market in Mexico, the number and amount of the offerings will resume the strong dynamism that has characterized them.

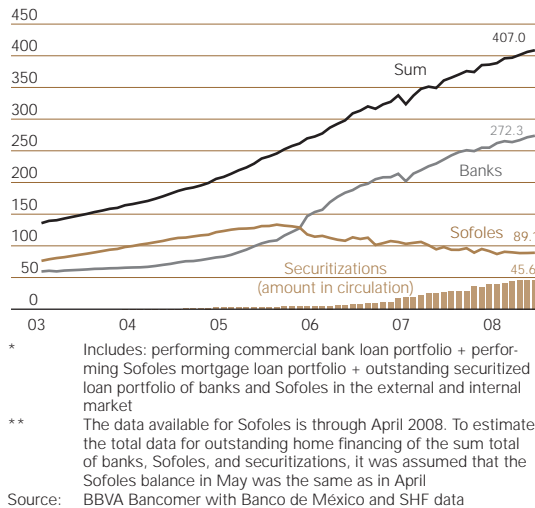
Total private sector financing for housing

The credit sought from a private sector institution by families and companies that require such financing in order to acquire housing is obtained from both Sofoles mortgage companies as well as banks. In addition, in order to measure the scope of the total financing that these institutions have granted, we have to consider the securitizations that they have made. Thus, the sum of the mortgage loan portfolios of these financial entities plus the securitizations portfolio enables us to have a more detailed appreciation of the behavior of total financing.

As indicated in the graph, total private sector financing for housing has continued to post important growth. Currently, the banks are the main private sector entities that grant mortgage loans. For example, the data available through June 2008 indicate that in that month,

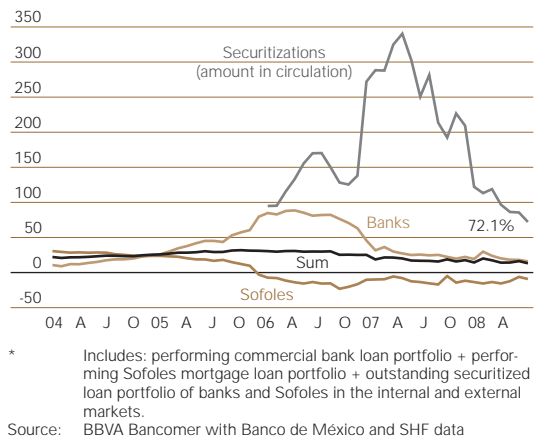
Private Financing for Housing*

Constant balances in billions of pesos through Jun'08



Private Sector Financing for Housing

Real annual % change



² See article in this edition "The Securitizations Market in Mexico"

67% of the balance of total private housing loans were made by the banks; 22% by Sofoles, and the outstanding securitized portfolio represented 11% of total loans.

When considering total private sector mortgage financing, it should be noted that since 2003 it has posted uninterrupted growth. In June 2008 its real annual growth rate was 13.2%, which reflects a major increase. It should be mentioned that it is bank credit that has most contributed to the growth in total home financing. In June 2008, bank loans contributed 11.9 percentage points (pp) to the 13.2% growth in home financing; securitizations provided 5.3 pp to the total, while the share by Sofoles was negative, at -2.5 pp.

Another way to analyze the dynamism of total private sector financing for housing is by considering its annual flows. These credit flows grew considerably from the beginning of 2004 to mid-2006 as a result of the great unfulfilled demand for such financing —both due to the housing deficit as well as the real demand for housing as a result of the formation of households—and the relative abundant availability of such loans. As of 2007, a year in which GDP grew at a lower rhythm than in 2006, and coupled with the other previously mentioned economic factors, annual credit flows slowed down to fluctuate at around 50 billion to 60 billion pesos.

It should be mentioned that the annual average flow of financial resources that private sector institutions channel in the form of new mortgage loans represents around 0.5% of the country's annual GDP. That is, these flows of resources continue to be high and the country's financial institutions move an important quantity of funds to enable major segments of the population to improve their well-being by being able to acquire housing with a loan granted by a private sector entity.

Outlook for housing loans: better symptoms toward the second half of next year

For the rest of 2008, mortgage loans are expected to grow at rates slightly below those of the first half of the year. The moderation in growth can mainly be attributed to demand conditions linked to the behavior of the economy and to advances in covering the historical housing deficit. For the rest of the year, if the economy grows more than 2%, the growth rate for bank mortgage loans could increase a real 17% in annual average terms, while total financing from banks, Sofoles, and securitizations would be below this level and at around 14%.

To the extent that the economy shows greater symptoms of strength toward the second half of 2009, that is, when the growth rate of economic activity is higher and employment in the formal sector of the economy increases at a faster rhythm, then there would be elements to expect that the expansion of home financing could be greater, boosted by a greater real demand for housing.

Interest rates: moderate increase

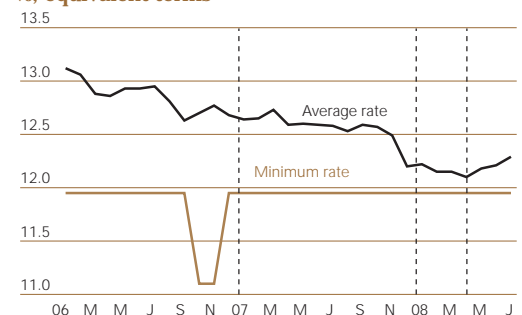
The average interest rate on home mortgages charged by Sofoles and banks had decreased from 2002 until the beginning of 2008. For example, in December 2005, the interest rate was 13.25%; at the end of 2006 it had declined to 12.68%; in the last month of 2007 it further decreased at 12.20%; and in April 2008 it dropped to 12.10%. In June and July, the rate increased slightly to 12.21% and 12.29%, respectively. In this time period, the minimum rate of 11.95% was only adjusted on the downside temporarily at the end of 2006. Its behavior until April 2008 means that the decrease in the average interest rate can be attributed to an increasingly greater percentage of financial institutions having reduced their mortgage interest rates, which reflects greater competition among them. At the same time, the slight increase in average mortgage loan interest rates as of May of this year is due to the rises in the main reference rates of the financial market.

As long as the main interest rates remain high and inflationary pressures do not recede, it is possible that average mortgage loan interest rates will not decline. When the main interest rates decline, average mortgage loan interest rates will similarly decrease as had been the case until April 2008.

The greater competition among institutions to place more loans also reduced the maximum interest rate, which declined at the end of 2007 and remained at that new level until June 2008. This led the spread between the maximum and minimum interest rate to decrease from 298 basis points (bp) in November 2007 to 47 bp in December of that year. The maximum interest rate increased in July 2008 due to the pressures generated by the recent increases in the main interest rates. In July, the spread between the maximum and minimum rate increased to 255 bp.

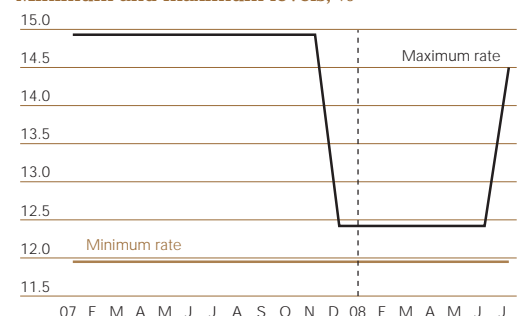
Source: BBVA Bancomer

Housing Loans: Interest Rates
%, equivalent terms



Source: BBVA Bancomer with Banco de México data

Mortgage Loans: Interest Rates
Minimum and maximum levels, %

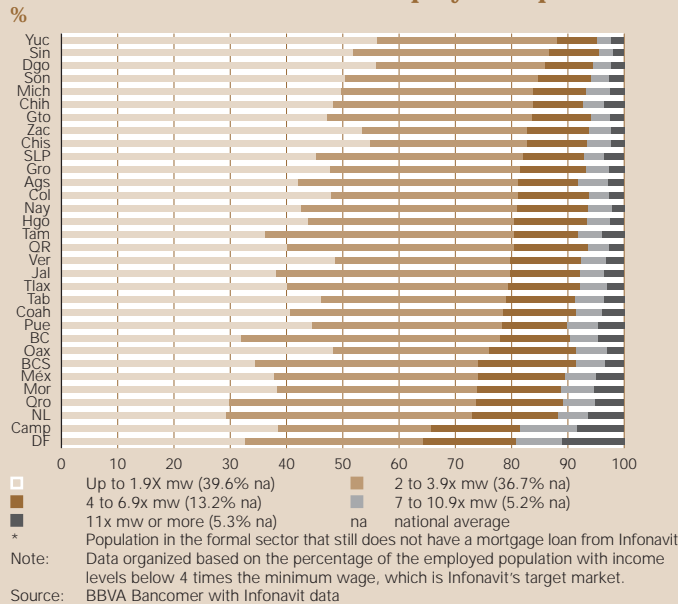


Source: BBVA Bancomer with Banco de México data

Infonavit, Counterweight to the Economic Cycle

Despite the downturn, Infonavit maintains its ambitious goals and the housing agency is fulfilling them. Its financing projections for 2008 involve a 13.5% increase in the number of loans granted and in an optimistic scenario the figure could reach 22.5%. With a potential client base of close to 9.5 million workers, the volume of demand exceeds the effect of ups and downs in the economy. At the close of July, Infonavit had granted 60% of the loans projected for the entire year. In general terms, Infonavit has two financing categories: loans based on the agency's own resources, which represent 80% of its loan portfolio, and that are aimed at workers with income below six times the minimum wage (mw); and co-financing with other institutions, which accounts for the remaining 20% and complements home financing for those with mid-range and high income levels. The latter financing category has been particularly successful with the elimination of restrictions on the value of the home being acquired by workers with income levels of more than 11 times the minimum wage. Through July, the entire year's goal of loans to be granted had been exceeded by close to 50%.

Income Breakdown for the Employed Population*



Infonavit's financing structure is associated with workers' income levels. Among workers in the formal sector who still do not have a home, close to 40% have income levels of less than two times the monthly minimum wage and an additional 37% receive between two and up to four times the minimum wage. Thus, it should come as no surprise that, of the total number of loans granted in 2008 involving only Infonavit resources, two-thirds were provided to workers with income levels of up to four times the

minimum wage. Therefore, the Infonavit's home financing support programs—and in this case, of public housing agencies in general—are of greater importance in relative terms in localities in which wages are lower. Thus, while in Yucatan close to 90% of the employed population has an income level below four times the monthly minimum wage, in the Federal District, the percentage is 65%. The breakdown in income levels also shows that only 5.2% of the employed population earns from seven to 11 times the minimum wage.¹ This implies that the market's capacity of absorption in this segment is the most limited. Perhaps this is why, among the different financing modalities used by Infonavit, the program aimed at this income bracket, Cofinavit 7 to 10.9 times the minimum wages, is the only one that is far behind in meeting its goal in terms of the number of loans granted. Through July barely 15% of the annual goal had been met.

Compliance with Credit Goals for 2008

Thousands

	Goal 2008	% share	Fulfill. July	Fulfill. vs. goal (%)
Total	500.0	100.0	270.6	54.1
Only Infonavit	403.0	80.6	220.7	54.8
Up to 1.9x mw	115.0	23.0	52.2	45.4
From 2 to 3.9x mw	195.0	39.0	113.4	58.1
Traditional	93.0	18.6	55.1	59.2
Co-financing	97.0	19.4	49.9	51.5
Up to 6.9x mw	27.0	5.4	19.5	72.1
From 7 to 10.9x mw	55.0	11.0	8.5	15.4
More than 11x mw	15.0	3.0	22.0	146.7

Source: BBVA Bancomer with Infonavit data

Infonavit: a complement to financing, without neglecting the housing deficit

The changes that Infonavit has promoted in terms of its financing policies have provided a strong boost to the housing market, especially, for the mid-range and high-income salary brackets. It has also been an important factor in mitigating the effects of the downturn, allowing for continued housing construction and expanding the population's access to credit. In the future, the challenge will be to establish financing goals that take into account the evolution of the economic cycle and not only market potential, which in some segments has little margin for expansion. This is in addition to continuing to evaluate new formulas to better attend to the low-income strata of the population, which has the highest housing deficit and that is one of the agency's most important markets.

Eduardo Torres
Alma Martínez

e.torres@bbva.bancomer.com
alma.martinez@bbva.bancomer.com

¹ Although the percentage is similar for those whose income levels are above 11 times the minimum wage, 5.3%, in this latter segment the dispersion is very broad.

Does a Housing Deficit Currently Exist?...

Leonardo González leonardo.gonzalez@bbva.bancomer.com
Adolfo Albo a.albo@bbva.bancomer.com

Introduction

In the last two years, we have frequently heard that we are observing periods of a Housing Oversupply. This contrasts significantly with what was affirmed at the beginning of the housing construction cycle that took off in 2002, when it was mentioned that the deficit was five million, a deficit then rated as historic. That figure was commonplace among the participants then in the sector, and it was an unequivocal sign of an unattended potential market that offered an opportunity under certain circumstances.

But, given the evolution and dynamism of housing construction in recent years, many questions on this topic arise: does the housing deficit continue to persist? What is its magnitude? In which segments is it found? In what locations? Why hasn't it been met, given that favorable conditions exist such as macro stability, financing availability, and a significant improvement in accessibility conditions? What actions can be taken to reduce it more quickly? Does it still represent an opportunity?

The purpose of this article is to try to answer these questions and to complete the picture on the evolution of the sector during the cycle described in the previous edition of our magazine, *Situación Inmobiliaria México*¹ (*Real Estate Watch Mexico*). We believe that to try to answer these questions will help to better understand what is happening in the housing sector, so that it can be a guide for different actions and reflections for developers, financiers and public policy administrators.

Toward a definition of “housing deficit”

Upon analyzing the deficit, we find that there is no consensus regarding its definition and magnitude. The different measurements of the current housing deficit are quite general, not too specific and lack a full definition that takes into account the variables explaining the evolution of this indicator over time. The different approximations on this topic respond to the various objectives of the institution that presents them.

The housing deficit is a “signal” for the different participants in the sector: for developers, because it locates and identifies the appropriate sites for building a residential stock for the public sector—at its different levels—for an efficient planning and endowment of infrastructure: it is important for the financial system for the appropriate allocation of loans; for securities rating agencies to evaluate the risks and to better monitor the instruments issued. Also, a better estimate of the deficit could complement information regarding the current situation of the market and, thereby, contribute to reduce the occurrences of Housing Oversupply.

In view of this scenario, it is important to have a complete definition of housing deficit that is standard, periodical and homogenous among all the participants in the sector, in such a way that it is possible to

¹ Review edition of *Situación Inmobiliaria México* (*Real Estate Watch Mexico*) of January 2008, the articles entitled: “Housing Oversupply? Is this all it is?...” and “The Housing Market in this growth cycle”.

General Criteria for Estimating the Housing Deficit

	Effect	Goal/Objective	Zero deficit
Demographic bond	+	2015, maximum; favorable to 30's	Positive Increase potential demand
Overcrowding	+	UN: decrease	Negative Social policy
Mortgage portfolio (MP)	-	1 million loans annually MP/GDP: increase	Positive Provides financing
Federal subsidies	-	Subsidies up front US\$2.3-4 billion	Positive Multiplies demand
Job creation	+	1 million jobs annually	Positive Greater real demand
Depreciation	+	Greater quality. Improvement	Negative Housing improvement
Construction	-	2.4% annual Oversupply	? Coordination

Source: BBVA Bancomer with Softec data

set a consensus on its definition and, thus, obtain a solid "signal" that offers a more frequent and consistent measurement of the lag and of housing needs.

In the most desirable situation, this indicator must quantify the market imbalances by housing segment, location, income bracket, acquisition price, and type of financing instrument, which will facilitate the negotiation of public policies, urbanization plans, migration policies, and real estate investment decisions by the developers.

General criteria for estimating the housing deficit

The most basic definition of the housing deficit is the difference that we observe between demand and supply. This, in turn, can be grouped in a general way in two headings: static in the case of overcrowding and depreciation, and dynamic in the case of potential real demand, and payment capacity. The general criteria that can be used to obtain an estimate of the housing deficit are as follows:

a) Population dynamic. The demographic bond of the population pyramid shows us that, up to the decade of the 30's, we will observe a growing trend, which will be favorable, will sustain potential demand through the formation of households, and will reach its maximum toward the year 2015.

b) Overcrowding. The population in Mexico, in general terms, lives in a state of overcrowding in current housing facilities. This is a need that must be resolved through the faster construction of new housing with an improvement in the levels of accessibility for lower income-level families.

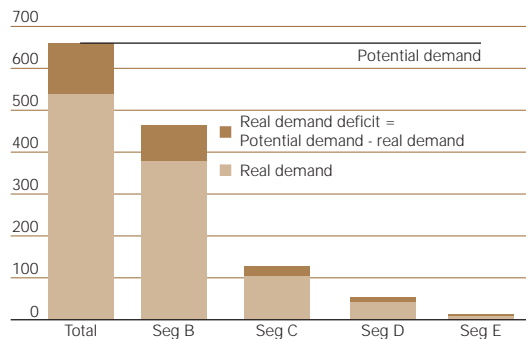
c) Payment capacity. Potential demand is restricted by families' mortgage payment capacity, which represents real demand. Therefore, it is important to generate employment and in general, improve the labor market. The current deficit between potential and real demand is around 120,000 housing units annually, concentrated mainly in the "B" segment, with 70% of the real market.² These factors are one of the limiting elements to achieve the goal of allocating an average of one million loans per year until 2012, as projected in the National Housing Program (PNV). In the short term, this industry should set its criteria for growth based mainly on the trend in real demand and the accumulated housing deficit. An ideal long-term scenario would be for housing construction to keep up with potential demand.

d) Subsidies. Federal subsidies for housing acquisition are an additional support to reduce the deficit in market demand. The federal government sets different scenarios in the allocation of these resources, within a range between Ps. 2.3 billion and Ps. 4 billion during the current administration. These transfers have an important multiplying effect on real demand.³

2 Review edition of *Situación Inmobiliaria Mexico (Real Estate Watch Mexico)* of September 2007, the article entitled: "Real Housing Demand", which analyzes the spreads between potential and real demand by segment and by state.

