

Situación

Economic Research Department

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México

Doubts regarding the degree of the slowdown in the U.S. Internal demand main support in Mexico Inflation increasingly more dependent on demand Space for anti-cyclical fiscal and monetary policies Toward monetary relaxation; doubts regarding timing The beginning of the year has brought increasingly more generalized evidence of a deterioration of economic activity in the U.S. In addition to the process of adjustment in the real estate sector, there are negative effects in consumption. What has remained strong is foreign demand and investment tied to this sector. The Federal Reserve has played an active role, injecting liquidity in the system and reducing interest rates. On the fiscal side, a plan has been announced to provide specific stimuli and supports for housing. Overall, the idea is to reduce the risks of a sharp and prolonged slowdown. However, there is great uncertainty regarding the degree and the time of adjustment in the U.S. economy.

In view of this panorama, the Mexican economy is better prepared to soften the effect of lower demand in the U.S. There are fundamental differences compared to the past. First, the importance of internal demand has increased. Macroeconomic stability, the supply of credit, the dynamic of services and housing construction have led to a greater maturity of the domestic market. Second, there is space for applying counter-cyclical measures, both in fiscal and monetary terms. Third, a proportion of Mexican exports to the U.S. are intermediate inputs for U.S. exports to the rest of the world. World economic strength and the weakness of the dollar will continue to spur U.S. exports, and consequently, those of Mexico. Fourth, the oil surpluses could allow maintaining the stimulus of public investment.

In light of the risks of lower activity, concerns regarding inflation have not disappeared but have been reduced. The recent development of inflation has been affected by supply shocks, the result of a global phenomenon stemming from the international markets. These pressures have not altered significantly the process of price formation: long-term inflation expectations remain anchored, while wage reviews have not been altered. Nevertheless, there are doubts regarding the transfer to final prices of the recent tax reform, in particular the IETU (Spanish initials for the new sole rate corporate tax). In this context, there are two demand shocks with positive effects on inflation: the lower activity in the U.S. and the relative strength of the exchange rate. We have observed that demand is playing an increasingly more important role in determining inflation. The perspective of lower growth than the potential will facilitate the convergence of inflation with the target.

A balance of growing risks in activity opens the opportunity for the central bank to relax monetary conditions in the coming months. The magnitude of the reduction would be to move toward neutral levels (6.50-6.75% in bank funding). In the face of a greater deterioration in activity, the margin could be greater. The timing of the drop is uncertain.

Despite the current situation, there are positive elements for reflection. The recent tax reform will permit the greatest historic expense in infrastructure, possibly contributing to productivity, which could raise potential economic growth. Many of the support elements that we observe today have been possible thanks to structural reforms. The effects that could result will be milder than those in the past. There is a lesson, however: it is necessary to continue providing greater flexibility and maneuvering capacity to the economy. The agenda of reforms should not be cast aside in these times. It is necessary to act in a timely and comprehensive manner in order to soften the impact.

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U.S.: Outlook

Scenario of a Moderate Rationing of Credit Real annual % change



U.S. Economic Scenario: Uncertainty regarding the Degree of the Slowdown

The slowdown in the U.S. is generalized; there are downward risks

In the last four quarters, the growth rate of economic activity in the U.S. has decreased noticeably. After an annual GDP growth rate of 2.9% in 2006, expansion was a more moderate 2.2% in 2007. In the same period, moderation in the growth rate of consumption was only 0.2 pp (from 3.1% to 2.9%). The slowdown in the economic growth rate continues to be explained mainly by the adjustment in residential investment, in view of the end of the real-estate boom. Between 4Q05 and 4Q07, residential investment has contracted 28.7%. Nevertheless, GDP data for 4Q07 and timely indicators for 1Q08 point not only to a deepening of the recession in the housing sector, but also to the generalization of the slowdown in other sectors.

Undoubtedly, the crisis in confidence and financial liquidity unleashed in August by the growing non-payment of high-risk (subprime) mortgages and the deepening of the slowdown in the housing sector, are sufficient arguments to expect a considerable slowdown in economic growth in 2008. In fact, timely data have been mostly negative surprises and indicate a marked slowdown in employment, retail sales and in industrial and corporate activity. In this sense, a strong concentrated slowdown in 1H08, with signs of stabilization in the second half of the year, is a highly probable scenario. However, the risks downward have intensified, so that there is also a great probability of a less benign scenario—a credit crunch, with an intense and long-lasting contraction of credit, with real costs for the economy, extending into 2009. In this context, we revised our previsions for economic growth downward. We anticipate that GDP will grow at a lower than the potential rate during 2007-09, and expect that, after 2.2% growth In 2007, activity will slow down In our scenario of a moderate rationing of credit, toward 1.7% in 2008 before recovering softly to reach 2.2% growth In 2009. It should be noted that these forecasts are subject to important and growing risks of downward activity.

The revision downward responds mainly to a slightly more pronounced slowdown in private consumption, as a result of a deeper and longer-lasting adjustment in the real-estate sector, with effects on other components of demand. On the one hand, we anticipate that, in view of the lower demand expected, the corporate sector will restrict capital spending and job creation more than previously foreseen. Consequently, consumption will be affected due to lower growth in the labor market and more moderate increases in real income. Also, the adjustment of the real-estate sector will have second-round effects on families' wealth, (with the gradual drop in housing prices) and confidence. In contrast, we anticipate a favorable performance in external demand. We continue to expect a significant contribution to growth from net exports, derived from the dynamism of the world economy and the weakness of the dollar. To summarize, due to the components of aggregate demand, residential investment will continue to show reduced growth during 2008; consumption will moderate in a more pronounced manner during 2008-09, a period in which it will grow below total economic growth, and non-residential investment will grow only moderately.

Residential Investment has not touched bottom; it will continue to drop

The recent events in the mortgage market—detonated by problems on the subprime mortgage market (see chart)— indicate that the adjustment in the housing sector will be deeper and longer lasting. The excess supply in the real-estate market has begun to be reflected in housing price drops, which, for now, are insufficient to stop the imbalance between supply and demand. Low real interest rates will have a favorable effect on accessibility and, consequently, on demand. Nevertheless, two risks linked to the subprime market seem to be materializing. On one hand, the greater credit restriction is affecting, to a greater extent, the demand for housing, thus extending the adjustment of supply; and, on the other, the rise in foreclosures of homes and the drop in home prices will delay eliminating the excess supply on the market. Therefore, we foresee that residential investment will continue to significantly reduce growth during 2008.