3 The application of subsidies up front for housing acquisition for families with lower paying capacity constitutes complementary income which makes housing demand real in such a way that we can observe a home subject to this transfer and to contracting a mortgage loan. Or rather, they represent a complement for those who have a certain level of savings to be able to settle indirect payments or transaction costs of a mortgage loan (down payment, notary fees, appraisals, execution of a deed, etc.)

Housing Demand in Mexico, 2006
Thousand of units



Source: BBVA Bancomer

e) Housing quality. The depreciation and deterioration of the housing stock has a negative impact because it expands the housing deficit. To the extent that new housing facilities are designed and the effectiveness of mortgage instruments increases, the quality of housing will improve, as well as its availability. Also, it is necessary to consider that a broader concept of the quality of housing should include the amenities of the surrounding infrastructure. With regard to this, Mexico also shows an important deficit and historic backlogs. Thus a proper quantification of this indicator will allow a faster correction of this imbalance in the market.

As we have insisted, a comprehensive and full definition of the “housing deficit” in Mexico should consider the above mentioned criteria in the deficit estimates with the greatest level of desegregation and periodicity possible. This could facilitate better coordination among the participants in the real estate sector and achieve the final objective of a faster reduction of the housing deficit.

Historic evolution of the housing deficit

In 1970, the Popular Housing Main Office of what used to be the Department of Human Settlements and Public Works (SAHOP for its Spanish initials) began estimates of the housing deficit with information from the Population Census. Currently, the official estimates are calculated by different public organizations of the sector as follows: Infonavit, Conavi and SHF, all of these with diverging positions due to the use of different methodologies in their estimates, and also with different aims such as setting goals or public policies, etc.

In the present administration, as indicated in the chart on subsidies, the design of instruments and public policies to reduce the current housing deficit is a priority. As of the INEGI II Population and Housing Count, the Conavi defined the housing goals with a plan to grant over 6 million loans, of which less than 50% covers the deficit with only 2.1 million loans

According to these estimates—which are considered to be those available on the subject—the housing deficit reached its peak during the decade of the 1980’s. As of the 1990’s, a gradual decrease was observed, which has probably accelerated in recent years. By the year 2000, according to Conavi, there was a backlog of 4.3 million homes, of which 1.8 million corresponded to new homes and 2.5 to home improvement. The new housing item includes the replacement of housing stock (1 million) and over-occupation (750,000), while remodeling consists in improvement (400,000) and expansion (2 million).

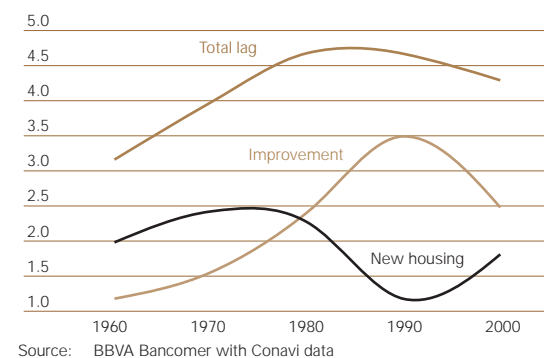
As we have commented on other occasions, the housing growth cycle of 2002-2007 must be considered as positive, with growth above the average for the economy. In this period, approximately 3.5 million homes were built. However, the greater part of these homes has been assigned to meet the demand for new housing that comes from new families. It can be assumed that the deficit has been reduced marginally due to housing improvement, and that this currently represents most of the total historic housing deficit.

“Housing Deficit” Estimates by Public Institutions

	Millions of units
Conavi, housing needs	6.1
SHF	9.4
Fovissste* (affiliate deficit)	1.6
Infonavit**	3.0

* Fovissste presents its deficit for non-attended affiliates
 ** Infonavit estimates the deficit in units required on the market
 Source: BBVA Bancomer

“Housing Deficit”: Historic Evolution Millions of residential units



“Housing Deficit” in Mexico

Historic evolution of the housing lag, thousands of units

	1960	1970	1980	1990	2000
Total lag	3,160	3,977	4,678	4,667	4,291
New housing	1,981	2,422	2,267	1,176	1,811
% share	62.7%	60.9%	48.5%	25.2%	42.2%
Improvement	1,179	1,555	2,411	3,492	2,480
% share	37.3%	39.1%	51.5%	74.8%	57.8%

Source: BBVA Bancomer with Conavi data

The aforementioned housing deficit has been covered where it could be materialized, where there was payment capacity of families. It is in the first part of the evolution of the cycle that we have called “accessibility given better financial conditions”. In that context an important recent part has been covered by the generation of demand from new families. Now, there is a deficit to be covered of a more residual nature, more complicated in more remote areas and due to families’ lower payment capacity. For this deficit segment of the population, there are restrictions in the allocation of mortgage loans, due to an unstable labor situation or because it is part of the informal economy and guarantees and loan backgrounds are weak, which emphasizes the problem of the residual deficit.

In this context, the natural trend that should prevail is that the deficit be reduced by housing improvement and that the low-income population be serviced. The new phase of the cycle is characterized by the need to reduce the housing deficit under conditions different from the past, which demands the need to redefine the urban development paradigm currently in force. This should now be focused on access for the less developed localities with a high growth potential of the housing market, such as, for example, the medium-sized cities and rural populations, with environmental sustainability criteria

Housing Lag 2000

	Occupants	Housing units	Homes	Overcrowding			Deterioration			Housing Lag		
				Over-crowded	Expansions	Total	Replacement	Improvement	Total	New housing	Remodeling	Total
National Total	95,376,614	21,513,862	22,268,916	755,681	2,042,099	2,797,780	1,055,249	437,636	1,492,885	1,810,930	2,479,735	4,290,665
México	12,472,648	2,743,144	2,848,992	105,848	221,043	326,891	111,117	40,343	151,460	216,965	261,386	478,351
Veracruz	6,857,389	1,597,311	1,635,564	38,253	222,449	260,702	113,618	46,618	160,236	151,871	269,067	420,938
Chiapas	3,778,574	779,472	808,149	29,304	185,635	214,939	50,987	23,398	74,385	80,291	209,033	289,324
Puebla	4,914,782	1,028,692	1,068,836	40,144	163,713	203,857	50,729	23,759	74,488	90,873	187,472	278,345
Oaxaca	3,416,849	738,087	763,292	25,205	157,926	183,131	45,035	21,764	66,799	70,240	179,690	249,930
Guerrero	3,041,892	651,149	674,177	23,028	153,318	176,346	48,591	22,908	71,499	71,619	176,226	247,845
Distrito Federal	8,450,809	2,103,752	2,180,243	76,491	68,177	144,668	76,748	24,068	100,816	153,239	92,245	245,484
Jalisco	6,235,981	1,378,666	1,441,069	62,403	58,929	121,322	47,456	18,494	65,950	109,859	77,423	187,282
Michoacán	3,931,372	846,333	887,958	41,625	78,403	120,028	42,800	22,810	65,610	84,425	101,213	185,638
Guanajuato	4,625,930	918,822	990,119	71,297	51,951	123,248	35,718	13,271	48,989	107,015	65,222	172,237
Tamaulipas	2,720,159	677,489	689,844	12,355	55,007	67,362	33,380	14,794	48,174	45,735	69,801	115,536
Chihuahua	2,952,401	733,379	744,159	10,780	48,247	59,027	34,071	18,314	52,385	44,851	66,561	111,412
Hidalgo	2,220,014	491,482	503,151	11,669	60,212	71,881	24,045	8,996	33,041	35,714	69,208	104,922
San Luis Potosí	2,281,812	489,828	504,990	15,162	50,177	65,279	26,926	11,237	38,163	42,088	61,354	103,442
Yucatán	1,645,421	371,242	387,573	16,331	49,212	65,543	25,786	8,354	34,140	42,117	57,566	99,683
Nuevo León	3,781,624	878,600	915,404	36,804	20,292	57,096	30,876	10,887	41,763	67,680	31,179	98,859
Sinaloa	2,514,540	572,816	585,943	13,127	47,371	60,498	27,986	9,143	37,129	41,113	56,514	97,627
Baja California	2,272,952	559,402	568,090	8,688	31,040	39,728	33,730	17,796	51,526	42,418	48,836	91,254
Tabasco	1,877,280	410,388	424,613	14,225	41,906	56,131	25,651	8,412	34,063	39,876	50,318	90,914
Sonora	2,186,002	527,427	535,743	8,316	36,514	44,830	32,117	10,952	43,069	40,433	47,466	87,899
Coahuila	2,269,189	539,169	552,024	12,855	24,213	37,068	21,043	9,872	30,915	33,898	34,085	67,983
Morelos	1,495,193	354,035	364,798	10,763	31,672	42,435	18,777	6,420	25,197	29,540	38,092	67,632
Quintana Roo	860,281	210,482	216,478	5,996	29,888	35,884	13,703	6,990	20,693	19,699	36,878	56,577
Querétaro	1,387,927	295,143	31,098	14,955	24,989	39,944	11,637	4,014	15,651	26,592	29,003	55,595
Durango	1,432,005	322,288	329,552	7,264	22,555	29,819	13,568	8,318	21,886	20,832	30,873	51,705
Zacatecas	1,345,213	298,217	307,698	9,481	20,005	29,486	10,849	6,973	17,822	20,330	26,978	47,308
Campeche	684,742	156,125	160,492	4,367	25,271	29,638	11,675	5,110	16,785	16,042	30,381	46,423
Tlaxcala	953,842	193,288	203,443	10,155	20,540	30,695	7,397	3,184	10,581	17,552	23,724	41,276
Nayarit	907,791	219,181	222,953	3,772	19,178	22,950	9,593	3,735	13,328	13,365	22,913	36,278
Aguascalientes	936,872	199,398	208,167	8,769	7,496	16,265	6,393	2,481	8,874	15,162	9,977	25,139
Colima	508,592	124,714	128,295	3,581	8,691	12,272	6,205	1,950	8,155	9,786	10,641	20,427
Baja California Sur	416,536	104,341	107,009	2,668	6,139	8,807	7,042	2,271	9,313	9,710	8,410	18,120

Source: BBVA Bancomer with Conavi data

of efficient use of water and energy. Also, it should continue the growth forthcoming from the dynamics of localities and other segments such as those of the tourist segment that acquire a second home and high-end residences.

Estimate and appraisal of the housing deficit

In this section we present different quantitative approximations to the housing deficit by using the following: (a) ownership, (b) housing and population in housing deficit, © housing deficit adjusted in line with income and economies of scale, (d) housing deficit times working days, (e) housing deficit according to social security affiliation and (f) the approximate latent deficit in accordance to educational level.

a) "Ownership deficit": lags in the assignment of property rights.

The ownership deficit refers to the lag that the country is facing in the assignment of real estate property rights. This deficit is measured by the spread of ownership of real estate under the regime of ownership and leasing. To obtain its estimate, the following are taken into account; the population, households and the number of houses and, from there, the residual margin is derived that still does not own a home. As is natural, this deficit is distributed heterogeneously among the different housing segments.

One way to estimate it is through the National Survey of Household Income Expense (ENIGH for its Spanish initials), the most recent survey corresponding to 2006, which shows that the home ownership rate is 86%, that is, there is a 14% deficit, equivalent to a lag of approximately 800,000 in home ownership.; where 20% is concentrated in families with an income of less than 3 minimum wages (mw), equivalent to 150,000 homes and 33% in households with an income equal to or higher than 8 or more minimum wages, equivalent to 300,000 units. For the first group, the price of a home that can be acquired is lower than P\$250,000, and, for the second, it is in the range between P\$800,000 and P\$4.5 million or more. It should be mentioned that the range of wage-earners from 0 to less than 8 minimum wages represents 66% of the deficit group, which corresponds to 530,000 housing units. The segment comprised of employees earning 8 or more minimum wages is a group that is characterized as including the leasing market, that is, in the ownership deficit. We can consider that the middle class is in this last group, which is evidence that there is also a housing deficit in this segment, although relatively more limited than in lower-income groups than this one.

This estimate is conservative as it does not consider the criteria mentioned in the previous section, such as for example, overcrowding and housing quality. In any case, the ownership of residential property should continue to be the main criterion that defines public policies, financing strategies, and institutional management in the task of reducing the housing deficit.

b) "Regional deficit by type of housing" concentrated in rural areas and in independent homes.

This deficit indicates the state of housing scarcity under different criteria, the first at a regional level —among rural and urban locali-

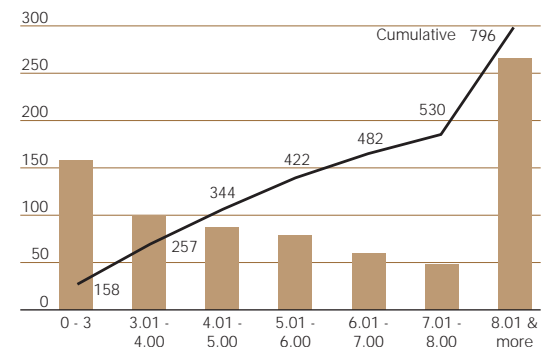
Housing Lag Estimate 2000

Total	4,290,665		
=		Replacement	Overcrowded
New housing	1,810,930	1,055,249	755,681
+		Improvement	Expansion
Housing remodeling	2,479,735	437,636	2,042,099

Source: BBVA Bancomer with Conavi data

"Housing Deficit" by Home Ownership (by Minimum Wage Range)

Thousands of units



Source: BBVA Bancomer with ENIGH 2006 data

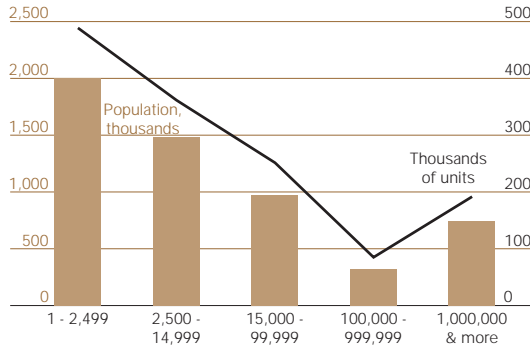
"Housing Deficit" by Ownership

Thousands of units

Min. wage	Housing units	Homes	Difference	% share
0 - 3	709.5	867.1	-157.6	19.8%
3.01 - 4.00	566.5	666.3	-99.7	12.5%
4.01 - 5.00	417.4	504.1	-86.7	10.9%
5.01 - 6.00	371.2	449.5	-78.3	9.8%
6.01 - 7.00	311.4	371.5	-60.1	7.6%
7.01 - 8.00	193.8	241.5	-47.7	6.0%
8.01 & more	992.8	1,259.0	-266.2	33.4%
Total	3,562.8	4,359.0	-796.2	100.0%

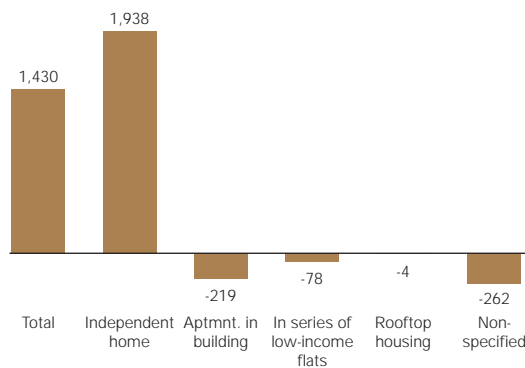
Source: BBVA Bancomer

“Housing Deficit” by Type of Region



Source: BBVA Bancomer with INEGI data

Housing Units with “Housing Deficit Population” by Type of Housing
Thousands of units



Source: BBVA Bancomer with INEGI data

“Housing Deficit” by Type of Region and Housing
Thousands of units

	Total	Share	I.H.	A.B.	H.L.	R.H.	N.S.
Total	1,429.7		1,938.5	-219.2	-77.5	-3.6	-261.6
1 a 2,499	488.8	34.2%	481.1	-0.7	0.2	0.0	-53.5
2,500 a 14,999	379.4	26.5%	369.6	-1.4	-0.5	-0.1	-29.1
15,000 a 99,999	250.2	17.5%	260.1	-8.9	-12.0	-0.2	-30.4
100,000 a 999,999	82.9	5.8%	280.3	-160.1	-47.3	-2.8	-105.1
1,000,000 y más	190.2	13.3%	253.4	-48.9	-19.4	-0.5	-43.8

I.H. Independent Home
A.B. Apartment in Building
H.L. Home in low-income flats
R.H. Rooftop Housing
N.S. Non-Specified
Source: BBVA Bancomer

ties— and the second by type of housing. According to our estimates and, taking as a base the INEGI II Population and Housing Count of 2005, we believe that there are 5.7 million inhabitants without housing, who live in overcrowded conditions, equivalent to a deficit of 1.4 million units. This estimate was arrived at by using an approximation methodology based on the average number of inhabitants per household, which, at a national level, is 4 persons; however, in the urban population, it is lower (3.9), while in the rural it is higher (4.1).

The most acute deficit (87%) is seen in regions with lower urban concentrations, under one million inhabitants. For these regions, there is a total estimated deficit of approximately 1.1 million units, but with an enormous geographic dispersion. For example, in areas with fewer than 2,500 inhabitants—which, as per the more conventional classification, are the smallest— there is an estimated deficit of 488,000 homes for 2 million persons. The next group corresponds to areas with fewer than 15,000 inhabitants with a deficit of 379,000 housing units for approximately 1.5 million persons. The following regions show a decreasing housing deficit, that is, the higher the urban concentration, the lower the housing deficit, which then reverts for cities with more than 1 million inhabitants. That is, it shows that the regional deficit is mainly concentrated on very small communities, which are widely scattered by nature.