Consumption: more pronounced moderation

Recently the pillars of consumption have been affected, confirming the signals that forewarned the drop in consumer confidence. Employment continues its adjustment and disposable income is beginning to feel the effects. In an environment of loss of confidence and lower expected demand, companies will restrict their investment plans and the employment rate in a greater way, affecting families' consumption even more. The reduction of housing prices will affect families' wealth and confidence and will cause them to gradually increase their savings. In addition, more restrictive credit conditions will affect family spending in view of more limited financing.

Non-residential Investment: modest growth

Although the fundamentals continue solid—1) profits as a percentage of GDP are at historic highs, 2) favorable financial conditions, and 3) strong external demand—, the higher costs and lower growth rate in productivity have reduced the profit margins. Modest growth in capital spending seems to be the most probable option in a context of greater uncertainty and lower expected demand. The downward risks regarding economic growth will affect the confidence of companies, leading to greater caution and a more discreet investment rate. Also, high costs could continue to cause a moderation in the margins. Finally, financial conditions could become less favorable (credit restriction is increasing).

The External Sector: it will contribute but does not compensate

Exports will grow at a higher rate than imports. Both the moderation in imports (due to the lower growth rate in consumption and investment) and a strong expansion in exports (due to strong global demand and favored by the weakness of the dollar) will contribute positively to the growth of net exports.

This scenario of moderate rationing presents important downward risks. The main ones are a credit crunch and a more pronounced

Constructor Confidence



Source: Bloomberg with National Association of Home Builders data

Employment Moderating Annual % change



Source: BBVA with Bureau of Labor Statistics data



Comparison of the Recent Drop in Confidence with Periods Prior to Recessions

Survey	Conference Board	University of Michigan
Change, six months prior		
to recession		
Average*	-14.7	-9.4
Current (Dec. 2007)	-16.7	-12.1
Level, month prior to recess	ion	
Average*	100.8	80.0
Current (Dec. 2007)	88.6	76.1

* Average of recessions of 1980, 1990-91 and 2001 Source: BBVA with Univ. of Michigan and The Conference Board data impact from the correction in the real estate market: a) credit standards could be sharply restricted, and b) housing prices could drop significantly. In this context, the adjustment in employment and in companies' investments could lead to a greater slowdown in consumption, while the greater credit restriction would demand a greater adjustment in savings and, therefore, in consumption. Finally, the economic slowdown in the U.S. could have a more negative impact on world growth, and, consequently, on the demand for exports in that country.

More interest rate reductions

In a context of lower economic growth and the risk of recession, the relaxing of monetary policy is foreseeable. After revaluating the risks—between higher inflation and lower economic growth— the Fed abandoned its restrictive bias during August and, in view of the confidence and financial liquidity crisis, decided to reduce the reference interest rate by 50bp on September 18th, placing it at 4.75%. At each of the meetings in October and December, the Fed cut the rate an additional 25 bp, leaving it at 4.25% at the close of the year. In January, in view of greater concern over the risk of recession, the federal funds rate was reduced 75 bp on the 21st and 50 bp more on the 30th, placing it at 3%. Going forward, the Fed will continue to lower the federal funds rate. It will continue to focus its action on avoiding recession and curbing financial instability.

The most benign scenario for inflation (slowdown) accentuates the process of moderation of core prices. Several factors point to this dynamic. In the first place, inflationary expectations remain anchored and wage growth continues delimited (the recent weakness of the labor market supports the continuation of moderate growth in wages). In the second place, the economic slowdown will significantly reduce pressure now existing in the evolution of unitary labor costs. Finally, rental prices—which explain the acceleration of core inflation during 2006— will stop pressuring upward, due to lower employment generation (which will curb the increase in rents) and within a context in which part of the excess supply in the real estate market will be earmarked for the rental market— leading to a greater moderation in rental increases.

Thus, although our expectation for the course of core prices has not changed, the downward revision in our forecasts for economic growth leads us to anticipate that the moderation of core inflation will accelerate. The possible inflationary pressure derived from the narrowness of the labor and production markets will dissipate to the extent that economic growth, lower than the potential, generates a more negative production gap. In addition, the greater depth now foreseen in the adjustment of the real-estate sector will cause a sharper drop in rental prices, mainly due to excess supply in the market. Although energy prices continue to be high, the lower economic growth rate could cause a gradual decrease in these, which would benefit headline inflation and would allow inflation expectations to remain contained—and even decrease.

As a result, should it consider it necessary, the Federal Reserve, in a context of lower core inflation pressure, would have an additional

margin to relax its monetary policy. In its communication, it has made it clear that its main concern is the risk associated with a possible recession. The adjustment in the mortgage market and the current credit restrictions, together with the disorder in the financial markets are important risks for growth going forward. Considering that it is unlikely that the economy will show signs of recovery in the near future and that credit conditions will improve in the short term, the probability of greater monetary relaxation in the U.S. is quite high. In this sense, in a scenario of a moderate slowdown, the Federal Reserve would lower the federal funds rate to 2.5%; while, at the other extreme, in a credit-crunch scenario, the reduction could be greater.

In conclusion, although there is a clear bias downward regarding the risks in economic growth, and the uncertainty surrounding our forecasts is great-mainly due to uncertainty in the evolution of the credit markets and its impact on the real sector— the most probable scenario is one that is not so unfavorable, where the slowdown that has been going on since 2H06 will continue, prior to a soft and gradual recovery in 2009. The main risk is that a greater depth and longer duration of the real estate adjustment will turn the current confidence and financial liquidity crisis into a credit crisis, with more severe consequences in the real sector. This scenario anticipates second-round effects, deeper and longer lasting, stemming from the adjustment of the housing sector on consumption and corporate investment. Should the scenario of lower growth materialize, it would bring with it stronger downward pressures, both in headline and core inflation. The Federal Reserve would reduce the rates more aggressively, as it has done in the last cycles of a strong slowdown.

With regard to the dollar, in the current context of uncertainty, depreciation risks continue. Several factors continue to point to the weakness of the dollar. A greater moderation in U.S. growth compared to Europe, more aggressive drops in the U.S. prior to those in Europe, and a deterioration in the quality of currency flows toward the U.S. will continue to affect the value of the dollar. As of the end of 2008, once the economy begins to show signs of a recovery (although mild), the dollar could revert to slightly less depreciated levels.







03 II III IV 04 II III IV 05 II III IV 06 II III IV 07 II III IV 08 II III IV Source: BBVA with Federal Reserve data

The Subprime Market in the U.S. and the Confidence Crisis: Liquidity Crisis Caused by Assymetric Information

Stable Economic Cycles and Excessive Risk Taking How did the real estate boom in the U.S. and growing nonpayment of high-risk mortgages (subprime) end up unleashing a confidence and financial liquidity crisis? What is the magnitude of the problem for the Federal Reserve to have decided to abandon its restrictive bias and reduce the federal fund rate 50 basis points at its September meeting (and 50 bp more overall at the October and December meetings) in view of growing probabilities of a recession?

In order to understand why risks of a sharp slowdown have increased, it is necessary to look back in time. The current cycle of economic expansion has been characterized by very low interest rates. As a result of the greater stability in the economic cycles—longer-lasting expansions and milder recessions—and the growing credibility of the central banks—price stability and the anchoring of inflation expectations—interest rates remained very low for a long time, at a time when excess global liquidity increased due to a great extent to the greater resources of the Asian countries and of oil producers.

The greater confidence led investors to demand lower compensation for risk. The excess liquidity and low volatility translated into a reduction of the risk premiums, that is, lower spreads. In the search for greater yields, there was excessive risk-taking by investors, which has led to a "financial accident" due to the interrelation of new financial products and the new agents that emerged.

Low Interest Rates and the Subprime Market

The low real interest rates had effects on the real sector of the economy and on the financial sector. The expansive monetary policy unleashed an abundant demand for mortgage loans, which spurred the demand for housing and translated into unprecedented increases in housing prices. According to the Case-Schiller housing resale price index—the most widely accepted price measurement index in the U.S.—prices rose 91.6% between 4Q99 and 4Q06, that is, average annual increases of 13.1%.

The dynamism of prices was leading, on one hand, to a significant increase in the wealth of families who owned their homes, and on the other, making it difficult for people with lower income to have access to housing, even though interest rates remained low. Nonetheless, several factors combined so that a growing number of families were now able to purchase their homes.

On one hand, families borrowed beyond their possibilities, motivated by "easy" loans with very low introductory interest rates—that allowed for abnormally low monthly payments—which would later be adjusted toward much higher rates, usually after two years. Furthermore, credit standards for people to have access to a mortgage loan were relaxed even more. In the beginning, second loans were granted for the down payment—lending 100% of the value of the property. Later, the standards were relaxed even more and loans were granted to people without income, employment or proven assets.

As a result, the universe of high-risk mortgages grew exponentially. Subprime mortgages grew from representing slightly more than 5% in 2001 to 15% in 2006, mortgages with limited documentation shot up from 6% to more than 25% in the same period, and mortgages on more than 90% of the property value rose to almost 15% of the total after having previously accounted for less than 5%. But we should ask; how was the growing lack of risk control on these mortgage loans possible? How were these excesses possible that generated such a high risk?

The Transfer of Risk, the Search for Yields and the Financial Innovation

The answers to these questions have two edges: the financial innovation—which allowed for the transfer of risk, disregarding the matter of the risk balance of the banking institutions—and excess liquidity—which generated the search for higher yields.

The excesses and lack of risk control were possible due to the development of complicated financial products that greatly weakened the relation between the origination of the mortgage and the risk assumed by the originators. The loans derived were developed rapidly. The most notable were collateralized debt obligations (CDOs) with assets from the mortgage sector that packaged or structured risk assets (subprime loans) together with other loans with lower probabilities of non-payment to later sell them to investors seeking higher yields in an environment of low returns on other long-term assets. The CDOs divide the expositions of the collateral loans into different "tranches", each one with different risk and yield levels. By adding lower-risk "tranches" it was possible to create structured bonds to which the rating agencies assigned a low risk.

Problems: Moral Risk and Adverse Selection

This securitization of the chain of the mortgage portfolio with multiple intermediaries generated perverse incentives that were not limited by the regulators. In the securitization of mortgages, the lender is replaced by the originator of the loan, (who provides the service of collecting the mortgage payments), the investor and the rating agencies. This chain generated problems of assymetrical information.

On one hand, the originators entered into a situation of moral risk. They knew they would have high returns if the high-risk loans were paid and would suffer only a fraction of the losses if the opposite occurred—by packaging and selling the loans they retained only the risk of non-payment of the first "tranche". Therefore, there was little incentive to choose carefully who would be granted a mortgage, since they knew they would not be assuming the greater part of the risk, although the earnings from issuing the loans would be theirs.

On the other hand, the investors (who assumed the risk) did have the proper incentives to be careful, but the complexity of the CDOs, added to the search for excess earnings, limited the monitoring of the risks and relaxed de facto the credit standards. In the chain, the rating agencies have also been criticized and questioned for having assigned AAA ratings to structured products (CDOs) so easily. A possible explanation is that their services were paid for (at least the more active rating agencies) by the investment banks (the buyers) and not by the investors.

This chain also generated another problem of assymetrical information: adverse selection. Since the originators of the loans incurred high overhead costs (due to the great number of employees), the business depended more on the number of loans issued than on the quality of these (since they did not retain the risk). Thus, in the more recent harvests of subprime mortgages, a greater concentration was attracted of persons or families with a higher risk of non-payment (either due to their having lower income or to the granting of a high number of second-home mortgages). Those with a higher probability of not being able to pay mortgage loans (unless the price of the home continued to increase as in previous years) were those that had more incentives to demand this type of subprime loans with such lax standards.

Adjustable Interest Rates. Non-payment **Rises**

A fundamental factor to explain the strong increase of non-payment of subprime mortgages and the increase in foreclosures were adjustable interest rates. The subprime loans were granted with abnormally low introductory interest rates (teasers) that allowed for very low payments in the initial years of the loan-generally the first two. These introductory interest rates generated two problems that increased the risk of non-payment. On one hand, many families were motivated to borrow beyond their possibilities (the initial payments were low and they could cover them), and on the other hand, in most cases, the initial payments—before the interest rates were adjusted upward-did not even cover the interest on the loan, thereby increasing the principal (the debt). At the end of the first period the payments were adjusted based on the higher interest rates and because the amount owed had grown during the first two years this could imply a monthly payment between two and three times greater than the initial payments.