We also estimate the deficit by type of housing. In this case, we found a total of approximately 1.4 million units. The most notable situation lies in the independent household, with the population living in it showing the highest deficit of over 100%, equivalent to 7.5 million persons, or 1.9 million homes. For the rest of the housing units, such as apartments, rooms in low-cost housing complexes, rooms on a rooftop or non-specified living quarters, we found a surplus of housing units. In particular, in apartments, of which there is a surplus of 219,000 units for 854,000 inhabitants. To summarize, the rural sector is the one with the greatest lag and, as is evident, the deficit corresponds to homes. The new urban model should consider these regional disparities among the rural and urban localities and the preferences of the communities to have this type of home.

c) “Housing deficit adjusted by income and economies of scale” confirms the problem of payment capacity. There are significant differences by income bracket.

This estimate is an approximation to the accumulation of income distributed among the members of each household. That is, the stock of wealth by goods and domestic services (i.e. refrigerator, TV, etc.), the use of which is common to the family and, therefore, generates income flow and collective well-being⁴, which implies an adjustment in current earnings and in the provision of household services. This criterion is a reasonable approximation to the permanent income of households and shows an unequal state among income brackets. Although the average monetary deficit is marginal and offers an opportunity to establish some equalizing mechanism of income for the

4 That is, individual consumption of common use goods is acquired by the head of the family and used by all the members of the household. To the extent that the approximation of permanent income of households is a parameter for estimates for the deficit, then it would be possible to expect the lag level to be of a lower magnitude. If we were to observe a greater degree of economies of scale in households linked to residential use and services, then one could expect a rise in the well-being of the population.

evaluation of public policies such as, for example, subsidies. We call this approximation criteria the housing deficit adjusted by income and economies of scale⁵ of which the average is a monthly constant of P\$1,314, corresponding to the average for the 2000-06 period. It should be noted that the wealthiest decile is the only population segment showing a surplus that has increased over time, whereas the first decile, the poorest, has the highest deficit in income earmarked for housing in 2006. Based on this, we estimate the equivalent deficit in terms of income from 2002 to 2006 by population decile. We find a gradual improvement in all the segments of wealth, although the main housing deficit continues to be concentrated in the poorest profiles.

d) “Housing deficit times working days”, confirms that there is a greater lag at lower income levels

The following approximation corresponds to the housing deficit times working days which measures the lag in housing services by income bracket, equivalent to the number of working days paid at minimum wage. That is, we estimate the labor effort necessary for households in such a way that they meet with an assumption of observing a housing deficit level equal to zero, or, to put it another way, what the necessary increase in income would be —measured in working days— for households to achieve housing accessibility by income bracket.

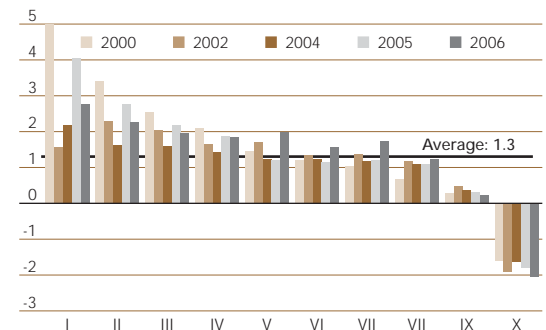
In estimating the housing deficit in terms of working days, we considered the equivalence of the current earnings of households to the number of working days paid for the average of 2000 through 2006, according to the Income INEGI National Survey of Household Income Expense (ENIGH for its Spanish initials). For example, if the second decile shows a housing deficit of 52 days of labor effort, each household in this decile should work, in addition to its effort level observed, almost an additional month and a half each month, so as not to present a lag in housing services. The results show that we have a deficit, at a national level of 28 working days monthly on average for the period between 2000 through 2006. In brief, we would have to duplicate the labor income at a national level so as to obtain a zero deficit in housing services. It should be mentioned that the tenth decile has a surplus of 38 days while the poorest decile has a deficit of 66 working days monthly.

The link between the labor market and housing is essential to structurally reduce the housing lag. A specific public policy for employment for the lower-income brackets is a desirable strategy not only to gradually reduce the deficit but also to introduce long-term reforms in the housing sector.

5 The housing deficit adjusted by income and economies of scale is a mathematical criterion that corrects the presence of the use of goods and services of common use in the home that generate economies of scale (i.e. TV, refrigerator, etc.). Equation 1 shows the adjusted income by economies of scale:

$$(1) Y_e = Y / (n)^{1/2}$$
 Where,
 Y_e : current income adjusted by economies of scale
 Y : current income
 n : Number of occupants in the household

“Housing Deficit” Adjusted by Income and Economies of Scale per Household
 Thousands of pesos, monthly income, 2006=100



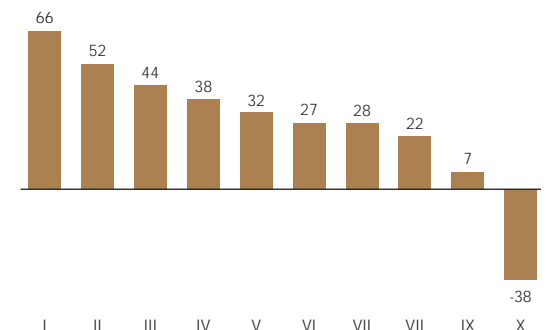
Source: BBVA Bacomer with ENIGH data

“Housing Deficit” Adjusted by Household Income and Economies of Scale by Population Decile
 Pesos, monthly

	2002	2004	2005	2006	% tot. income
I	1,571	2,185	4,051	2,771	256.6%
II	2,287	1,618	2,768	2,261	124.0%
III	2,042	1,585	2,184	1,948	81.4%
IV	1,658	1,438	1,859	1,854	63.0%
V	1,708	1,242	1,205	1,991	56.1%
VI	1,330	1,221	1,140	1,574	37.0%
VII	1,368	1,186	1,216	1,727	33.6%
VIII	1,165	1,094	1,095	1,225	19.2%
IX	471	365	319	226	2.6%
X	-1,897	-1,624	-1,788	-2,056	-10.2%
Avg.	1,170	1,031	1,405	1,352	23.9%

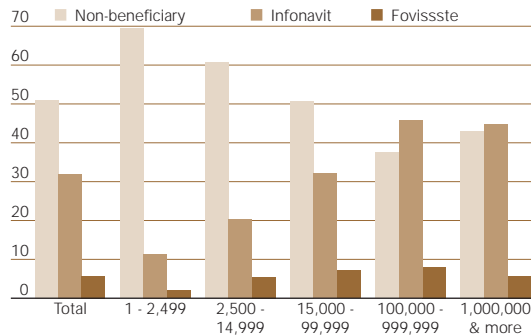
Source: BBVA Bancomer

“Housing Deficit” Equivalent to Working Days Paid at Monthly Minimum Wage
 Number of working days, 2000-2006



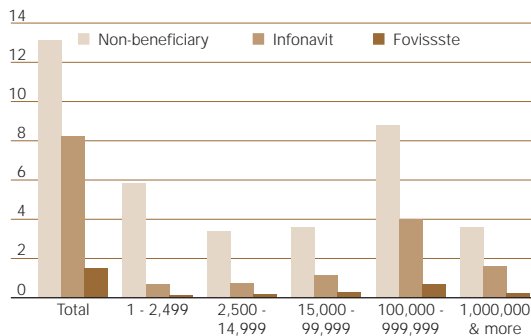
Source: BBVA Bancomer with ENIGH data

“Housing Deficit” by Infonavit and Fovissste Beneficiaries by Region % of local population



Source: BBVA Bancomer with INEGI data

“Housing Deficit” by Infonavit and Fovissste Beneficiaries by Region Millions of housing units



Source: BBVA Bancomer with INEGI data

“Housing Deficit” by Infonavit and Fovissste Beneficiary Units

	Non-beneficiary	%	Infonavit	Fovissste
Total	13,103,711	51.0%	8,215,009	1,480,443
Inhabitants				
1 - 2,499	5,845,514	69.5%	702,050	121,602
2,500 - 14,999	3,384,240	60.8%	726,028	195,086
15,000 - 99,999	3,589,948	50.7%	1,152,026	255,148
100,000 - 999,999	8,802,854	37.5%	4,020,436	703,235
1,000,000 & more	3,601,842	43.0%	1,614,468	205,371

Source: BBVA Bancomer

e) “Housing deficit by affiliation rights in social security: 50% of the population is not affiliated to this service

The following definition corresponds to the status of the population that is not affiliated in the social security program and, therefore, has no affiliation rights of housing financing by public mortgage organizations. This is called “deficit due to benefit rights” of the “National Housing Fund Institute” (Infonavit for its Spanish initials) and the Housing Fund of the Social Security Institute for Government Workers (Fovissste for its Spanish initials). In this case, we observe 51.1 million inhabitants, over 50% of the total population that lacks this right and, therefore, has no access to mortgage financing. To enrich this estimate, a classification with a regional criterion was used. This problem is more acute in localities with fewer than 2,500 inhabitants, with 16.5 million that represent 32% of the population with housing deficit due to no rights to the benefits. On the other hand, 42% of employees affiliated to the Infonavit are found in communities with more than 100,000 inhabitants, which represent 15.6 million persons. In the case of Fovissste, it has 2.5 million affiliates that are living in these localities, representing 47% of its affiliates. These conclusions go in the same direction as the regional deficit by type of home, indicated in paragraph “b”. That is, the deficit is concentrated in very scattered areas with a low urban concentration.

The social security mortgage programs show a considerable lag in worker affiliation, which is an institutional barrier to this sectorial problem, suggesting that it is important to link the public social security and housing loan endowment plans with the informal economy. Among various measures, incentives must be generated to increase formal employment and through this, access to housing.

f) “Approximate latent deficit by educational level”: an opportunity for new mortgage instruments

The last definition of housing deficit presented refers to a mixed residential plan between the endowment of human capital and housing. We will call this the “latent housing deficit”. This does not necessarily imply that this population group lacks housing; it is more an approximation of the potential market of the mortgage segment linked to the endowment of higher education.

This indicator is obtained through the sum of the higher education student groups for the range between 21 and 44 years of age. And, additionally, we assume that the formation of households and the education achieved allow them to have access to the real estate housing market. This estimate, as opposed of the previous ones, assumes a household size for two individuals, which we consider to be reasonable as a first stage in forming a family. The latent estimated deficit is equivalent to 2.3 million persons, where 84% is found in the population segment from 25 to 44 years of age and 88% is concentrated among students with 4-5 educational levels, which represent 2 million potential housing units.

The latent deficit shows us the great potential that this market niche of human capital has and the accessibility to housing through the implementation of mortgage instruments linked to this market criterion. The innovation of instruments could be an important detonator of activity and generate greater certainty in investors, promoters

and builders. An instrument with these characteristics has multiple positive effects that tend to extend —spillovers— over to labor productivity of the group with human capital and offers an important space for the development of new residential niches of high added value and wealth generation in emerging families. Similar to this is an additional line in the process of banking coverage to provide access to new homes that can present better levels of housing accessibility.

How to achieve reducing this existing or residual deficit?

This is a complex problem that has to be attended from different facets and with the joint intervention of public housing institutes and of private enterprise. What has to be done in a very simplified and schematic way is to once again boost an improvement in the accessibility to housing on different fronts, both from the aspect of costs —direct and indirect—, and in terms of income or the payment capacity of households and an improvement in mortgage financing programs.

In this context, one of the more evident and immediate measures is the reduction of indirect costs⁶ in its different phases of implementation, land acquisition, urbanization, construction and housing acquisition. This is desirable for all the segments, since it would be a more efficient process, where there would be an improvement in accessibility for low-income families. Another possibility in terms of costs and sustainable development —which has to be analyzed in greater detail— refers to the development of mini-cities, an option which at first Impression could offer the possibility for obtaining several benefits, among them perhaps a reduction in housing costs, In view of a greater production scale and lower land acquisition cost and the possibility of facilitating sustainable development with the environment. In this aspect, the participation of the public sector will be key for the proper stimulus to this type of projects, in such a way that they can be served with sufficient infrastructure coverage that will allow an appropriate connection with working centers under a plan of urban networks between clusters and residential areas.

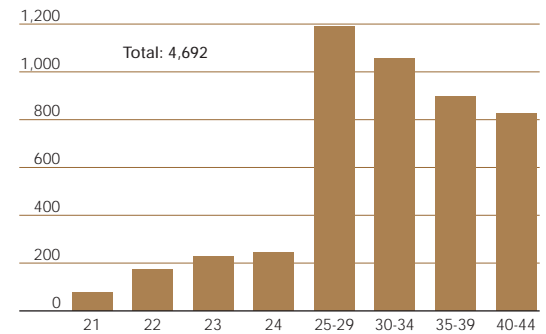
In terms of income or payment capacity, centering attention on poverty areas in terms of subsidies should be mentioned. For example, in rural areas, which grant the equivalent of a down payment, with the rest to be paid by the creditor. Also, this situation points to the need to find new more efficient formulas for help the poorest communities.

In the financial area, there is also room for innovation and development of new financing plans that support the conditioning or improvement, remodeling, or expansion of housing. An example refers to considering the mortgage collateral in a mixed use of the guarantee.⁷ A special case can be the one relative to immigrants. The remittances help mainly for the improvement: maintenance, remodeling and expansion. But, the question that arises is whether

6 See article under indirect costs with approximation to transaction costs of the sector in this edition of *Situación Inmobiliaria (Real Estate Watch)*

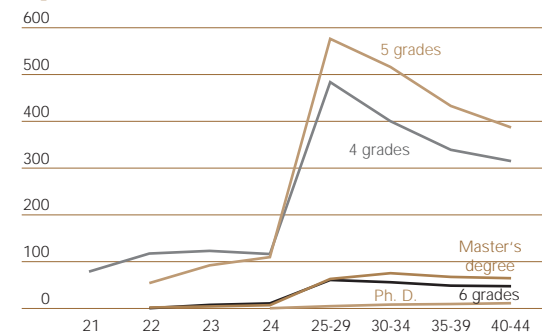
7 The mixed use of mortgage guarantee or collateral refers to the financial use of real estate property for granting one or more loans: that is, in the case of bi-national mortgages, a real estate property in the U.S. could be used as collateral for a mortgage loan in Mexico, or rather, for the case of a mortgage granted for which the guarantee is a real estate property requiring a remodeling process, it would be desirable that the property could act as mortgage collateral of a second mortgage loan.

“Latent Housing Deficit” for Higher Education Population
Population in thousands



Source: BBVA Bancomer

“Latent Housing Deficit” of Higher Education Population between 20 and 44 years of age
Population in thousands



Source: BBVA Bancomer

“Latent Housing Deficit” by Human Capital Endowment*
Thousands of units

Years	Total	%	4 grades	5 grades	6 grades	Masters	Ph. D.
21	39.4	1.7	39.4	0.0	0.0	0.0	0.0
22	87.1	3.7	58.7	27.1	0.3	1.0	0.0
23	113.6	4.8	61.5	46.1	3.8	2.1	0.0
24	122.1	5.2	58.2	54.8	5.4	3.5	0.2
25-29	594.5	25.3	241.9	288.2	30.4	31.5	2.4
30-34	528.0	22.5	200.1	258.1	28.0	37.7	4.1
35-39	448.8	19.1	169.6	216.4	24.4	33.7	4.7
40-44	412.7	17.6	157.5	193.5	23.8	32.3	5.6
Total	2,346.2		986.8	1,084.2	116.1	141.9	17.2

* Human capital endowment refers to the number of grades obtained in the Higher Education level, which goes from 4, 5, 6, Master's Degree and Ph. D.
Source: BBVA Bancomer

these current trends are the most efficient or if plans can be found that would facilitate the acquisition of a new home or a better adaptation of the existing home that would derive in a better alternative: a better quality home that generates a better patrimonial asset for those households.

Finally, we cannot refrain from mentioning, when evaluating an improvement in conditions of accessibility, that which refers to the financial conditions of mortgage loans. If the mortgage rate were to drop 1/2 percentage point, then the price for accessible housing would rise 3%; if the financing term were to be extended from 20 to 30 years, this price would increase 5% and, for a mixed collateral case, with a rate reduction of 1/2 percentage point and a 30-year financing term, the accessible housing price would rise 8%.⁸

Conclusions

According to our estimates, we observe a housing deficit both in terms of remodeling and new housing that is found mainly in urban concentrations of fewer than one million inhabitants —of low urban concentration—, in geographically scattered areas with low-income levels and that have no social security affiliation, which is why, presumably, they are in the informal economies.

The estimates presented on the status of the home deficit is evidence of the lack of a consensus among the participants of the sector with regard to this indicator. They can be approached under different criteria. For example, in home ownership there is a lag in about 14% of the total. The least urbanized areas show the highest level of housing lag and a deficit in residential home use can also be observed. The adjusted deficit for the common use of goods and services in the home should be compensated to horizontally equalize the needs in housing services and be able to reduce the deficit. Also, the equivalence of the deficit in working days is evidence of an important lag, 28 days on average, at a national level to obtain a zero spread in the provision of housing services. Then too, around 50% of the population has no social security benefits, which represents 3.6 million units and is an approximate indicator of the deficit. Finally, there are still opportunities for the implementation of new mortgage instruments linked to residential-educational niches for the formation of emerging households and that are suitable for their introduction in the labor market.

This situation makes it necessary to attend the housing deficit with specific measures and instruments. In this context, the comprehensive solution to this problem is a long-term effort that requires, first, generating a consensus and the necessary information, not only among the participants in the housing sector but that it must also go further toward improving the accessibility levels that imply a boost to the labor market, both in creating jobs and in fostering productivity and, therefore, higher wages.