When the real estate boom ended in the U.S., housing prices stopped rising and even began to drop. This, in addition to the fact that, in most cases, debtors of subprime loans owe more than 90% of the value of the property, practically eliminates any possibility of refinancing—which would allow reducing the monthly payments in order to cover them—especially given the current perception of risk and greater credit restriction. Thus, non-payment of subprime loans abruptly began to grow. Going forward, it is highly probable that the situation will get worse before it gets better. On one hand, the loans with more lax standards (that is, those with greater risk) were granted during 2006, at the end of the real estate boom, and the interest rates on these will be adjusted in 2008, so that the non-payment rate will surely rise significantly.

On the other hand, with the falling demand for housing and excess supply in the market—at its highest level since the recession of 1991—housing prices could drop even more. Moreover, the risk is that the restriction of credit standards could lead to a greater weakness of demand—and a greater excess of supply—which would lead to a further reduction in prices.

Assymetric Information, Loss of Confidence

With the rise in non-payment of subprime loans, concerns increased over the value of the CDOs leading to an abrupt rise in risk aversion. This lack of confidence was severely aggravated because many of these novel financial instruments are not listed on the secondary market. Their price is determined using complex mathematical models, giving rise to significant doubts regarding their valuation. This lack of confidence was transferred to other credit segments, such as collateralized loan obligations (CLO), which caused a strong reduction of demand for leveraged loans, which was transferred to the wholesale credit market.

Why was it transferred to the interbank market? In recent years, various institutions, especially in the developed countries, had popularized some financial vehicles that issued short-term commercial paper and acquired financial risk instruments (CDOs, CLOs, LBOs, etc.). The crisis reduced the demand for this commercial paper and made financing of these vehicles difficult. The intensification of these problems was passed on to some commercial banks either because they anticipated that they would have to finance these vehicles with credit lines granted before August or because loans or large commercial operations that they had intended to sell in the market had to remain in the balance, or because they had doubts when lending to other banks whose risks they could not evaluate. The banks began to value liquidity more.

In sum, all this phenomenon has led to less certainty among investors in the valuation of a broad group of complex financial instruments, not only those collateralized by subprime mortgages. The problem goes beyond a liquidity crisis. In fact, the central banks have contributed to the situation. The Federal Reserve has used a series of instruments to try to alleviate the tensions in the credit markets. It has injected liquidity by expanding the spectrum of collateral to those that approach the discount window (that is, for those financial institutions that borrow from the central bank) and extending the terms for such loans—up to 30 days and allowing for immediate renewal. Also, in the beginning, they lowered the discount window interest rate 50 bp and later reduced the federal funds rate 50 bp in September and 25 bp more at consecutive meetings (October and December).

Although these measures have alleviated tensions, this has been marginal for now. The level of commercial paper and corporate bond issues is still low. Maturities remain at very short terms. Interbank interest rates continue abnormally high in intermediate tranches and the high spread between the yield on Treasury Notes continues to indicate a clear lack of confidence in the credit markets. The actions of the Fed have not been efficient because they do not solve the problems of assymetric information. The buyers of CDOs (the investors) believe that the sellers (those who package the subprime loans) know more about the value of those assets (value associated with the probability of non-payment). When the rating agencies began to lower their grading levels—by recognizing a greater risk due to the increase in the nonpayment rate of packaged loans-investors' mistrust grew regarding the value of all structured loans (CDOs) until they stopped buying them at any price, regardless of how low.

The current crisis of assymetric information is explained by the George Akerlof¹ theory. If we consider the usedcar market and assume that buyers don't know the difference between good and bad cars, they will offer an average price for all of them. The sellers will withdraw the good cars from the market (because they are worth more than the average). This process could continue until the market disappears completely. Something similar is happening in the credit markets: liquidity has disappeared completely for CDOs. It will be difficult for mistrust to disappear. The participants with liquidity in the market will not be willing to lend until those who have CDOs and derivative products clarify as to what they have or a price is reached that compensates the greater risk. Investors need to know who has what and what its real value is. Lower interest rates will alleviate but will not eliminate the restriction in the credit markets.

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¹ The Market for "Lemons": Quality Uncertainty and the Market Mechanism. George A. Akerlof. The Quarterly Journal of Economics, Vol. 84, No. 3 (Aug., 1970), pp. 488-500

The Mexican Economy Faces the U.S. Slowdown

Throughout 2007, the Mexican economy felt the effects of the moderation in U.S. activity. Although the forecasts in the early part of the year were in line with our estimates, the breakdown of activity showed two effects: a greater than expected moderation in components related to external demand and, in contrast, the relative strength of internal demand. The consequence of the first of these effects, together with an additional adjustment in the growth forecasts in the U.S. for 2008 point to a moderation in the growth rate in Mexico in our scenario of moderate rationing of credit in the developed countries from an estimated 3.2% in 2007 to 2.7% in 2008.

Although there is great uncertainty surrounding the subprime mortgage loan crisis in the U.S., which makes it difficult to forecast the duration and magnitude of its effects, what is indisputable is that it will imply lower growth compared to what was originally estimated for the U.S. in 2008 some months ago. The strong synchronization of the Mexican economy with that country would imply that Mexico would feel the effect of the moderation in the U.S. Nevertheless, we believe that some particular characteristics of this cycle, among which are those of the adjustment, the flow of credit to the private sector, and the positive effects on investment of the tax reform, could contribute to moderating the impact on the real sector of the economy in 2008. The risks to the central scenario persist: the uncertainty regarding the depth and duration of the moderation in the U.S. has increased, and implies that the growth forecast for Mexico is an element to monitor carefully throughout the year. Due to this, in the last part of this section, a tally of the risk factors of the scenario is set forth.

The channel of transmission toward the real economy

As a result of the coming into force of the North American Free Trade Agreement (NAFTA), the trade flows between Mexico and the U.S. grew in such magnitude that the correlation of the cycles has been around 0.8 since the end of the decade of the nineties¹. The channel of transmission toward the real sector of the economy is through exports (84% of total exports from Mexico goes to the U.S.), particularly manufactured products. The potential lower demand for Mexican manufactured products will lead to a lower level of industrial production in terms of supply, and consequently to lower investment levels. The lower production required in industry makes it necessary to employ fewer workers, both in manufacturing and in related services closely linked to manufacturing (transportation, warehouse services, customs agencies, etc.) which, in turn, implies (considering real constant wages) moderation in total wages, which is one of the pillars of private consumption. This component contributes close to 70% of GDP:

Although the Mexican and U.S. cycles are closely synchronized and the duration of the slowdowns tends to be similar in both countries, in Mexico the fluctuations are considerably more pronounced²: this

Growth in Mexico and the United States Index, real GDP 4Q01 = 100



Source: BBVA Bancomer with INEGI and Federal Reserve data

Industrial Production Annual % change



Cyclical Component of GDP Mexico and the U.S. Moving correlation, 3 years





¹ Two episodes have interrupted the high correlation (in moving terms) in the cycles: the strong financial crisis in Mexico in 1995 and the one related to the economic recession of 2000-2001.

² Based on quarterly data since 1981 to date and comparing standard growth and deviations of Mexico, the United States and Canada, it can be observed that Mexico is the country with the lowest growth and the greatest volatility; following are the averages and deviations of the three countries in the order quoted: (2.6, 2.8, 3.1), (3.6, 2.3, 1.9).

Aggregate Demand Mexico and the United States; 2000-2001 Episode* Loss in bp maximum - minimum



Mexican Exports to the U.S. % of total







characteristic was evident in the episode at the beginning of this decade of strong moderation in the U.S. in the years 2000-2001. At that time, due to strong moderation in high-technology-related sectors in the U.S., in the second half of 2000 (which sharpened in 2001) were added the negative effects of risk aversion due to the terrorist attacks in September of that year, factors that affected our country. In 2001 Mexico's GDP suffered a 0.1% reduction, after having grown 6.6% the previous year. When comparing the maximum growth with the minimum of that cycle (maximum: 2Q00 with 7.6%; minimum: 3Q01 with -1.4%), the variation was (-)9 percentage points, while the same comparison in the case of the U.S. shows a decrease of practically half (-)4.6. The components of aggregate demand most affected were at that time linked to foreign trade. Both underwent drops of more than 20 percentage points in their growth rates. Although private consumption did not show real negative changes in any guarter, its moderation was also significant.

Why could the adjustment be different on this occasion?

Even though the 2000-2001 episode is an important parameter of comparison with regard to the channel of transmission of the U.S. moderation to Mexico, a series of factors should be mentioned that could make a difference in the current episode. It should be noted that the expected adjustment in the financial markets is estimated to be the same as in 2001, orderly, given the greater confidence and advances in the fundamentals of our economy. On the other hand, in the real channel, we do not foresee an adverse event for Mexican exports such as China's entry in the World Trade Organization (WTO) and the loss in market share of Mexican products that this caused.

On the other hand, it is advisable to consider in our scenario of credit moderation in the developed economies, the form of the expected adjustment in the U.S. economy. It is believed that growth in the U.S. will be through public spending and net exports, and to a lower extent, through non-residential investment. The breakdown of the adjustment suggested implies risks, as well as opportunities for Mexico. The related risks take two courses: on the one hand, an adjustment through private consumption could limit the recovery of demand in that country and, therefore, its imports. It is considered that the rest of the world will continue to grow at relatively high rates, which will contribute to making net exports trigger growth in the U.S.; that is, the U.S. will continue to export while demanding fewer foreign goods and services³. In this sense, the destination of Mexican exports becomes crucial: although it is true that 84% of these have the U.S. as their destination, an important part of these are, in turn, intermediate inputs for U.S. export products to the rest of the world. The manufactured goods that have gained a share in the U.S. market in recent months are concentrated mainly in metal products, machinery and equipment, wood and its manufactures, and basic metals. In more recent months, automobile exports have also increased their share. Export growth ratio statistics in those items of private consumption and U.S. exports (both in real terms) point to the fact that basic metals and wood products are to a large extent consumed internally, while specialized equipment and electric apparatuses and exports related to the automobile sector are partially exported, which could mean an advantage for our exports in

³ In the scenario of credit moderation, GDP growth in the U.S. in 2008 is estimated at 1.7%, while global growth is expected to be around 4% (BBVA estimates).

those industries. On the other hand, it should be mentioned that, in recent years, the destination of Mexican exports has been diversifying and gaining a presence in places such as Latin America and Europe: export destinations other than the U.S. now account for 18% of total exports vs. slightly more than 10% in 2002.

A second characteristic that could differentiate this cycle of moderation is the relative importance in the economy of non-tradable sectors (particularly services) in contrast to the tradable ones (manufactures), which indicates the greater strength of domestic demand. While during the 1997-2000 period, the share of industry and services in GDP was 26.4% and 62.8%, respectively, between 2003 and 2006, these shares were 24.9% and 65.3%. The greater share in aggregate value of the tertiary sector in national production is centered on trade, banking services, leasing and insurance services and strongly in services linked to telecommunications.

A third element to be considered, the effect of which could differentiate this cycle from the past, is the additional stimulus to investment derived from the resources of tax reform, where the probable increase in demand for private investment (through tax incentives for their deduction) should be mentioned, and, on the other, greater public spending on programmed infrastructure. It is expected that this stimulus to infrastructure will be historic and that it will contribute to increasing the country's productivity.

Greater risks given greater uncertainty

It should be pointed out that the above-mentioned factors of strength for the Mexican economy are highly dependent on the deepening and duration of moderation in the U.S., since, should the external adjustment be more severe, it could have an impact on global demand, affecting services linked to industry and inhibiting the potential positive effects on investment stemming from the tax reform. It should be noted that the higher degree of uncertainty in recent months regarding the future evolution of the global economy, has changed into a greater probability that the adjustment in the U.S. will be greater than originally expected. This has led the Mexican authorities (in the central bank and the Finance Ministry) to revise their growth projections downward for this year.⁴ There are several risks for Mexico that accompany this scenario of credit moderation. The external ones are related to the magnitude of the adjustment in the U.S.: an adjustment through private consumption in the U.S. could prolong and deepen the moderation in that country and accentuate the negative effects of the real transmission channel toward Mexico. Also, recovery via net exports could imply a greater adjustment in employment linked to the sectors of exportable manufactured goods and related services. Depending on the magnitude and duration of the adjustment, the effect on Mexico could be greater; in the case of a strong adjustment, or one of greater duration, it is probable that some of the axis that have helped to strengthen internal demand (credit, remittances, employment) will moderate strongly and in fact, the relative strength shown up to now by the internal market might not be sufficient to mitigate the impact of a strong adjustment in the U.S.