Secondly, policies derived from these estimates must be consistent with long-term projects, an orderly and focused application of subsidies, more efficient and economic building technologies that protect

⁸ Due to the existing conditions in the international financial markets and inflationary pressure, this option does not seem feasible in the short term.

the environment and are sustainable, without forgetting the needs and preferences of the population. Also, the housing deficit must be one of the priorities in the design of mortgage instruments and urban development plans. This criterion will gradually allow improving the efficiency of the housing market and correcting the systemic imbalances of the sector, such as oversupply or restrictions to the payment capacity of households.

A consensual definition of the housing deficit is vital for sending signals to the participants in the sector regarding long-term objectives as well as correcting the imbalances and lags of the market: it should be mentioned that making public this estimate with greater periodicity would allow adjusting the objectives, forecasts and goals of public organizations with greater speed and efficiency. A more consistent estimate of more frequent diffusion would be a very useful tool to accelerate the adjustment of institutional mechanisms in the current model of real estate management and promotion in Mexico.

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Government Housing Subsidies Reduce the Deficit and Improve Accessibility for the Low-Income Strata of the Population

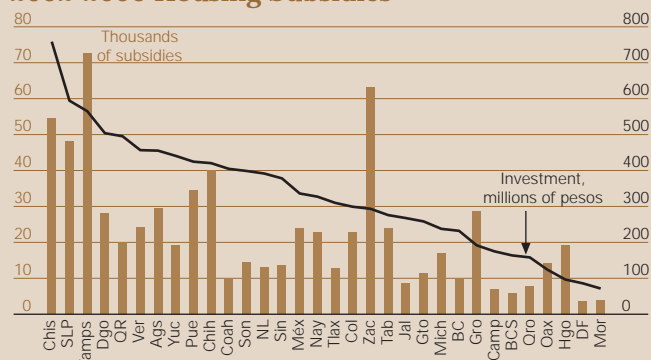
Given the imbalances and the restricted payment capacity of those holding mortgage loans, with a market characterized by limited employment and weak growth, transfers to low-income families are the main support mechanism to achieve an improvement in their ability to access housing and thus boost coverage of an important part of the remaining housing deficit. The current administration's subsidy policies are directed toward subsidies on the demand side, and are known as "direct or up front" subsidies. They involve government transfers to those segments of the population characterized as having low-income levels or a weak credit history, which prevents them from obtaining a mortgage loan from a commercial bank. The subsidies are applied to the down payment for home acquisition, remodeling, or improvement.¹ This is preferable to direct financial subsidies² because they introduce greater transparency, are more effective, reduce market distortions, and diminish the "crowding-out" effects toward the private sector. The housing subsidies on the demand side have a dual effect on decreasing the housing deficit as they: a) increase accessibility and b) have a multiplying effect on the market. Both reduce the gap between potential and real demand³, the former because they improve the financial conditions to access a mortgage loan and the latter because those families that are marginally outside the real estate market or face a deficit of housing services, in response to this government support, join the ranks of the mortgage system as clients and users.

The sector's most important subsidy policies and programs are: (1) the "Esta es tu Casa" ("This is Your Home") program of the National Housing Commission (Conavi), whose target group are those earning two times the minimum wage on an individual level and up to four times the minimum wage in combined marital income. (2) the housing subsidy program (Prosavi) of Sociedad Hipotecaria Federal (SHF) (the Federal Mortgage Association), which involves a minimum down payment that fluctuates between 4% and 5% and the financing of loan origination costs for up to 5.4% of the value of the home, and (3) the "Tu Casa" ("Your Home") savings and subsidy program of the National Popular Housing Fund

(Fonhapo), which is aimed at households characterized as experiencing "asset poverty".

For housing subsidy policies to achieve a greater impact, their coverage should be increased in the lower-income strata of the population located in localities with a high degree of household formation and a housing deficit, so that the multiplying effect in the market indeed materializes. In this context, to have an "adequate" directional reference point for the subsidies during the current housing cycle (2002-07) we prepared two exercises. In the first, we compare the gap between potential and real demand with the accumulated amount of the subsidy. In the second exercise, we use the poverty index prepared by the National Population Council (Conapo) corresponding to 2006 and we compare it with the subsidy.

2002-2006 Housing Subsidies



Source: BBVA Bancomer with Conavi data

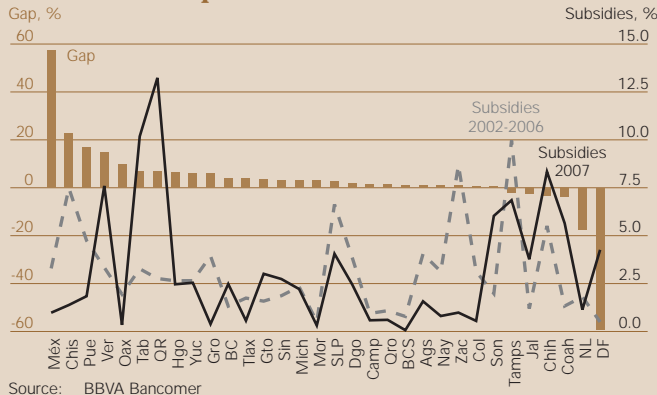
For the 2001-06 period, according to data from Conavi, the sector's most recent expansive cycle, 1.4 million subsidies were granted involving 17.9 billion pesos. It should be mentioned that the states with a greater potential demand received a larger number of federal subsidies. For example, Chiapas accounts for 7% of the investment and the 10 states with a highest number of transfers represent 52% of the investment exercised for this period. The results for 2007 indicate that 117,000 subsidies were allocated, involving 3.6 billion pesos. It should be mentioned that the average subsidy was for 31,000 pesos.

For the relation between subsidies and the gap between potential and real demand, it should be noted that the correlation is uneven, while it should be positive. That is, for those states with a larger gap between potential and real demand, a greater amount of subsidies should be allocated. For example, the state of Mexico has a demand

1 The rental housing market does not have a defined subsidy policy that would guarantee a minimum level of consumption of housing services or encourage a more rapid transition toward a home ownership market.
 2 The subsidy at the traditional mortgage loan interest rate has a problem of transferring prices to the final user, which is reflected in a real subsidy to housing developers and not to the final consumers, through bridge loans.
 3 See "Situación Inmobiliaria México" ("Real Estate Watch Mexico") (Sept. 2007), which explains and estimates the real demand for housing on a state level.

differential of close to 60% and it only represents 4% of the investment in subsidies, while Tamaulipas has a marginal surplus and a subsidy allocation of around 10%.

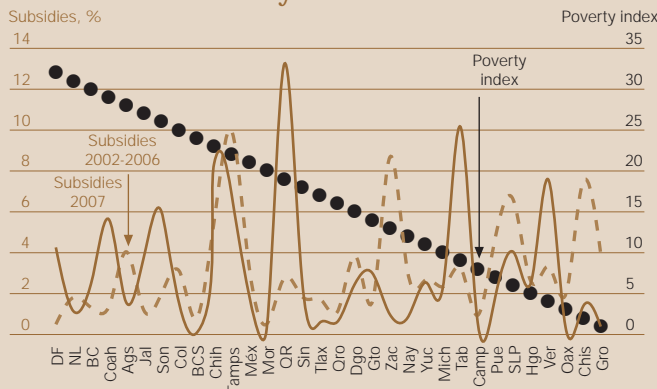
Subsidies & Gap Between Potential and Real Demand



Source: BBVA Bancomer

If we evaluate the subsidies and the poverty index, we also see an uneven correlation in which the state with the highest level of poverty does not necessarily receive the greatest amount of subsidies. For example, Guerrero, which is the state with the highest degree of poverty, receives 4% of the investment in subsidies, and the Federal District, with the lowest poverty level, receives the least amount of subsidy allocation at around 0.5%.

Subsidies and Poverty Index



Source: BBVA Bancomer

In terms of the current administration's outlook, the National Housing Plan contemplates three scenarios that

range from 2.3 million to 4.0 million subsidies involving resources of 45 billion to 75 billion pesos earmarked for improvement and the acquisition of land with minimum housing services, without the need to resort to the informal market, irregular housing construction or homes in high-risk areas, with inadequate construction materials or that represent a threat to health, well-being, and safety.

Finally, the structure of housing subsidies earmarked for the lower-income strata of the population should accelerate the transition from the rental market or from homes in very bad conditions that need to be replaced toward property subject to rental with an option to buy. In addition, there are mechanisms such as "housing vouchers", as in the case of the Section 8 program in the United States⁴ that finances around 30% of the rental for low-income families and households or those living in poverty, whose feasibility and application in Mexico could be analyzed.

Toward greater accessibility to housing

Housing subsidies are the most effective transfers to households to improve accessibility to housing for low-income families and particularly for the poorest strata of the population. The distribution breakdown by state is lower than 10% and there is still unevenness, in which the degree of poverty or the real deficit in demand does not necessarily correspond to criteria for the allocation of such subsidies. Reducing the housing deficit should be considered as one of the goals of the sector's public policies and a consensus should be achieved on the best methodology and the estimate that is the most consistent with the "reality" of the market.

Leonardo González leonardo.gonzalez@bbva.bancomer.com

4 The housing vouchers are direct subsidies to demand, which guarantee a minimum level of consumption of housing services and that encourage investment in the housing market. Housing vouchers increase the viability of home acquisition for low-income families. It should be emphasized that this program could deepen the penetration of financial instruments for home acquisition for the lower-income strata of the population that use housing services in the rental market. The housing vouchers guarantee rent payments and diminish the risks of losing financial collateral corresponding to the housing purchase agreement.

Introduction

Since 2002, the housing market in Mexico has experienced a very positive cycle of growth and expansion. The bases have been set for long-term development based on institutional reforms in the sector and a favorable macroeconomic context that has led to an abundant supply of credit. To sustain these trends, challenges must be faced, one being to continue improving housing accessibility. In the recent cycle, the way to improve accessibility has been mainly by improving the financial indicators: interest rates have dropped to historically reduced levels and financing terms have been extended. However, space for improvement in this area is limited; other areas must be explored that will allow renewed enhancement of the accessibility indexes. In general, it is necessary to induce institutional changes that will encourage the reduction of housing construction costs, both direct, because of their importance, which is beginning to become a limiting factor for expanding more economic housing, and indirect costs, such as land subdivision and urbanization expenses.

Housing construction costs are a strategic variable that will help to reduce the remaining housing deficit and to alleviate the adverse prevailing situation derived from the macroeconomic slowdown. They are a corner stone to boost a new urban model in which the main criteria that will facilitate better quality housing and the capitalization of the surplus value of these assets are better and more timely statistics, the deepening of the secondary mortgage market, the development of necessary and complementary infrastructure to housing growth, growth of intermediate cities and fomenting environmentally friendly sustainable housing.

The analysis of indirect costs is a subject that also stands within the framework of the public finances of local governments; that is, the federalist system of the country. This is where the autonomy and sovereignty of the states and municipalities allow considering local management models in housing that are independent among themselves, although, it should be mentioned, with a certain degree of similarity among them.¹ To the extent that this federalist framework is more homogenous —both in its regulations and in its costs— we observe more efficient tax collection that could generate a more neutral investment trend, since, for the agents, the location of the new developments will be indistinct from the standpoint of indirect costs. Costs could also be reduced —for example, with regard to learning, just as much for the regulators, as for the developers— when government management plans are homogenous among the different localities. Also, additional benefits could be obtained, such as a more accelerated convergence at a national level with the indirect costs target.

In this context, this article will analyze indirect housing costs as a first approximation toward the study of transaction costs. In the first section, we specifically define what indirect costs are. Later,

¹ To the extent that there are greater differences among the local public finance models, we will have a more complex plan at the national level, both for construction and, possibly, for housing sales in the country.

we present the historic trend and its analysis by phase, in line with the government classification. We mention the implications of the federalist model of the local governments in the indirect costs of housing acquisition, to finally, conclude with a brief evaluation of the topic. This article is situated within the framework of a series of future studies where the objective is an in-depth analysis of the importance and scope of the transaction costs of the housing market in Mexico.

Indirect Costs through the Theoretical Focus of Transaction Costs

The transaction costs model¹ is defined with the objective of solving the “bottlenecks” of the housing market and of facilitating a better operation of the sector, with an emphasis on providing accessibility to the low-income population. Shlomo Angel (2000) has developed a theoretical-applied framework of housing policy for the World Bank where the need to boost the creation of markets linked to the housing sector is considered to improve its development. This approach is formulated in terms of a series of political measures to provide capacity incentives to private agents. The essence of this proposal lies in the development of the direct supply of land for housing that will allow eliminating restrictions in the activity of the private market and integrate sector dynamics with the general development of the macro economy. Specifically, the “facilitating” strategy proposes the development of property rights. This is an approximation to the indirect costs as a partial and approximate definition of the transaction costs² in the housing market.

In this approach, the following topics are inter-related: regulation, updating the value and ownership of real

estate, modernizing the public registry systems, and providing legal certainty. It is also intended to delve deeper into mortgage financing by granting loans at a market rate, to rationalize subsidies, to provide urban infrastructure for construction, to reform construction and urban planning regulations simultaneously to stimulate greater private activity, to eliminate regulatory barriers to improve the institutional framework for management of the housing sector. Even though the emphasis in these studies lies in the development of private activity, the criterion of providing adequate and sustainable housing for low-income or impoverished human settlements³ has also been incorporated.

In Mexico, the housing policies that must be applied for the development of this market are the coordinated objective of the agents participating in this sector: homes, promoters, government, commercial banks and Sofoles. To mention just some of the actions, the strategic aspects of the sector that must be considered include the endowment of land supply and of urban infrastructure to accelerate the generation of increased value or appreciation, to design incentives that will legalize housing for the population in the informal sector, to reinforce the legal framework that will improve the security of home tenure; to implement policies of financial guarantees that will mitigate systemic risk; to improve financial accessibility through an in-depth study of the coverage process of banking services, to regulate land use so as to avoid undue use and disorderly growth of cities, to promote information niches that will improve decision-making of the final users, etc.

Leonardo González leonardo.gonzalez@bbva.bancomer.com

1 The economic theory on transaction costs (Williamson, 2005) explains the institutional framework that allows completing a transaction of a good or service. The objective of this approach is to allow that transactions are carried out minimizing the costs implied in realizing them, under three distinct possible plans: market, hybrid and hierarchical. On the other hand, within the basic framework of this theory, there are three important attributes: asset specificity, uncertainty and the frequency under which each transaction operates.

2 See OECD Economic Outlook (2004), Chapter IV (Housing markets, wealth and the business cycle) where it is explained that transaction costs differ considerably which is why their respective estimates, although available from different sources, are not comparable and are usually limited to a reduced number of countries. According to the Danish Business Ministry, it is shown that these costs are higher in the countries of Continental Europe than in the Nordic countries. Although limited by the size of the sample, which makes it difficult to show the relationship between transaction costs in housing and housing/consumption correlation prices, the hypothesis is maintained that in the face of higher costs, real-estate assets are relatively less liquid.

3 The Istanbul declaration and the Habitat II Agenda (1996).

**Housing Acquisition:
Tariffs: Taxes and Fees**

Phase	
Phase I	1 Real Estate Appraisal
Land Acquisition	2 Certificate of freedom from encumbrances
	3 Notary fees
	4 Property tax
	5 Deed registration in the Public Property Registry (PPR)
	6 Tax on real estate acquisition
	7 Certificate of property tax indebtedness
	Phase II
Land Division and Urbanization	2 Delineation of boundaries
	3 General sewage network in subdevelopment
	4 Survey & delineation of boundaries
	5 Connection rights of gen. sewage network for subdevelopment
	6 Connection rights for drinking water and drainage of sub-development
	7 License for subdevelopment
	8 License for urbanization works
	Phase III
Construction	2 Home drinking water connection rights
	3 Construction license
Phase IV	1 Real Estate Appraisal
Legal Deed Process	2 Certificate of freedom from encumbrance
	3 Non-ownership certificate
	4 Notary fees
	5 Deed registration in Public Property Registry (PPR)
	6 Registration of Mortgage Loan in Public Property Registry (PPR)
	7 ISAI
	8 Property tax certificate of indebtedness

Source: BBVA Bancomer with Conavi data

What are the Indirect Costs in the Housing Market?²

Indirect costs refer to the expenditures in each of the phases of housing acquisition, and these are classified in four production stages: land acquisition, land subdivision and urbanization, construction and legal title of the home. The estimate model of indirect costs is of a mixed nature under the assumptions of price stability and based on a homogenous sampling plan. The variables considered are land, road system, gutter, sidewalks, and donation areas. These are considered within the cost per square meter for the urbanization and construction phases, and there are also fiscal and tax variables such as the payment of duties for public services and of residential amenities.³ It is important to point out that this plan partially defines the transaction costs of the housing market (see inset on housing transaction costs), in order to consider it in a comprehensive manner, other types of costs should be added such as those generated during the search process by the users, those relative to the pre-sale time and available real-estate information.

According to the federalist model in Mexico, each state has a certain degree of autonomy to define its local tax management model, which is why it should be expected that the costs and procedures for each production phase are different among the different states. For the purpose of this research study, we have considered the tax model for the acquisition of housing in the State of Aguascalientes⁴; which although it is not equivalent or identical to the rest of the states, is similar to the rest. That is, it includes most of the concepts, fees, registries, taxes and tariffs associated with housing acquisition in the country.