Public and Private Investment in Infrastructure % of GDP



Frequency of "the Uncertainty"* in Banco de México Quarterly Reports on Inflation



Macroeconomic Chart of Mexico Annual % change, seasonally-adjusted series

	2005	2006	2007e	2008e	Cont*
GDP	2.8	4.8	3.2	2.7	2.7
Total demand	4.4	7.0	4.5	3.4	4.9
Domestic	5.2	6.1	4.3	4.2	4.4
Consumption	4.6	5.1	3.8	3.8	3.1
Private	5.1	5.0	4.3	3.9	2.9
Public	0.2	6.0	-0.2	2.8	0.2
Investment	7.6	10.0	6.0	5.6	1.3
Foreign	7.0	11.2	5.1	2.9	1.2
Imports	8.5	12.3	7.6	4.8	2.2
Net external	na	na	na	na	-1.0

Estimated contributions 2008. The annual rates are not presented because they are not representative

na does not apply

estimated ource: BBVA Bancomer with INEGI data

⁴ The central bank revised its estimate from a range of 3.25-3.75 in October 2007 to a range of 2.75-3.25 in the January 2008 report. The Finance Ministry revision was from 3.7 published in September 2007 to 2.8 in January of this year.

Cycles and Potential GDP in Mexico: Space for Solid and Sustained Growth¹

Potential GDP and the structural changes

Potential growth is understood to be that which is consistent with the level of production when resources are at their full level of use. The potential growth of the economy defines its capacity to grow in the medium and long term, which reflects the efficiency in the use of the factors of production. It is important to have a proper approximation of potential growth in Mexico, particularly in a context of discussion of structural reforms, with which the aim is to increase efficiency in the combination of the productive resources.

The concept of potential GDP is related in economic theory with the long-term aggregate supply curve, where prices and wages are completely flexible so that changes in aggregate demand do not have real effects. For the measurement of the potential GDP of the economy three approaches have traditionally been used; the first involves estimating a Cobb-Douglas type function of production, the second deals with estimating a structural auto-regressive vector (SVAR) with long-term restrictions, and finally the third uses statistical methods that seek to capture the trend component of GDP.

The following is a brief description of the characteristics that make up some of the economic cycles in Mexico since 1980, which is an element to consider in the study of potential GDP. The next section includes the approximations of the estimate of potential GDP and in the final segment, in the boxed inset, the results are summarized.

Lower volatility in recent cycles: the role of the opening

With quarterly data of annual GDP growth in real terms between 1980 and 2006, it is possible to identify five cycles lasting from three to eight years; despite the fact that the detonators and the evolution of each one are very diverse, a characteristic that allows their classification is the volatility they present. Between 1980 and 1998, the common denominator is the intense volatility of the main macroeconomic variables.

It is to be expected that in an emerging economy this characteristic would be present²; however, the dispropor-

tion before and after that period is worthy of note. It is possible that, after the tequila crisis and derived partly from the greater trade integration with the U.S. through the North American Free Trade Agreement (NAFTA), the bases would be defined aimed at promoting productivity in the country; although economic growth has not been extraordinary, financial and macroeconomic stability is strengthened. This structural change permits differentiating an adjustment in the relation between cycle and potential GDP.

Standard Deviation

	Pre-NAFTA	Post-NAFTA
GDP	4.3	2.4
Private consumption	5.1	2.5
Investment	16.9	9.3
Exports	10.9	7.1
Imports	21	8
Industry	6.8	3.4
Services	3.9	2.2

Source: BBVA Bancomer

Three approaches to measure potential GDP

The first deals with estimating a production function: based on the Solow classical analysis where a Cobb-Douglas type function of production is estimated, with constant yields to scale of the $Y_t = A_t \cdot F[K_t, L_t]$ form; where the long-term dynamic depends on the labor force, capital accumulation and technology, or total factor productivity (TFP); the fluctuation of this component is, to a great extent, responsible for the high volatility of the estimated potential GDP.

Total Factor Productivity Contribution for growth



Change in the Trend of Potential GDP



¹ Summary of "Determining factors & characteristics of the economic cycles in Mexico and estimate of potential GDP", EconomicWatch, Oct. 2007

² Carstens, A. 1998 "Emerging Economies and the Business Cycles" Federal Reserve Bank of Boston, pp 377-381

This component has fluctuated in its contribution to growth from almost 4% at the beginning of the eighties to -7% as of 1982; since 2001, TFP has reflected the fall in international competitiveness (to a great extent derived from China's entry in the WTO and its impact on Mexican industry) so that it has not reached contribution levels of 2% again.

It should be mentioned that the direct estimate of a function of production and its TFP entails some inconveniences that should not be ignored, particularly the difficulty of measuring correctly the existing capital wealth at every moment. It is therefore necessary to use an initial assumed capital wealth as the basis and add new investments and discount depreciation.

The second approximation is through an SVAR, as originally suggested by Blanchard and Qhua (1989), where the permanent and temporary components of a series can be identified. For that purpose, long-term restrictions are imposed where the orthogonal vectors are interpreted as supply and demand shocks. It is assumed that every dynamic derived from disturbances in supply or structural changes, in the long term affect growth of GDP and the dynamism of inflation: productivity shocks have permanent effects on GDP. While fluctuations derived from the demand cycle that cause nominal distortions have no long-term impact, they do have an effect on short- and medium-term inflation. The same as with a traditional VAR, impulse-response functions can be obtained as well as variance decompositions that can be attributed to supply and demand shocks. Moreover, historic decompositions can be obtained from each series³.

Contribution to the Variance of Growth Supply / real

Periods	1980 - 2006	1998 - 2006
1	78.03	81.97
6	90.03	79.19
12	88.50	64.05
24	87.64	59.97
Source: BBVA Bancomer		

3 The estimated SVAR includes oil as an exogenous variable. The GDP and inflation were incorporated as endogenous without changing the results substantially. The order of the VAR was (oil, GDP %, inflation). The variance decomposition of the SVAR for Mexico for the 1980-2006 period shows that supply shocks dominate the variability of growth in simulations of one to 24 quarters. However, in estimating SVAR for a small sample since 1998, the supply shocks show a substantial drop in their effect. This could help explain the lower volatility observed since 1998 (less distortion due to supply shocks).

In the structural models, the variation of the potential of the economy is approximated using the parameters of the Phillips Curve relation.

The third method for estimating potential growth is purely statistical: the idea is to extract the component related with the long term of a series. Two types of filters were applied: Holdrick-Prescott, Baxter King and linear (trend). Both are softening techniques based on moving averages with which the cyclical component of the trend is detected.

Results of the estimates

In accordance with the estimates realized, potential GDP growth in the economy is between 3.0% and 3.9%. Although the range is wide, a possible explanation is that the period used for its calculation encompasses years of severe slowdowns in a relatively short period of time.

Potential GDP Growth

Period	Structural (SVAR)	Baxter- King	Holdrick- Prescott	Trend	Phillips
1980 - 1994	2.4	1.9	1.9	2.0	2.0
1996 - 2006	3.0	3.3	3.0	3.1	3.9

Also, and as in the more recent cycles as mentioned in the previous section, we have witnessed the consolidation of macroeconomic stability and the reactivation of the financial system, which intuitively leads us to think that the potential GDP would be in the high range of the estimates, specifically around 3.5% to 3.9%, which models such as that of the SVAR would indicate.

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Futures Market



Source: BBVA Bancomer with Bloomberg data



Estimated Inflation Profile by Banxico Annual %, quarterly average

Period	Minimum	Maximum
4 th quarter 2007	3.50	4.00
1 st quarter 2008	3.75	4.25
2 nd quarter 2008	4.00	4.50
3 rd quarter 2008	4.00	4.50
4 th quarter 2008	3.75	4.25
1 st quarter 2009	3.50	4.00
2 nd quarter 2009	3.50	4.00
3 rd quarter 2009	3.00	3.50
4 th quarter 2009	3.00	3.50
Source: BBVA Bancomer with B	anco de México dat	а

Inflation: between Economic Slowdown, Tax Reform and International Shocks

For more than a year, the course of inflation has been altered by a series of supply shocks that placed it above the upper limit of the variability range of Banco de México (4%). The origin of these disturbances is in the international markets and in volatile production factors (such as climate). In a first instance, at the end of 2006 and the beginning of 2007, increases were seen in sugar cane and corn prices, in view of a greater demand for these for the production of ethanol. This affected various processed foods in Mexico. Later, there were increases in vegetables due to climatic factors and more recently in wheat/bread due to a drop in international production. Although the previous increases have not altered long-term inflation expectations or wage negotiations, they have contributed to raising uncertainty in view of the possibility of new supply shocks, the rise in taxes in the Mexican economy-the Single Rate Corporate Tax (IETU for its Spanish initials)—and concern regarding consumption conditions in Mexico and the U.S.

In this context, Banco de México (the central bank) informed of the possibility that headline inflation would be between 4% and 4.5% in the first half of 2008 and between 3.75% and 4.25% in the last quarter of the year. But at the same time, it warned of growing uncertainty in this scenario. Although this announcement has had a moderate effect on medium-term inflation expectations, we believe that we should not minimize the risk of growth below the potential for 2008, which would contribute to containing recent inflationary pressures. Therefore, we estimate inflation of 4.1% in the first half of the year, which could drop to 3.8% at the close. Despite this, we recognize that uncertainty is high regarding the international prices of inputs (such as grains and steel) and the transfer of the tax cost (the IETU) to higher prices, which has not been significant to date¹.

Growth in 2008 will be crucial for inflation

To the extent that inflation has neared the central bank's variability range and that volatility has been reduced, the behavior of prices has shown a closer relation with the economic environment: (i) the characteristics of the cycle of activity assume greater importance in price determination; (ii) the speed of convergence of inflation with its long-term determining factors is greater (that is, cost of inputs); (iii) the persistence of core inflation is relatively greater to that of non-core (iv) medium- and long-term expectations take on greater relevance in the determination of prices; and (v) the influence of external inflation and the exchange rate is lower in the absence of abrupt adjustments.

Taking the above into account, we expect economic growth in 2008 to be 2.7% (below estimated potential GDP between 3.6% and 3.9%), due to lower stimulus of external demand from the U.S. In addition, we do not envision a strong adjustment in imported inflation in view of the outlook of a strong peso and high annual inflation in the U.S. (2.7%), which might still be limited. This macroeconomic environment, together with anchored inflation expectations and in the absence of supply shocks, would allow inflation to diminish gradually

1 See box inset "Potential Sectorial Effect of the Tax Reform" in this edition.

and converge toward the central bank target toward 2009 and reduce pressures due to the tax reform.

Inflationary effects of the tax reform

The tax reform generates medium- and long-term benefits associated with an improvement in the government's financial position by increasing its capacity to provide public goods and incentives for the private sector to invest. These benefits contribute to increasing potential growth, which could be close to 4%. The productivity associated with this greater potential growth facilitates the convergence of long-term inflation expectations with the 3% inflation target projected by Banco de México. Nevertheless, in the short term, there could be transitory inflationary pressures in view of the greater tax burden, which could tend to be limited in line with low economic growth. In particular, the following elements are worthy of note:

Higher cost of gasoline products: The 5.5% increase in gasoline prices over an 18-month period starting in January 2008 will have a reduced impact (0.09 percentage points) on annual average inflation. As for its transfer to other prices, we believe it will be limited.

Electricity rates: Together with the tax reform, an allowance of 7.7 billion pesos was announced for the "reduction of electricity rates" to high consumption producers in peak hours. This incentive represents a reduction of 6.4% in electricity bills for industrial and agricultural activity. Assuming that there are no strong increases in the determining factors of electricity rates (for example, the price of energy products), the lower electricity rates would represent up to 0.1% of the cost of inputs in the economy. Thus, the direct effects of the higher gasoline prices could be offset. The new formula for determining the price of electricity incorporates a greater weight of the price of natural gas, which would make those prices more susceptible to the international conditions of energy products.

Uncertainty regarding the inflationary effect of the IETU: The higher tax obligations will imply an increase in the tax burden for productive activity. There is great uncertainty regarding the transfer of the tax cost to the consumer; however, we believe it will be very limited: (1) the additional tax burden is low in proportion to the value of production in the economy (0.8%) and of the costs of productive inputs (1.8%); (2) reduction of the gross operating surplus in the economy will be low; (3) the weakness in consumption would reduce the capacity to increase prices; and (4) the coexistence of two groups of taxpayers (those paying ISR (income tax) and those paying IETU) reduces the capacity to transfer higher company costs to the final prices. Thus, we estimate a transfer of up to 20 basis points of inflation derived from the IETU in an environment of greater competition in the markets. (See box inset on the IETU).

Public programs and trade opening: The rally in uncertainty will be mitigated by the trade opening of agricultural products, which will contribute toward reducing inflation in food products to that in the U.S. Additionally, the setting in motion of agreements (ANTAD) to promote family savings in the basic food basket and programs promoting competition (for example, expansion of the distribution of natural gas and telecommunications) will be favorable in mitigating potential inflationary rises at the beginning of 2008.