The four production phases in housing are: (I) land acquisition; (II) subdivision and urbanization; (III) construction; and (IV) legal title of housing

2 Indirect housing costs are defined within the operating framework of the Housing Sectorial Program, which follows the guidelines of the National Development Plan. The guidelines are defined in a general way as an instrument that measures the economic development of the sector and specifically refers to the concepts of lower taxes, less housing regulation and its regulatory framework. The target set in the productivity program of the housing sector is that these commercial costs do not surpass 4% of the total value of the home. It should be mentioned that the mechanism or assumptions that define this target range of the model are not explicit and, therefore, this goal should be better defined methodologically. In a strict sense, the direct costs are the evaluation and design of the executive plan, the cost of the land and the materials and labor in the urbanization and construction process. In addition to these, the indirect costs include the work licenses and permits, taxes and duties, as well as notary expenses (negotiation and administration, marketing and sales, and financial expenses). These define the total housing cost—(see the National Indirect Cost System of the National Housing Commission—(Conavi for its Spanish initials). Indirect housing costs have their reference regulatory framework in the three levels of government. In the federal area these are legislated in the General Law for Human Settlements: For state jurisdiction, we have the Law for Human Settlements and Urban Development: the Sub-Divisions Regulation, the Construction Regulation, the State Revenue Law, the State Treasury Law, and the agreements on Notary Fees. Finally, in the local governments there are a series of three main regulatory frameworks: the Municipal Revenue Law, the Municipal Treasury Law and the Municipal Code. In these, the drainage, drinking water and electricity connection fees are set.

3 The specific application of this model is a vertical multi-family low-income housing condominium, on rugged land located on urbanized towns, with a price equivalent to 15 minimum wages (m, w).

4 The local tax model for housing acquisition of the state of Aguascalientes was selected, because it includes most of the taxes, fees and tariffs in housing acquisition compared to the rest of the states. According to the criteria of local sovereignty, each state has the autonomy to legislate housing acquisition under its local criteria. The case of this state is similar to 80%-85% of the rest of the states, which is why we can use it as the reference base to conduct a comparative analysis among the states for indirect housing acquisition costs.

What has been the historical trend in indirect housing costs?

As commented at the beginning, this study is an initial approximation toward housing transaction costs in Mexico. In order to carry it out, we have used available public information sources, with the most important being the National System of Indirect Costs in Housing Acquisition (Conavi for, Sistema Nacional de Costos Indirectos de Adquisición de Vivienda). This is the main source of information that includes these items by state. It should be noted that in an ideal situation, this information should be arranged in terms of qualitative criteria and tax collection efficiency, as well as its statistical methods made public in greater detail and instill greater trust in the gathering of information and the quality of the figures. In any case, it is the best approximation on the subject: and it is a valuable reference, which is why we decided to make use of it.

Since 1992, the national average of indirect costs has shown a downward trend. It stood at 12%, and is currently at 4.41%, marginally above the target⁵ of 4% of the commercial value. It should be mentioned, that, for the recent expansion cycle (2002-2008), most of the states (20) have an indirect cost of the commercial value below the national average. The state with the worse standing is Morelos, at 9%, and the best positioned is the Federal District (Mexico City) with 2.58% of the commercial value.

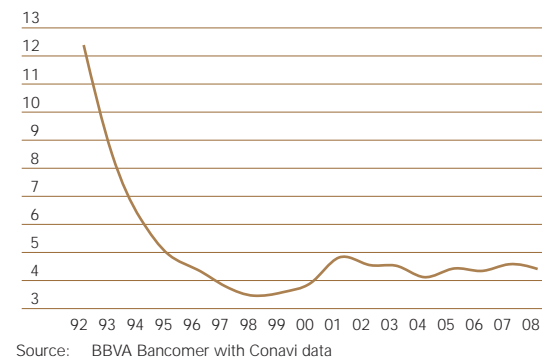
When analyzing these indicators by phases, based on two transversal cuts, the first for 2002-08 and the second for 2008, we observe a marginal improvement in the total indirect cost. While the former represented 4.61% of the commercial value, it is now 4.41% this year. The phase for processing legal title has diminished its share of total indirect costs significantly, from almost 50% to 45%. Secondly, the land subdivision and urbanization phase has been reduced marginally and stands at around 25%. The rest of the phases have risen: for example, construction has increased its share 2 percentage points to stand at 19%, and finally, land acquisition has also shown a rise and is close to 10%, while in the 2002-08 period it was 8.58%.

If we consider the last expansion cycle of the sector, that is, the phases of the National Indirect Costs System for the 2002-08 cycle, we note that it has also been favorable for the trend. Relative to land acquisition, this heading has shown an average of 0.4% of the commercial value, with the best positioned state being the State of Mexico, at below 0.2%, and the state with the highest level being Hidalgo, at over 1%. For land subdivision and urbanization costs, the average is 1.21%, in which the state with the highest level is Aguascalientes, at close to 3%, and the one with the lowest level is Campeche at 0.40%.

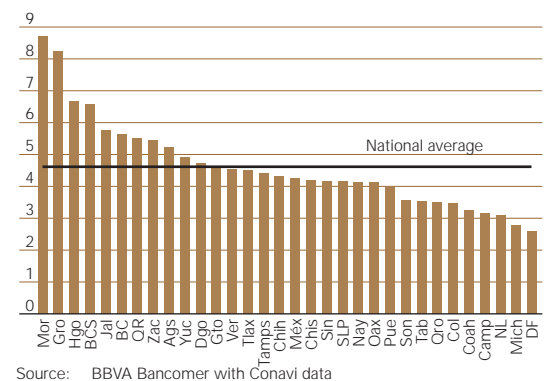
The construction phase shows a 0.73% level for 2002-08, in which the state with the worse showing is Baja California Sur (2.2% of the commercial value) and the one with the best level is Tabasco, at close to 0.15%. The legal title processing phase is slightly over 2% of the commercial value, while the state with the highest level is Guerrero with 5.65%, and the Federal District is at the 1% level.

⁵ The indirect costs target of 4% of the housing value was set in the Productivity Program of the Housing Sector. This has not been defined methodologically in the estimate model of these costs, not even explicitly the estimate method for each state.

Evolution of Indirect Costs National average in housing acquisition, % of commercial value



Indirect Housing Acquisition Costs by State Average 2002-2008, % of commercial value

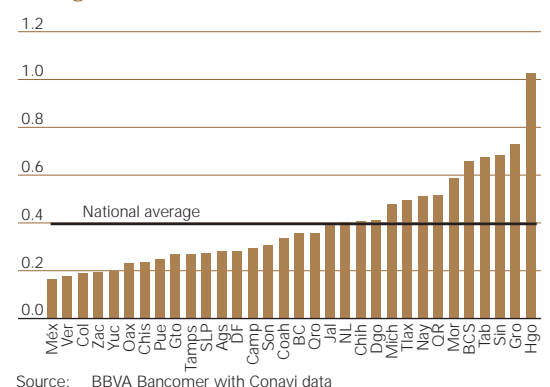


Indirect Housing Costs by Phases % of commercial value

	2002-08 % share		2008 % share	
Total (2002-2008)	4.61		4.41	
Land acquisition	0.40	8.58	0.44	9.98
Land subdivision and urbanization	1.21	26.30	1.13	25.62
Construction	0.73	15.86	0.83	18.82
Legal deed of housing	2.27	49.25	2.02	45.80

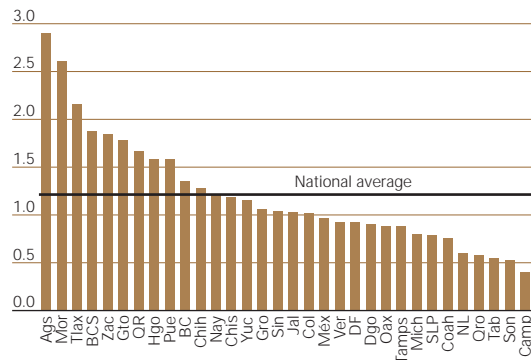
Source: BBVA Bancomer with Conavi data

Indirect Costs of Land Acquisition Average 2002-2008, % of commercial value



Land Subdivision and Urbanization Indirect Costs

Average 2002-2008, % of commercial value



Source: BBVA Bancomer with Conavi data

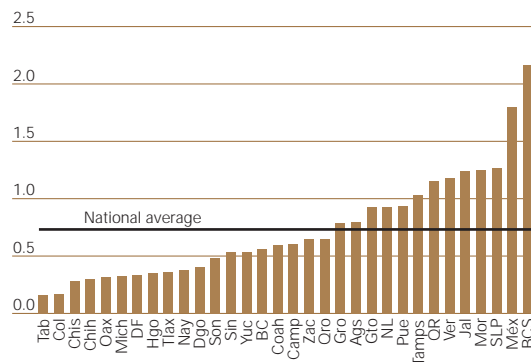
To summarize, based on this Information, the best positioned state in terms of indirect costs is the Federal District, where indirect costs are lower in all phases compared to the national average. The state with the highest level of indirect costs is Morelos, because it has the most expensive land subdivision and urbanization phase of the country. Should the trend observed since the nineties continue, it would be logical to expect that the official target for this indicator could feasibly be reached. Nevertheless, given that the regional differences are important, it could be possible to consider the possibility of defining indirect cost levels for each one of the states and for each phase of acquisition in order to accelerate convergence at the national level.

Local federalism: it should converge toward a homogeneous model of rules, not necessarily the same costs.

Local governments, states and municipalities are governed by a federal framework that defines their autonomy and, therefore, it proposes a federalist system of a regional nature different in each particular case. In an ideal scenario, it should be perfectly homogeneous in its regulation, not necessarily in its costs, because the equivalence in each model of local public finances would bring with it multiple benefits and considerable transparency for the system as a whole. A better legal framework for housing production and acquisition should be stable and equivalent in each state. For example, if an investor or a home purchaser faces a different process in each jurisdiction, then we observe that the realization of his projects and housing developments, as well as population migration, in different locations, is quite limited. Whereas a system of homogeneous rules at a national level would allow reducing the costs of learning, specializing in business models and would facilitate the residential mobility of the population.

Indirect Construction Costs

Average 2002-2008, % of commercial value



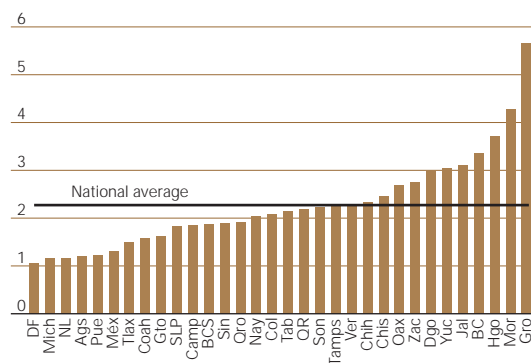
Source: BBVA Bancomer with Conavi data

In the structure of indirect costs per production phase, agent (promoter and purchaser) and tax collection jurisdiction (state and municipality) from 2004 to the present year, we can observe a proportionally stable participation throughout time in each approximation of the system. In terms of the distribution of costs among promoters and purchasers, it is approximately 50% for each of them. And, in tax collection⁶ we observe that the state has 21%, the municipalities over 50%, and others 24%.

Indirect Costs in

Legal Ownership Deed of Housing

Average 2002-2008, % of commercial value



Source: BBVA Bancomer with Conavi data

Now, we comment on an additional level of desegregation of each phase of indirect costs, where we present the main taxes, fees and tariffs for each of these during 2007. In land acquisition for construction, the tax on the acquisition of real estate is the main source of tax revenue for the local governments, at about 1.6% of the commercial value, and in the worse position is the appraisal of real estate with a value lower than 0.2%. For land subdivision and urbanization, the fee for surveying and setting of boundaries for the value and ownership

⁶ For example, the total indirect costs during 2007 came to P\$23.4 million with an average collection by state of P\$731,000. The state with the highest level of tax collection was Jalisco with P\$1.2 million and the one with the lowest level of tax collection was Nuevo Leon with P\$360,000. In the specific case of land acquisition, expenses totaled P\$2.4 million, with an average level of P\$73,887 per state. The total costs for land subdivision and urbanization were almost P\$6 million with an average level per state of P\$181,000. In the case of construction, the total cost was P\$3.9 million with average indirect expenses of P\$117,000 per state. And, lastly, the housing licensing costs were P\$11 million with an average level of P\$333,000 pesos.

of real estate, is the main source of tax revenue, at about 2.5%, and the registry of alignment and official number is under 0.5%, standing as the registry with the lowest taxing capacity. In the case of construction, the payment of connection rights for drinking water in homes is the main tax charge at a level of around 3.5%. And, for processing legal title, the main indirect cost is the notary fee with a value of about 7%, followed in second place by the tax on Real Estate Acquisition (ISAI for its Spanish initials) at 4% of the commercial value; and lastly we have the certificate of no property tax debt with a value of 0.14% of the commercial value.

It should be mentioned that the tax collection level in indirect costs is relatively low and, in some cases, there is zero collection of some fees and taxes (i.e. certificate free of encumbrance or registration of the title deed in the Public Registry of Property), in particular, if purchased with the activity level observed since 2002. If we were to evaluate the states in each one of their production phases, we would find that 30% of the states show a high cost in at least three of its phases of housing acquisition, 50% in two and 30% in only one.

In addition to the characteristic of the federalist system of the local governments, in terms of the infrastructure endowment, the supply of public goods and accessibility of government services, there is an ample margin to consolidate a system of indirect costs that is even more stable and equivalent over time among the states. Investment in infrastructure allows consolidating the regional model of each state or federal entity, since this is a strategic public investment. The land subdivision and urbanization phase is amply correlated with the public investment program of the housing market, where we find precisely that there is a higher degree of differentiation among local public finances and also indirect costs are higher than the rest of the phases in housing acquisition. The strategy of the present administration, based on the National Infrastructure Plan offers a great opportunity for introducing institutional and legal reforms necessary to consolidate equivalence among states and municipalities. This is a gradual process, notwithstanding the fact that convergence toward a homogenous regulatory model is a priority that could also facilitate achieving the 4% target of indirect costs and, consequently, spark greater fixed investment in regional public works.

On one hand, the acquisition of territorial reserves model by the main developers of the sector is an important variable for transaction costs in housing acquisition. This has been a strategy that has generated greater profitability, synergies and economies of scale in this housing business model and, therefore, it has consolidated as a "long-term growth formula" of the main housing promotion firms. From the federalism standpoint⁷, this situation is a dilemma for autonomy and the search for a more efficient model of public administration of the local governments, since they should endow additional residential infrastructure to other projects and productive investment rates (i.e. clusters, education, health, transportation etc.), which generates pres-

7 There are still problems in the institutional plans for housing acquisition: in the daily reality of real estate transactions there are still transfers outside the law, with implications for the level of wellbeing of the population and the efficiency of real-estate projects. These must be eliminated from the dynamics and operation of the residential sector. The delays in the development of real estate projects, the diffused signals in the investment decisions or the complexity in obtaining information for real estate acquisition are due, to a large extent, to the presence of some rather unclear rules for their operation.

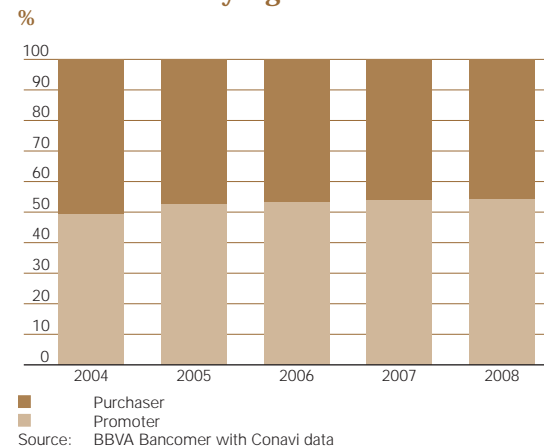
Indirect Housing Costs

Average 2002-2008; % of commercial value

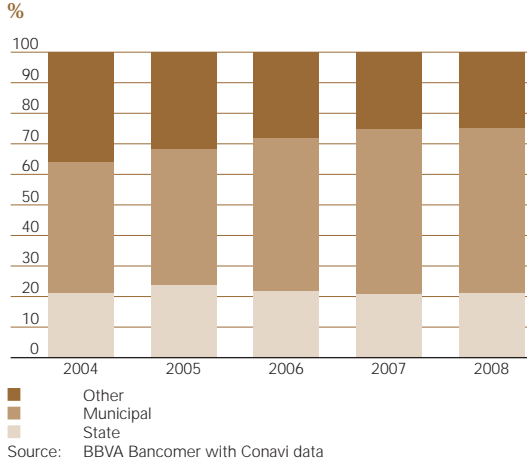
	Phases				Total
	I	II	III	IV	
Morelos	0.59	2.61	1.25	4.27	8.71
Guerrero	0.73	1.06	0.78	5.65	8.22
Hidalgo	1.03	1.58	0.35	3.71	6.67
Baja California Sur	0.66	1.88	2.16	1.88	6.57
Jalisco	0.39	1.03	1.24	3.10	5.76
Baja California	0.36	1.35	0.56	3.36	5.63
Quintana Roo	0.52	1.67	1.15	2.18	5.52
Zacatecas	0.20	1.85	0.64	2.76	5.45
Aguascalientes	0.28	2.90	0.80	1.21	5.18
Yucatán	0.20	1.15	0.54	3.04	4.92
Durango	0.41	0.91	0.40	3.01	4.73
Guanajuato	0.27	1.78	0.92	1.63	4.60
Veracruz	0.18	0.93	1.18	2.25	4.54
Tlaxcala	0.50	2.16	0.36	1.49	4.50
Tamaulipas	0.27	0.88	1.03	2.24	4.42
Chihuahua	0.41	1.28	0.30	2.32	4.31
México	0.17	0.97	1.80	1.31	4.24
Chiapas	0.24	1.19	0.29	2.46	4.18
Sinaloa	0.69	1.04	0.53	1.90	4.15
San Luis Potosí	0.27	0.79	1.26	1.83	4.15
Nayarit	0.51	1.21	0.37	2.04	4.14
Oaxaca	0.23	0.89	0.32	2.70	4.13
Puebla	0.25	1.58	0.94	1.23	3.99
Sonora	0.31	0.53	0.49	2.23	3.56
Tabasco	0.68	0.54	0.16	2.15	3.53
Querétaro	0.36	0.58	0.64	1.92	3.50
Colima	0.19	1.02	0.17	2.08	3.46
Coahuila	0.34	0.76	0.59	1.57	3.25
Campeche	0.29	0.40	0.61	1.85	3.15
Nuevo León	0.41	0.60	0.93	1.17	3.10
Michoacán	0.48	0.81	0.33	1.15	2.76
Distrito Federal	0.28	0.92	0.33	1.05	2.59
National avge.	0.40	1.21	0.73	2.27	4.61

Phase I Land acquisition
 Phase II Land subdivision and urbanization
 Phase III Construction
 Phase IV Legal title of housing
 Source: BBVA Bancomer with Conavi data

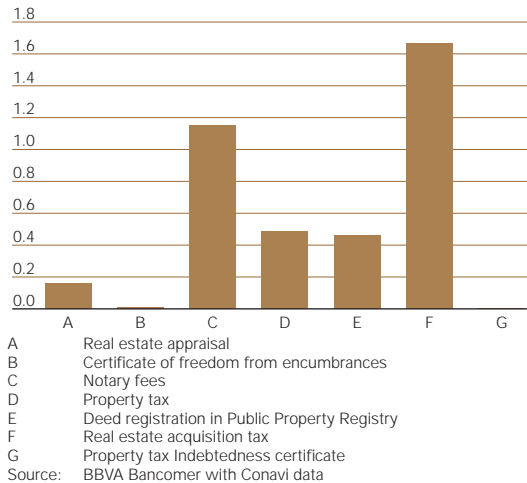
Indirect Costs by Agent



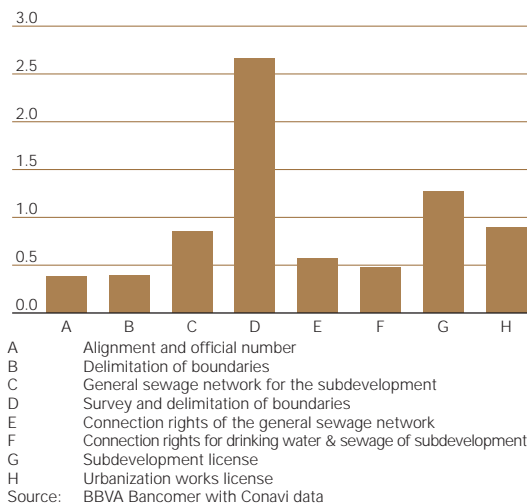
Indirect Costs by Tax Collector



Taxes on Property Acquisition 2007, % of commercial value



Land Subdivision and Urbanization Taxes 2007, % of commercial value



sure on local finances and in the speed of infrastructure endowment. In face of these limitations, it is necessary to explore the advantages of a federalist system, which although more homogenous, is also more sustainable and with a better transaction cost plan through compliance with the indirect costs target in housing acquisition for each of the states and municipalities of the country, which allows strengthening its benefits.

In synthesis, the role that some indirect and transaction costs of a lower level must play favors the elimination of these frictions of the institutional model, since they would introduce greater transparency, better sustainability of residential investments, and a greater integration of the sector with the rest of the local and regional economies.

Conclusions: Mexico should head toward a federalist model

Mexico's case is characterized by presenting multiple restrictions on the housing market due to the existence of diverse restrictions and costs, which implies a weak integration of industry with the rest of the sectors, impairing potential growth in the sector. In this article, we have analyzed, as a first approximation of a general nature, the transaction costs. It is recommended that the agents of the sector improve their degree of coordination in decision-making, in such a way that the regulatory frameworks are established or improved through a comprehensive plan of steps that will allow accelerating market growth, offer better guarantees and eliminate "bottlenecks". One of them, among the most important to be reviewed, refers to providing the supply of urbanized land that is appropriate for housing.

The institutional framework, under which housing market transactions are conducted in Mexico, should encourage even more private activity of the sector with a greater availability of information and a coordinated strategy, so as to minimize the costs associated with real estate transactions. Nevertheless, the trend of indirect housing costs is diminishing and is standing at a level close to the target of 4% of the commercial value. It should be mentioned that this indicator is still a partial approximation of the transaction costs of the market. There are also important differences, since the nature of these costs is linked to the federalist system and tax collection of the local and municipal governments.

In this sense, some necessary recommendations should be mentioned in order to achieve the goal set for this program.

a) A simplified administrative model should be defined in such a way that it integrates the tax and fiscal quotas in housing acquisition through a lower number of transactions and negotiations in each of the housing acquisition phases.

b) It is also necessary to homogenize the federalist "fiscal-taxation" framework; that is, given that each state has an independent taxation model, it makes the migration of companies among the various market places more difficult for the rest of the states. In its case, a homogenous or standard framework would define a simpler and more operational plan for real estate promoters and constructors.

c) It is important to evaluate the effects of lower tax and tariff collection of indirect costs. Given the evidence presented, there are transactions and taxes with very low collection. This situation is unjustified given the construction rate that has been observed in the sector. This is why it is necessary to implement programs that make the local public finances plan of the housing sector more efficient, thereby facilitating the development of infrastructure.

The main housing promoter firms, through their land reserves, are strategic agents in the local economic development model of each state. Also, the firms will define the model for residential growth in the medium term of the locations where they have acquired land for housing. These, in turn, play an important role with the government as to the endowment of infrastructure to urbanize rugged ground and provide public goods and residential amenities that detonate the accumulation process of increased value in each locality.

Finally, in face of the question, "How to reduce indirect acquisition costs in housing?" we proposed the following points of interest. First, from a methodological standpoint, if we incorporate the indirect costs model within a more general estimation framework in which we also consider the costs of search, information collateral payments to the institutional system and those generated by the regulatory framework, then we would observe a more realistic estimate of indirect costs and would achieve an approximation toward the estimate of transaction costs in housing acquisition in Mexico.

Lowering these costs is desirable in view of greater encouragement of the integration of the housing market with the rest of the industries and sectors of each local economy. That is, to the extent that this sector is found more closely integrated and with better regulation, then the transaction costs of each acquisition phase would be better identified, boosting the effort to reduce them. Also, in cases in which a real estate transaction generates a series of transactions in other related branches, these would also face transaction costs linked to each residential acquisition. Therefore, an efficient estimate of these costs would have multiple positive effects —spillovers— on the rest of purchase-sale transactions of inputs for price formation and development of the housing sector.

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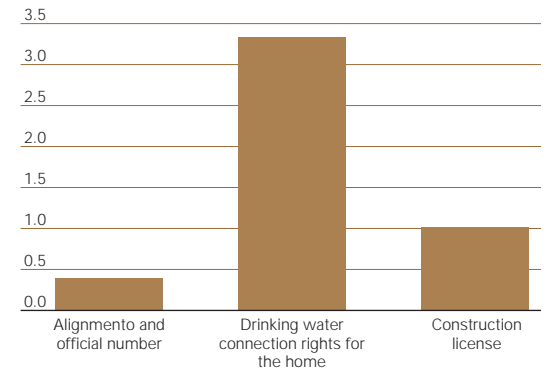
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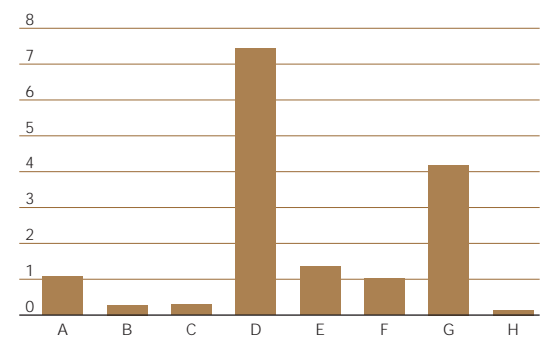
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**Construction Taxes
2007, % of commercial value**



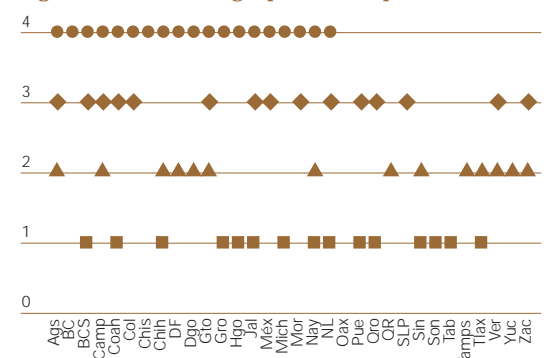
Source: BBVA Bancomer with Conavi data

**Taxes on Legal Title of Housing
2007, % of commercial value**



A Real estate appraisal
 B Certificate of freedom from encumbrances
 C Certificate of non-ownership of property
 D Notary Fees
 E Registration of deed in Public Property Registry
 F Registration of Mortgage Loan in Public Property Registry
 G ISAI
 H Certificate of property tax indebtedness
 Source: BBVA Bancomer with Conavi data

**States with High Indirect
Costs per Phase
Higher than the average, production phases**



Source: BBVA Bancomer

Mortgage Securitization Market in Mexico¹

Introduction

The purpose of this article is to analyze whether the subprime crisis in the United States has had any impact on the securitization market in Mexico. With this in mind, we will describe the macroeconomic and institutional changes that allowed for the growth and development of the mortgage market in Mexico, and led to the emergence of the secondary market (i.e., mortgage securitization). Despite the fact that it is still a small market, securitizations have grown dynamically in the past few years and have an enormous potential. It is of key importance that this rhythm of expansion be maintained, since securitization will tend to be an increasingly important source of financing for the sector, given the limitations that will be imposed on demand for housing and mortgage loans by bank balances.

1. Development and evolution

1.1 Changes that allowed for the development of the secondary market

To generate the conditions for a secondary mortgage market in Mexico, a series of obstacles first had to be overcome that prevented the growth and development of the primary market following the 1995 crisis. The high inflation rates and the financial uncertainty prevented loans from being granted at fixed interest rates and for long terms. Since then, the economic cycles in Mexico have been more stable—longer expansions and softer recessions—and they have been characterized by disinflation, with low and stable inflation rates being reached in the past few years. As a result, interest rates have been characterized by a downtrend. Economic stability is the main fundamental on which the growth and development of the primary mortgage market in Mexico rests. On the one hand, an increasingly larger number of families can have access to a mortgage loan and buy a home, leading to an increase in demand. On the other hand, Infonavit, the Sofoles, and the banks had an adequate legal framework and incentives to grant mortgages at fixed interest rates and at increasingly longer terms.

At the same time, the absence of clients' credit histories prevented estimations of risk and probabilities of defaults on unpaid loans. The lack of complete credit records created difficulties not only in estimating the probabilities of defaults by those seeking credit, but also estimates of advance payments. The credit bureau was thus created, which also functioned as a mechanism to share clients' credit information, and with which decisions on granting loans could be made. In addition, there was a high degree of uncertainty concerning the duration and the final results of efforts to recover collateral, namely the real estate involved, on mortgage loans. Granting mortgages in Mexico required a considerable amount of time, as processing the documentation could take up to five months, and the order for the home sale could take up to two years. In 2000, changes were made to the General Law on Credit Instruments and Operations, which managed to shorten these timeframes.² The changes in leg-

¹ Mortgage backed debt securities.

² The Miscellaneous Provisions on Secured Lending was amended, which modified different laws and legal dispositions to allow for a more easy recovery of consumer credit collateral.

islation in that year introduced a new instrument into the market—the “stock certificates”—which were sufficiently flexible to be used as a securitization vehicle. Since then, trust funds were also allowed to function as a securitization vehicle, and investors in them were guaranteed the rights on the loan collateral. In addition, the processes of executing mortgages were simplified in the case of the trusts, because the latter’s administrators have the right to sell the loan collateral in a public auction without the need of engaging in a legal process. Nevertheless, even then the debtors were not responsible for the remaining amount of the loan in case the guarantee—the property—was sold for less than the amount owed. In 2003, additional changes were made to the Miscellaneous Provisions on Secured Lending³, with which borrowers are from that point on responsible for the full payment of the debt.

Once these obstacles were overcome, there were others that prevented the development of the secondary mortgage market through securitization (Inset 1). Until the creation of Sociedad Hipotecaria Federal (SHF) in 2001⁴, there was no institution that directed and supervised the standards of the loans to be securitized. In addition, mortgage loans were not standardized. Each bank offered its own credit terms, which made it impossible to bring mortgages together and securitize them. In 2003, additional changes in legislation⁵ established standardized financial clauses for all loan agreements that required that their information appear in a standard format that would allow making comparisons between different loan agreements.

1.2 The secondary market: learning from the international experience

As in the United States, the secondary mortgage market in Mexico was launched with the support of government initiatives. However, Mexico moved away from the U.S. model in which Fannie Mae and Freddie Mac buy mortgages from the loan originators who fulfill certain standards and bring them together to use them in their mortgage backed securities whose yields are paid with the loan amortizations. In Mexico, the loan originators directly place their portfolios in the market and they benefit from the credit enhancements that the SHF has provided (Inset 2), the purpose of which is to facilitate the operations of the secondary market. The use of these credit enhancements allows improving the ratings of the securitizations. Recently, private companies such as Genworth and AIG, among others, have provided credit enhancements such as SHF does. The development of the mortgage securitization market has enabled some Sofoles to independently securitize their credit portfolios and/or act as securitization vehicles buying loan portfolios from other smaller Sofoles with the aim of securitizing them jointly.

Some characteristics of the Danish model have attracted special attention in Mexico. The most important characteristic of this model is the high liquidity of the secondary market. The securities issues are

Inset 1. Securitizations

Main Characteristics

Mortgage securitization is a technique that allows loan originators to obtain funding in the market and transfer the credit risk inherent to a group of mortgages. In a securitization transaction, the loan originator sells its mortgage loan portfolios to a securitization vehicle. The securitization vehicle issues securities representative of the rights on the yields that the transferred mortgages generate. The flow generated by the interest and the payment of the principal of the mortgage loans is used to pay the yield on the mortgage-backed securities, and the mortgages act as the collateral. An efficient mortgage securitization requires that: 1.- the group of loans to be securitized have uniform characteristics (including credit terms, documentation, credit quality, and historical performance); and 2.- the procedures for executing mortgages should be rapid and of low cost. In addition, the mortgages should be completely transferable, since the securitization vehicle should acquire all the rights on the flows derived from the mortgage loans and its rights on the collateral should prevail over any other.

Main Benefits

Mortgage securitization allows loan originators to immediately obtain the current value of the flows that the loans generate. Therefore, the operation generates funding for new lending activities. The greater turnover of assets that is obtained allows them to generate additional loans. Securitization is one of the most efficient mechanisms to obtain resources that allow loan originators to grant more loans. In addition, when removing the mortgages from their balance, the loan originators diversify their credit and market risk. As a result, once the mortgages are removed from the balance of the loan originators, the capital requirements—by regulation—diminish. Securitization allows not very liquid assets (mortgages) to be transformed into negotiable financial instruments that can be traded in the stock markets.

Source: BBVA Bancomer

³ Among other positive aspects, the timeframes for legal proceedings were shortened and the certainty of recovering the total amount of the loan increased (previously, only the amount that was covered by the collateral was retrieved).

⁴ Created for the purpose of promoting the development of the primary and secondary mortgage market. SHF has established minimum guidelines for the placement and management of mortgage loans.

⁵ Law on Transparency and the Fostering of Competition in Guaranteed Loans.

Inset 2. SHF Collateral Program

Collateral for Creditors

The SHF provides Mortgage Loan Insurance or Guarantee for Default (GPI, its Spanish initials), which covers up to 35 percent (of the remaining balance, plus interest) in first loss for each mortgage loan, when six consecutive months of default have transpired and the loan is in the process of recovery. The cost of the GPI is paid by the debtor, through financial intermediaries. A Mortgage Insurance Policy (GPI) insures the creditor for up to 70% of the remaining balance of the mortgage loan, plus interest.

Credit Enhancements for Issuers

The Partial Financial Guarantees or Guarantee of On-Time Payment (GPO for its Spanish initials) are designed to provide security for the on-time payment of the principal and interest for up to 85% of the remaining balance and interest for those loan portfolios that fulfill certain requirements (nevertheless, the maximum protection acquired thus far by any institution has been 25%). If the trust does not have sufficient liquidity for a payment, a line of credit can be obtained to pay the interest and the principal. Once this line of credit is paid, it can be obtained again if so required.

To qualify for SHF support, the mortgage loans have to be originated with specific requirements—among others, debt to income ratio (DTI), loan to value ratio (LTV), type of property and value, and reports of financial intermediaries—. If a loan does not fulfill the requested criteria, the trust will have to reimburse the SHF for any payment that the guarantee may have made for that loan.

Source: BBVA Bancomer

highly liquid because the loan portfolios offer uniform characteristics, such as coupons, amortization rate, and loan-to-value (LTV) ratio. The securitization issue, placement and sale is made through the Danish Central Securities Depository (VP). In this sense, in Mexico, in order to supplement the development of efficient mechanisms of portfolio aggregation for the purpose of facilitating securitization on the part of small and medium creditors, with the participation of SHF, Hipotecaria Total (HiTo) was created, which contributes to the liquidity of the market and expedites the marketing of the bond issues. HiTo will provide the market with a platform that will allow the connection between the origination of mortgage loans and the capital market; i.e., Mortgage-Backed Bonds (Bohris) can be issued from the moment the mortgage loan is granted.

VP has taken charge of the development of HiTo and its technological platform. Many benefits are expected, among them: a) a reduction in the time between the placement and the securitization of the loans, reducing costs and risks, b) direct and continuous access for those granting credit to the capital market, c) greater participation of small and medium-size issuers, d) larger issues (which will help the market's depth and liquidity), and e) disclosing the interest rate at the moment at which the loan portfolio is securitized, thereby eliminating the market risk that issuers face due to the time that transpires between the offering date of the loans and their securitization, which can take up to 28 months. The SHF, which was created with the objective of developing the secondary mortgage market in Mexico, is gradually relinquishing its role as an institution that grants credit to the Sofoles, in order to concentrate on supporting financial entities in the placement of Bohris directly in the capital market. Nevertheless, recently, in response to the impact of the subprime crisis on the liquidity of the securitization market in Mexico, SHF opened up alternative short-term financing mechanisms.⁶ HiTo will help to speed up the securitization process, which will allow for greater depth and liquidity in the market.

2. The mortgage-backed bond market in Mexico: differences in characteristics of the securitized loans, Bohris vs. subprime

The current mortgage and financial crisis in the United States, whose main detonator was the subprime real estate market, has sparked concern among investors over the conditions and characteristics of the mortgage securitization market in Mexico. In point of fact, we are dealing with two markets with different dimensions, ranging from the percentage share that mortgage securitization represents within the total number of securities in local currency in circulation—around 15.0% in the United States and 1.8% in Mexico—to the degree of liquidity and maturity of the markets.

It is precisely the recent development of the Mexican securitization market, which is organized and based on strict rules, that, in our opin-

⁶ Press release dated February 28, 2008: SHF reaffirms its commitment to provide liquidity to the home financing market in Mexico. "SHF has opened up alternative short-term financing mechanisms to specifically address the problem of liquidity in the mortgage debt markets. These mechanisms involve financing for portfolio purchases, both individual as well as construction, through special purpose vehicles whose characteristics are consistent with the structured transactions that are currently offered in the market (v.g. high credit rating, standard criteria for portfolio eligibility, portfolio diversification, etc.). This financing will represent a temporary bridge loan so that the collateral can be sold through open market transactions."

ion, sustains the strength of this nascent market in the country. The origin of securitizations coincides with the growth of the real estate market, whose rise in the past few years is far from being classified as a “boom.” The growing availability of mortgage loans—and with more reasonable terms, i.e., longer maturities, lower interest rates, lower down payments—has spurred the real estate sector in Mexico. However, it is a market that is growing at reasonable and sustainable rhythms—at rates barely above GDP growth, and without important imbalances, i.e., without excess of supply or demand—, contrary to the situation in the United States, in which excessively relaxed credit standards—adjustable interest rates, the possibility of zero down payments, not having to furnish proof of income, etc—generated excess demand in the market—in which clients were purchasing beyond their possibilities, causing a growing imbalance—which led to an unsustainable dynamism in the growth of housing prices. Thus, while the rise in housing prices in the United States was above 100% for the 1Q00 - 2Q06 period, in Mexico, the increase was close to 40%, that is, a level very similar to accumulated inflation during the same timeframe (37%). In Mexico, demand continues to grow at a slightly higher rhythm than supply, and in a context of a housing deficit and strong potential demand. In synthesis, it would be very difficult for the Mexican market to display imbalances comparable to those that occurred in the United States.

The mortgage securitization model in Mexico is based on a conservative format, characteristic of a nascent market, in which the originators have securitized solid portfolios, with high quality loans that protect investors: at fixed rates, all the loans being for first home purchases, to clients with a good credit record, a debt to income ratio (DTI) no greater than 33%, loan to value (LTV) no higher than 90%, loans with mortgage insurance. In addition, no contract is established on credits that have more than three overdue payments. All of this contrasts with the very lax standards—due to perverse incentives⁷—with which subprime mortgages were granted in the United States. It did not matter whether or not the loan was for a first home, most of the loans had variable interest rates, such financing could be obtained without the need to document a client’s income level, it was not necessary that he or she had a good credit history, and/or provide a down payment, there was no maximum limit in LTV, and DTI was of no importance.

An enormous difference exists between the securitization markets of Mexico and the United States—which even makes them not comparable—and it is important to explain in detail the excesses incurred by those involved in the securitization chain of the mortgage loan portfolio in the United States. All involved in the chain had “perverse incentives” and what is known in economics as the “Principle-Agent Problem” was created. The loan originators entered into a “moral risk” situation. They knew that they could earn high returns if the high risk loans were paid and they would only assume a fraction of the losses if the opposite occurred—by packaging and selling them they only retained a small percentage of the risk of default on the loans—. Thus, they had few incentives to carefully choose who to grant a mortgage loan to, since they knew that they would not retain

Differences in Characteristics of Securitized Loans

	Bohris (Mexico)	Subprime (U.S.)
Credit standards	Strict	Excessively relaxed
Origination	Good standards, loans only to those with a good credit history; generally for the first home	Origination policies excessively lax; little or poor credit history; possibility of obtaining credit without documenting proof of income levels (close to half of the loans)
Management	Management not separate from origination	Management separate from origination
Credit history; documentation of income levels	Complete and good credit history; proof of income levels necessary	Little or poor credit history; it was possible to obtain credit without documenting proof of income levels
Debt to income ratio (DTI) and loan to value ratio (LTV)	Adequate ratios	Loans with little or no down payment, therefore LTV ratios close to 100% (and greater than 100% with the subsequent fall in prices) and high DTI ratios (and at unpayable levels for many borrowers with the adjustment in rates)
Interest rates	Fixed	Most of the mortgage loans with variable rates, which are strongly adjusted upwardly after the first two years of the loan

Source: BBVA Bancomer with Conavi data

⁷ In economics, we speak of “perverse incentives”, when they function contrary to how they should.

the risk, but that they would keep the earnings for placing the loans. The excess liquidity, the low spreads, and the search for unusually high yields were increasingly more decisive—indirectly—in credit standards. As part of the chain, the rating agencies, which also had perverse incentives, have also been criticized. It has been argued that they very easily assigned “AAA” ratings to structured products (e.g. CDOs). The excessive relaxation in credit standards also generated another problem, namely, “adverse selection” i.e., a group of clients was attracted that implied greater risks. Those who had a greater likelihood of not being able to pay their mortgage loans were those who had more incentives to demand this type of subprime credit with such lax standards. As the loan originators incurred in high fixed costs—due to the high number of employees—the business depended on the amount of loans that were placed and not their quality—since they did not retain the risk—. This resulted in an ever increasing number of loans continuing to be generated that the investment banks later packaged and for which strong investor demand already existed. Thus, all the participants in the chain continued to be encouraged, with increasingly lax standards.

As part of the relaxation of credit standards, one factor was key, namely, adjustable interest rates. The subprime mortgage loans were granted with abnormally low introductory interest rates (teasers) that allowed for very low payments in the initial years of the loan, as a rule the first two years. These introductory rates generated two problems that increased the risks of default. On the one hand, they motivated many families to borrow beyond their possibilities—the initial payments were low and they could cover them—and, on the other, in most of the cases, the initial payments—before the interest rates were adjusted upward—did not even cover the interest on the loan, which increased the principal—the debt—. When the initial period was over, the payments were adjusted due to the higher interest rates and because the amount owed had grown during the first two years. This could imply monthly installments between two and three times higher than the initial payments.

At the end of the real estate boom in the United States, housing prices began to decline. This was coupled with a situation in which in the great majority of the cases, subprime loan holders owed more than 90% of the value of the property, and many even owed more than its value, which generates incentives to lose the property, through failure to pay the mortgage. In addition, since the monthly installments on the mortgage tripled, for a large percentage of borrowers it was impossible to continue paying. Thus, defaults on subprime mortgage loans abruptly began to grow. What is cause for concern is that it continues to be more likely than the situation will worsen before it improves. On the one hand, loans under lax standards (i.e., the riskiest) were granted during 2006; at the end of the real estate boom, their interest rates are being adjusted this year. The result will be that the default rates will surely increase further. On the other hand, with housing demand falling and an excess of supply in the market, home prices could diminish abruptly. Furthermore, the restriction of credit standards could lead to a greater weakness in demand—and an increase in excess supply—, which would cause a bigger slump in prices. In other words, the value of the collateral on subprime mortgage loans will surely diminish and at the same time, the default rate will continue growing, as the riskiest loans see their interest rates adjusted upwardly.

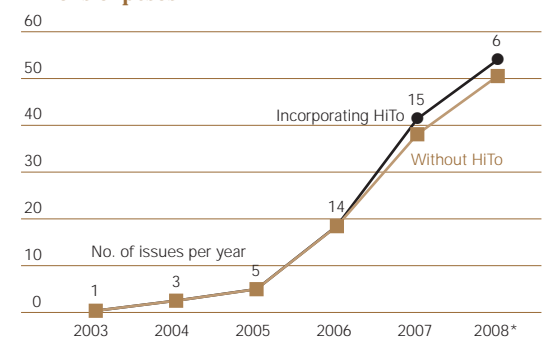
To summarize, neither the real estate nor the mortgage securitization markets in Mexico have common characteristics with those of the United States. They are different markets that cannot be compared. The key factors that generated the subprime crisis are simply not present in the Mexican mortgage-backed bond market. The Mexican market is being favored by a greater institutional backing, with strict rules as well as a slower but more organized development, and in an environment marked by growth of the sector that is still in line with the country's economic structure and dynamics. That is, we are dealing with a growing market but without pressures or imbalances. These characteristics will have to remain in effect in order to avoid excesses, such as occurred in the U.S. market. Future risks will depend on the solid regulatory structure not losing strength and continuing, as has been the case up to now, to promote the liquidity and orderly and sustainable development of the market. In addition, lessons were learned from the subprime crisis that should not be forgotten: a) reasonable and conservative origination standards should be maintained; b) mortgages loans should only be granted to those clients who can provide proof of their income levels and who have a good credit history; c) all loans should only be granted to those who give a down payment; and d) both those granting as well as those obtaining the mortgage loan should have an economic interest at stake, to avoid incentives to default (debtor) or not care what happens with the credit (creditor).

3. Effects of the subprime crisis on the mortgage-backed bond market in Mexico

As of the summer of 2007, when the subprime crisis began in the United States, investors have been concerned over the quality of mortgage-backed bonds in Mexico, the spill-over effect from the greater risk aversion, and their isolation from the U.S. subprime market. Although the factors that led to the destabilization of the securitization market in the United States are not present in the Mexican market, investor concern has not been absent. The effects in Mexico can be measured in quantity and price. In terms of quantity, the placement of mortgage backed bonds has remained strong and dynamic since the summer of 2007, despite the greater risk aversion. In the case of prices, the greater risk aversion has, in fact, generated an uptrend in the spreads of these bonds.

Since 2003, some mortgage Sofoles—with the support of the SHF—have securitized mortgage loan portfolios. As of 2006, banks also began to issue Bohris. In the first three years of the market—from 2003 to 2005—there were only nine issues. In the fourth year (2006), the number of issues increased significantly, from three on average from 2003-2005 to 14. However, the average amounts of these offerings, although they increased, did not do so very significantly, growing from 689 million to 893 million pesos. In 2007, the number of issues increased marginally (to 15), but the average amount rose significantly (to almost 1.50 billion pesos). But, what has occurred in the past 12 months i.e., since the beginning of the subprime crisis in the United States? It is clear that the crisis in the U.S. has had an effect. Indeed, the rhythm of mortgage-backed securities issues has diminished by 42% compared to the 12 previous months (from 19 to 11). Given the lower number of issues, it could be concluded that with market conditions becoming more complicated, it has become more difficult for the banks and Sofoles to place their mortgage portfolios. However, although the number of issues has diminished, the average amount per issue has more than doubled. The average amount of the 11 placements made in the past few months

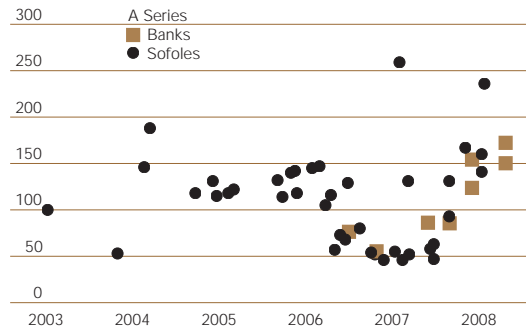
Real Unpaid Amount of Outstanding Bohris Billions of pesos



* Figures through July
Source: BBVA Bancomer

Yield Spread between Bohris and Government Bonds

Basis points



Source: BBVA Bancomer

(almost 2.155 billion pesos) is 103.3% higher than that of the 19 offerings made during the 12 previous months (1.06 billion pesos). Thus, although the number of issues has dropped precipitously, their average amount has increased significantly, which suggests that the loan originators with better loan quality have not had liquidity problems.

What about the price effect? The appropriate structure and the positive functioning of the Bohris market in Mexico by increasing liquidity had allowed for a decline in the spreads in average yields between Bohris and government securities. This spread declined from 190 bp on average at the close of 2004 to 100 bp at the end of 2006. However, since 2H07 i.e., as of the beginning of the subprime crisis, the spreads have shown a clear upward trend (see charts). On average, the yield spread between A series Bohris and government bonds has increased by about one third in the past 12 months, while in the case of the B series Bohris its growth has been less pronounced (around 20%). This suggests that the spreads on securitized bonds in their A series were very low, and are adjusting to levels that are more consistent with greater risk aversion in the financial markets. The spreads on B series securitized bonds was already high: in the 12 months prior to the subprime crisis; they were almost three times those of the A series bonds. Thus, the increase in the spreads on Bohris is the clearest and most important effect of the impact of the U.S. subprime crisis on the Mexican securitized bond market. Nevertheless, this increase seems to respond to a great extent to the greater risk aversion in the financial markets. At the close of July of this year, the spread on Mexico's country risk (measured by the EMBI+) had grown 34.6% compared to the end of July 2007. That is, it has risen at a level almost identical to that of the increase in the spreads of the Bohris.

This suggests that the greater spreads can largely be attributable to the higher risk aversion in the financial markets, and not to doubts about the quality of the mortgage-backed bonds in Mexico. As long as loan origination is responsible and standards are maintained, the securitization market in Mexico will be able to maintain its dynamism. The mortgage-backed bond issues will be increasingly more important for the growth of the mortgage-loan portfolio, and the characteristics of these securities —good ratings, long terms and high yields—will continue to make them very attractive for institutional investors with long-term investment horizons, especially the Siefores. In conclusion, it is of key importance that the strict standards that up to now have characterized the market be maintained. Only this way, will this increasingly important market be able to continue expanding at a dynamic pace.

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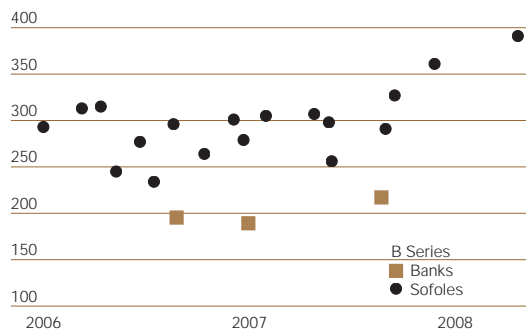
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Yield Spread between Bohris and Government Bonds

Basis points



Source: BBVA Bancomer

Statistical Appendix

Annual Macroeconomic Indicators

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008e
Real GDP ¹										
Annual % change	3.9	6.6	-0.2	0.8	1.3	4.0	3.1	4.9	3.2	2.3
Real Private Consumption										
Annual % change	4.3	8.2	2.5	1.6	2.2	5.6	4.8	5.6	4.2	2.6
Real Government Consumption										
Annual % change	4.7	2.4	-2.0	-0.3	0.8	-2.8	3.5	0.3	1.0	2.4
Real Investment in Construction (Annual % change)	4.9	6.1	-4.6	3.5	3.2	5.1	2.5	8.0	3.3	1.9
Residential						3.7	2.5	8.9	3.2	1.6
Non-residential						6.1	2.5	7.4	3.3	2.8
Total Private Formal Employment (IMSS) ²										
Average, millions of persons	11,906	12,607	12,541	12,436	12,369	12,506	12,893	13,486	14,046	14,458
Annual % change	5.7	5.9	-0.5	-0.8	-0.5	1.1	3.1	4.6	4.2	2.9
Average Wage for Social Security Contrib. (IMSS)										
Average nominal pesos daily	112.6	129.6	146.2	158.0	168.4	178.6	188.9	198.5	209.2	
Real annual % change	0.7	5.1	6.0	2.9	1.9	1.3	1.7	1.4	1.4	
Real Total Wages (IMSS)										
Annual % change	6.5	11.3	5.5	2.0	1.4	2.5	4.8	6.1	5.6	
General Minimum Wage (daily)										
Nominal Pesos	31.91	35.12	37.57	39.74	41.53	43.30	45.24	47.05	48.88	50.84
Real annual % change	-3.3	0.5	0.6	0.7	0.0	-0.4	0.5	0.4	-0.1	-0.9
Consumer Prices (end of period)										
Annual % change	12.3	9.0	4.4	5.7	4.0	5.2	3.3	4.1	3.8	5.8
28-day TIIE, average (%)	24.1	17.0	12.9	8.2	6.8	7.1	9.6	7.5	7.7	8.3
10-Year Government Bond interest rate (M10)			10.8	10.1	9.0	9.5	9.4	8.4	7.8	8.2

Annual Construction and Housing Indicators

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008e
Real Construction GDP (annual % change)	5.0	4.2	-5.7	2.1	3.3	5.3	2.5	7.9	3.0	1.9
Construction						3.6	0.8	9.4	3.2	
Civil Engineering or Heavy Works Construction						7.8	7.3	6.1	3.5	
Specialized works for construction						10.5	-0.6	2.7	-0.1	
Construction Employment (IMSS)										
Total (average, thousands of persons)	na	933.4	900.5	896.0	907.8	969.4	1,020.1	1,133.1	1,203.4	
Annual % change	na	na	-3.5	-0.5	1.3	6.8	5.2	11.1	6.2	
Hydraulic Cement Production (metric tons)										
Annual % change	3.9	6.0	-4.3	2.4	0.8	4.0	6.8	7.5	1.3	
National Cement Consumption (metric tons)										
Annual % change	2.5	4.6	-5.5	1.2	-0.3	2.9	5.8	6.6	0.4	
Construction Companies ³										
Real production value (annual % change)										
Total			4.7	1.4	11.4	33.9	8.5	29.9	11.1	
Construction			7.9	-3.1	5.0	52.3	13.0	31.5	17.7	
Multi- and single-family housing			18.5	9.8	13.5	74.5	4.6	27.3	23.1	
Of offices and the like			12.7	-16.8	-10.9	-27.9	32.9	20.7	34.8	
Commercial, of services and recreational			10.5	-7.3	-2.3	24.5	97.3	38.2	5.4	
Industrial in general			1.0	-24.5	-21.1	38.2	45.2	45.7	22.2	
Others			-11.1	-7.2	10.7	39.8	-26.8	33.3	0.3	
Public works			-0.7	11.1	16.4	24.2	4.7	32.2	5.2	
Others			11.3	-12.1	15.7	10.6	3.7	13.3	2.4	
Residential Construction Prices (end of period)										
General (annual % change)	14.4	7.6	3.5	3.5	6.9	12.2	-0.4	8.5	3.0	
Construction Material (annual % change)	15.4	6.9	2.2	2.7	7.2	14.8	-1.6	10.0	2.6	
Labor (annual % change)	8.8	11.2	10.1	7.6	5.4	4.4	3.7	4.0	4.4	

na not available
e estimated

1 The INEGI modified its registration methodology in the SCN based on 2003=100. The previous data are under review by the INEGI. Meanwhile, they are presented based on 1993=100

2 The IMSS modified its methodology to register the number of affiliated workers. As of 2003, said modification is reflected. The previous data are under review by the IMSS itself.

3 Considers the affiliated and non-affiliated firms with the Mexican Chamber of the Construction Industry.

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

Annual Housing Market Indicators

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 ^H
Housing Sales (thousands of units)											
Total	155.3	242.0	282.2	253.2	343.6	400.5	418.6	554.9	544.4	512.4	293.0
Segment A	73.3	103.3	93.1	63.4	75.6	83.2	94.2	105.3	148.6	124.0	107.7
Segment B	71.4	127.1	172.1	162.2	223.8	259.5	246.4	363.2	285.5	248.4	115.7
Segment C	6.8	7.4	12.0	21.3	34.3	44.2	54.8	58.8	65.5	90.1	41.3
Segment D	2.3	2.2	2.8	3.7	6.4	9.1	13.8	18.9	23.5	28.5	16.1
Segment E	1.6	1.9	2.1	2.6	3.6	4.4	9.4	8.8	21.3	21.3	12.2
Housing Price (thousands of constant pesos*, average)											
Total****	357.9	340.1	358.6	398.9	415.8	425.3	487.0	471.8	557.3	605.4	608.8
Segment A	227.9	225.2	227.1	232.3	218.6	207.9	211.2	216.8	221.1	226.2	217.3
Segment B	317.2	320.6	337.0	328.9	338.8	339.9	345.7	365.0	358.7	361.7	364.2
Segment C	880.5	858.5	758.3	768.0	755.5	766.6	758.0	733.4	744.6	753.7	752.9
Segment D	1,910.5	1,812.3	1,732.3	1,725.3	1,691.2	1,680.0	1,677.2	1,683.6	1,688.6	1,685.7	1,704.5
Segment E	3,678.8	4,160.9	3,908.7	3,908.4	3,833.7	3,520.2	3,639.4	3,595.3	3,742.5	3,576.7	4,454.5
Housing Price per Sq. Mt. (constant pesos*, average)											
Total****	5,076	4,988	5,171	5,336	5,309	5,736	6,042	6,184	6,543	6,726	6,952
Segment A	4,537	4,402	4,404	4,596	4,244	4,506	4,743	5,185	5,316	5,252	5,323
Segment B	5,083	5,093	5,293	5,174	5,113	5,551	5,679	5,866	6,017	6,055	6,266
Segment C	7,298	7,043	6,894	7,080	7,329	7,352	7,635	7,480	7,687	7,726	7,988
Segment D	8,450	10,872	9,501	9,511	9,421	10,327	10,118	10,079	10,315	10,263	11,598
Segment E	15,195	14,894	13,744	13,199	13,232	14,040	13,353	14,256	14,464	14,153	18,192

Annual Housing Financing Indicators

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 ^H
Number of Loans and Subsidies Granted (thousands)											
Total	196.3	279.5	331.9	326.8	400.3	500.7	532.0	525.6	655.5	636.9	317.7
Infonavit	105.6	195.4	250.1	200.5	268.7	291.4	300.8	371.7	418.0	456.0	234.3
Fovissste	15.3	17.9	24.3	26.6	11.1	66.4	59.4	48.7	76.5	70.5	33.3
Fonhapo	5.5	6.4	6.7	21.1	24.1	23.1	31.0	33.0	91.5	35.7	3.5
SHF/Fovi	55.4	59.1	46.7	47.6	46.1	54.2	65.3	54.4	37.1	32.6	15.3
Commercial Banks and Sofoles	2.0	0.8	0.8	3.7	9.7	20.7	37.5	49.0	92.8	191.2	73.5
Others**			3.2	27.3	40.5	44.8	37.9	21.5	17.3	14.4	84.5
Reduction***								-52.8	-77.7	-163.5	-126.6
Financing Flow (billions of pesos*)											
Total	45.4	66.0	84.4	84.3	99.5	140.3	156.0	171.3	229.5	252.2	108.7
Infonavit	26.4	48.4	61.9	50.0	65.6	68.4	69.1	87.5	99.3	106.5	48.1
Fovissste	3.5	4.4	5.0	6.7	4.6	21.4	20.0	17.2	27.3	23.2	10.2
Fonhapo	0.6	0.5	0.8	0.1	1.3	1.4	2.2	1.8	4.1	2.0	0.1
SHF/Fovi	7.6	6.1	9.3	16.7	13.0	17.2	24.0	19.0	12.4	12.0	5.0
Commercial Banks and Sofoles	1.9	0.7	0.9	3.1	7.6	13.2	25.5	45.8	86.5	108.6	41.1
Commercial Banks Current Loan Portfolio											
End of Period Balances (billions of pesos*)	83.7	72.9	66.2	62.6	60.8	65.1	81.3	145.9	212.6	253.5	280.4
Default Index (%)	33.4	22.3	13.7	12.6	11.2	8.4	6.1	3.2	2.9	3.1	

Note: Price ranges expressed in times monthly minimum wage (tmmw)
 Segment A (61-160 tmmw); B (161-300); C (301-750); D (751-1,670) and E (1,671 and more). MMW=1,599.6 pesos in 2008 in zone "A"

* June 2008 pesos

** Fonhapo, Sedesol, state agencies, Banobras, Issfam, Pemex and CFE

*** Refers to financing transactions (loans and subsidies) that are being considered in two or more institutions

**** Weighted price by sales volume

H First half of the year

Source: BBVA Bancomer with Banco de México, Softec, CNBV, and Conavi data

Quarterly Macroeconomic Indicators

	IV'05	I'06	II'06	III'06	IV'06	I'07	II'07	III'07	IV'07	I'08	II'08
Real GDP ¹											
Annual % change	3.5	6.0	5.1	4.9	3.7	2.5	2.6	3.4	4.2	3.3	2.1
Real Private Consumption											
Annual % change	4.5	6.1	5.8	6.1	4.3	4.4	4.2	4.1	4.2	3.7	
Real Government Consumption											
Annual % change	4.9	2.2	1.3	-0.8	-1.3	-0.6	-0.1	1.9	2.7	0.7	
Real Invest. in Const. (ann. % change)	3.0	10.3	7.9	7.3	6.8	6.3	2.1	2.0	3.0	0.2	
Residential	4.1	11.2	8.7	8.4	7.6	6.4	2.1	2.0	2.6	0.4	
Non-Residential	2.2	9.6	7.3	6.5	6.2	6.1	2.1	2.0	3.3	0.1	

Quarterly Construction and Housing Indicators

	IV'05	I'06	II'06	III'06	IV'06	I'07	II'07	III'07	IV'07	I'08	II'08
Real Const. GDP (ann. % change)	2.8	10.1	8.0	7.2	6.2	5.8	1.8	1.7	3.0	-0.1	1.7
Construction	2.8	10.8	9.2	9.2	8.4	6.8	2.1	1.8	2.3	-0.3	1.7
Civil Engineering & Heavy Const.	4.6	10.2	6.2	4.1	4.1	5.4	2.1	2.3	4.2	-0.1	1.6
Special Works for Construction	-2.8	4.7	5.7	2.8	-2.5	-0.2	-1.9	-1.4	3.4	1.4	2.3
Construction Companies ²											
Total	6.8	12.7	29.7	41.8	33.3	24.5	11.0	4.2	8.6	12.1	
Construction	10.5	9.3	27.6	47.4	39.8	31.6	18.1	10.5	14.8	17.5	
Multi- & Single-Family Housing	2.2	2.7	17.7	40.6	46.9	41.1	26.8	17.5	13.7	11.0	
Of offices and the like	112.1	50.5	33.4	38.1	-12.8	8.5	4.1	33.0	90.2	93.3	
Commercial, serv. & entertain.	94.6	20.0	57.8	50.9	26.3	2.8	-16.8	1.9	34.7	58.6	
Industrial in general	33.5	17.6	22.7	77.4	67.6	58.5	50.8	3.8	-5.9	-11.1	
Others	-34.8	8.8	43.0	55.2	24.5	17.3	10.3	-8.2	-11.0	4.4	
Public Works	4.2	18.5	37.7	41.5	30.0	18.9	4.4	-1.4	2.9	6.2	
Others	2.3	6.0	7.7	18.2	18.7	12.4	2.1	-4.2	2.1	7.0	

Housing Market Quarterly Indicators

	IV'05	I'06	II'06	III'06	IV'06	I'07	II'07	III'07	IV'07	I'08	II'08
Average Housing Price (thousands of pesos*, eop)											
Segment A	213.3	214.0	220.1	216.5	216.3	224.9	227.6	218.4	219.9	217.0	219.4
Segment B	358.9	352.1	350.4	349.9	352.0	353.8	364.1	365.6	366.6	367.0	364.6
Segment C	722.6	710.0	729.4	742.2	729.9	746.5	758.3	768.9	752.1	760.2	752.2
Segment D	1,675.3	1,641.4	1,652.2	2,026.8	1,696.7	1,741.9	1,735.5	1,733.5	1,712.2	1,697.3	1,726.5
Segment E	3,832.8	3,863.9	3,939.9	3,938.7	3,940.0	4,005.5	4,313.1	4,361.2	4,433.8	4,437.1	4,510.5
Average Housing Price per Sq. Mt. (pesos*, eop)											
Segment A	5,105	5,086	5,117	5,146	5,209	5,356	5,285	5,322	5,288	5,325	5,368
Segment B	5,777	5,831	5,839	5,922	5,863	5,929	6,093	6,269	6,252	6,294	6,293
Segment C	7,367	7,398	7,508	7,636	7,532	7,665	7,775	7,887	7,801	7,960	8,086
Segment D	10,684	10,760	10,909	10,917	10,856	10,943	11,506	11,651	11,412	11,459	11,836
Segment E	16,135	15,906	16,117	16,416	16,300	16,750	18,471	18,283	18,524	18,163	18,379

Quarterly Housing Financing Indicators

	IV'05	I'06	II'06	III'06	IV'06	I'07	II'07	III'07	IV'07	I'08	II'08
Commercial Banks Current Loan Portfolio											
Default Index (%)	3.2	3.0	2.9	2.8	2.7	3.0	3.1	3.1	3.1	2.9	3.1

1 Base 2003 = 100

2 Considers the affiliated and non-affiliated firms with the Mexican Chamber of the Construction Industry. Real production value, annual % change

Note: Price ranges expressed in times monthly minimum wage (tmmw). Segment A (61-160 tmmw); B (161-300); C (301-750); D (751-1,670) and E (1,671 and more). MMW=1,599.6 pesos in 2008 in zone "A"

* June 2008 pesos

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

Monthly Macroeconomic Indicators

	Sep'07	Oct'07	Nov'07	Dic'07	Ene'08	Feb'08	Mar'08	Abr'08	May'08	Jun'08	Jul'08
GEAI (Global Economic Activity Index)											
Annual % change	2.8	5.0	4.0	3.8	3.8	6.0	-1.6	6.7	1.0	1.1	
Real Construction Volume (annual % change)											
Construction	0.5	4.0	2.3	2.5	1.0	6.1	-6.6	6.6	-1.7	0.8	
Civil Engineering and Heavy Works Construction ¹	0.3	3.1	2.0	1.9	0.3	6.6	-6.8	6.6	-1.4	0.4	
Specialized Construction works	-1.1	3.7	3.1	3.5	2.5	5.2	-3.1	6.5	-1.8	2.7	
Total Private Formal Employment (IMSS)¹											
Total (thousands of persons)	14,208	14,360	14,450	14,100	14,173	14,248	14,253	14,335	14,338	14,390	14,402
Annual % change	3.8	3.9	4.0	3.9	3.6	3.4	2.9	3.0	2.6	2.7	2.3
Average Wage for Social Security Contrib. (IMSS)											
Nominal daily pesos	209.1	207.8	209.2	210.8	217.1	218.6	219.1	218.4	220.8	220.6	
Real annual % change	1.3	1.1	0.9	1.4	0.4	0.6	1.4	0.3	0.3	0.1	
Real Total Wages (IMSS)											
Annual % change	5.1	5.1	4.9	5.4	4.1	4.0	4.4	3.3	3.0	2.7	
General Minimum Wage (daily)											
Nominal Pesos	48.9	48.9	48.9	48.9	50.8	50.8	50.8	50.8	50.8	50.8	50.8
Consumer Prices (end of period)											
Annual % change	3.8	3.7	3.9	3.8	3.7	3.7	4.2	4.5	4.9	5.3	5.4
28-day TIIIE*, average (%)	7.7	7.7	7.9	7.9	7.9	7.9	7.9	7.9	7.9	8.0	8.3
10-Year Government Bonds Interest Rate (M10)	7.9	7.9	7.9	8.1	7.7	7.5	7.7	7.7	7.7	8.3	9.3

Monthly Construction and Housing Indicators

	Sep'07	Oct'07	Nov'07	Dic'07	Ene'08	Feb'08	Mar'08	Abr'08	May'08	Jun'08	Jul'08
Construction Employment (IMSS)											
Total (thousands of persons)	1,241	1,263	1,254	1,137	1,181	1,195	1,185	1,211	1,218	1,230	1,244
Annual % change	4.5	4.8	4.3	3.5	4.2	2.9	1.1	2.2	1.3	0.9	1.1
Hydraulic Cement Production (metric tons)											
Annual % change	4.4	1.8	5.6	5.3	-7.9	8.7	-3.4	9.2	0.8	-4.9	
Cement Consumption per Inhabitant (kg.)²											
Annual % change	3.5	1.0	4.7	4.4	-8.7	7.8	-4.2	8.3	0.0	-5.7	
Residential Construction Prices											
General (annual % change)	1.8	2.7	3.3	3.0	4.1	6.3	7.2	8.7	10.7	11.9	12.7
Materials (annual % change)	1.1	2.2	3.0	2.6	4.2	7.0	8.1	10.3	12.9	14.5	15.7
Labor (annual % change)	4.4	4.2	4.2	4.4	4.1	4.2	4.0	3.8	3.9	3.4	3.3

Housing Financing Monthly Indicators

	Sep'07	Oct'07	Nov'07	Dic'07	Ene'08	Feb'08	Mar'08	Abr'08	May'08	Jun'08	Jul'08
Commercial Banks Current Loan Portfolio											
Balances, billions of pesos*	249.5	248.1	253.5	253.5	260.7	263.7	262.3	265.4	269.9	272.3	275.3
Annual % change	22.3	19.8	22.3	19.3	29.8	23.9	20.2	18.3	18.1	15.9	14.0
Loan Portfolio Sofoles											
Balances, billions of pesos*	71.6	71.3	71.8	73.7	71.4	74.0	73.5	73.0	72.8	73.2	
Annual % change	-29.3	-31.6	-33.2	-30.5	-6.5	-4.5	-4.4	2.8	4.8	3.7	
Average CAT in pesos at a fixed rate	14.77	14.75	14.58	14.17	14.23	14.12	14.11	14.03	14.09	14.16	14.24

¹ The IMSS modified its methodology for registering the number of affiliated workers. As of 2003, said modification is reflected. The previous data are under review by the IMSS itself

² The cement production volume was used as a consumption equivalent

* June 2008 pesos

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

For further information please contact:

Economic Research Department Av. Universidad 1200 Col. Xoco 03339 México D.F. Tel. (52) (55) 5621 5994 Fax (52) (55) 5621 3297 www.bancomer.com

Economic Research Department BBVA Group

Chief Economist

José Luis Escrivá

Unit Heads

North America: Jorge Sicilia
Mexico: Adolfo Albo
United States: Nathaniel Karp

LatAm and Emerging Markets: Alicia García-Herrero
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Quantitative Analysis: Giovanni di Placido
Quantitative Research and Development: Rodolfo Méndez

North America Economic Research Dept.

Jorge Sicilia j.sicilia@bbva.bancomer.com

Mexico

Adolfo Albo a.albo@bbva.bancomer.com
Javier Amador javier.amador@bbva.bancomer.com
David Aylett david.aylett@bbva.bancomer.com
Fernando González f.gonzalez8@bbva.bancomer.com
Leonardo González leonardo.gonzalez@bbva.bancomer.com
Octavio Gutiérrez o.gutierrez3@bbva.bancomer.com
Ociel Hernández o.hernandez@bbva.bancomer.com
Carlos Herrera carlos.herrera@bbva.bancomer.com
Alma Martínez alma.martinez@bbva.bancomer.com
Fco. Javier Morales francisco.morales@bbva.bancomer.com
Cecilia Posadas c.posadas@bbva.bancomer.com
Eduardo Torres e.torres@bbva.bancomer.com

United States

Nathaniel Karp nathaniel.karp@compassbank.com
Marcial Nava marcial.nava@compassbank.com
Ignacio San Martín ignacio.sanmartin@compassbank.com
Fernando Tamayo fernando.tamayo@bbva.bancomer.com
Elisa Sánchez elisa.sanchez@bbva.bancomer.com

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