Inflation Observed and Expected Annual % change







Annual Inflation of Food Products in 2007





Inflation Forecasts Credit Moderation Scenario Annual %, end of period

Period		Headline	Core*		
1 st qua	rter 2008	3.77	4.10		
2 nd qua	rter 2008	4.12	3.90		
3 rd quarter 2008		3.76	3.74		
4 th qua	rter 2008	3.77	3.51		
Averao	les				
2007	·	3.97	3.84		
2008		3.88	3.51		
* li Source: E	ncludes education in 20 3BVA Bancomer with B	008 anco de México data			

Monitoring supply disturbances in 2007-2008

Since the end of 2006 to date, there have been international disturbances in the prices of inputs, which have increased the prices of processed foods—sugar, tortilla, milk and bread—and the uncertainty of possible contagion to other merchandises and services. To this regard, it is important to highlight the following: (1) inflation in food products is a global phenomenon that goes beyond local market conditions; (2) inflation in food products in Mexico was one of the lowest in Latin America; and (3) surprises of greater inflation have not been reflected in increases in long-term inflation expectations, nor in contractual wages. The latter becomes a nominal anchor in determining prices going forward. In the immediate future, it is foreseeable that international pressures on food products will continue in view of the outlook of growing demand for bio-fuel products. Nonetheless, the outlook for corn production and corn inventories is favorable, which could contribute to balancing those effects at the beginning of the year. Despite this, the uncertainty regarding the occurrence of any other disturbance is high, particularly in international prices such as steel, which could pressure housing prices in Mexico, so that it is advisable to continue to monitor them as a potential element of deviation.

Balance of Inflation 2008: trend and alternate scenarios

In our credit moderation scenario, the outlook of reduced growth toward the second half of the year will contribute toward containing the pressures derived from the tax reform and higher prices of inputs in food products. Thus, the recent inflationary rises will moderate as this low growth materializes. Therefore, we do not rule out that headline and core inflation could close at around 3.8% and 3.6% in 2008, below the upper limit of the variability range set by the central bank. In particular, we believe that core inflation will continue to be pressured throughout the first half of 2008 due to processed foods. For the second part of the year, we believe that other tradable goods will lead to greater decreases in core inflation thanks to lower international growth. Annual inflation in services will have little space for reduction in view of the recent shocks. In non-core inflation, price volatility will continue in agriculture products where we assume that the bad climatic conditions of 2007 will not be repeated, and public prices will have to align themselves to the central bank target. With this, non-core inflation will stay close to 5% in 2008.

Despite the above, we recognize that uncertainty is high, particularly with relation to economic growth and the effects of the IETU. In particular, the risk of greater inflation for 2008 could materialize in case of growth close to the potential (3.6%), in which case we would not rule out that producers in the economy could translate their tax costs to the final consumer. In this case, we estimate that the effect of the IETU on inflation could reach up to 110 basis points of inflation. In the event of this alternate scenario, inflation could close at around 4.5%. In counterpart, the risk of lower inflation could materialize if the slowdown were to intensify, forcing producers to moderate their prices (close 3.0%) in order to maintain sales levels and assume lower profit margins. This scenario could occur if the real-estate situation in the U.S. were to cause credit restriction, which would mean a greater adjustment in consumption.

Potential Sectorial Effect of the Tax Reform (IETU)

The recently approved tax reform implies an increase in the tax burden for companies that will tend to increase potential economic growth in the medium term provided the new tax resources are used efficiently and investment (public and private) is promoted. Nevertheless, in the short term the private sector will not have access to resources of 1.1% of GDP (according to the Ministry of Finance or SHCP) in view of the new Single Rate Corporate Tax (IETU for its Spanish initials). With regard to this, there are questions as to which sectors will be affected the most by this new tax and the importance of its effect on the structure of costs and margins.

Potential tax revenue collection based on national accounts

The IETU obliges both individuals and corporations to pay taxes on income obtained from the sale and/or temporary use of goods and services provided. In a simplified form, we calculated the amount of payment in the economy using data from the national accounts:

Income: (estimated on the value of production).

Minus Deductions: a) Acquisition of goods and services necessary for the activity taxed (approximate based on intermediate consumption); b) investments paid in 4Q07 and 2008 (estimated based on economic census); other authorized deductibles (donations and payment exemptions to the primary sector according to estimates by the Chamber of Deputies (the lower Chamber of Congress).

IETU Same Base: multiplied by IETU rate (16.5%)

Minus Credits: multiplying IETU rate by: a) Wages (considering national accounts wages); b) Prior investments, 10-year lapse at 5% on non-deductibles (estimated based on economic census and information from the Chamber of Deputies).

Summary of the Calculation of IETU % of aggregate figures of the economy

Concept	% of production value
Production value	100.0%
Minus deductibles	
Intermediate consumption	-42.6%
Investments 2008 and 4Q07	-15.9%
Other deductibles	-0.2%
IETU base (national accounts)	41.3%
By IETU rate (16.5%)	7.4%
Minus credits	
Payroll (at 16.5%)	-3.6%
Previous investments (at 16.5%)	-0.1%
Potential IETU payment	3.75%

Source: Author's calculations with data from national accounts through 2004 and SAT

Assuming that all taxpayers pay under the new regime (excluding salaried workers who pay income tax (ISR) and that payment is not evaded, the potential collection from the IETU would total approximately 5.3% of GDP at the 16.5% rate. This level would represent 3.7% of the value of the aggregate production reported in the national accounts (see chart). We believe that this level of potential IETU is equivalent to potential tax revenue collection of income tax (of salaried workers). Assuming a tax evasion rate similar to the current one¹, we do not rule out that the additional tax revenue that the government will actually receive will be between 1.2% and 1.3% of GDP in 2008, slightly higher than its estimate.

Effect of the IETU on Cost Structure % of production value



Source: Author's calculations with data from national accounts through 2004 and SAT

Even in the case of high tax revenue from IETU, the new regime would imply a marginal reduction of the Gross Operating Surplus by reducing from 38% to 37% of the value of production. This suggests that in the aggregate of the economy there is room for taxpayers to assume this higher tax without passing it on completely to the final consumers—through a higher price—and that the "drainage" of these resources from the private sector should not, of itself, depress economic activity (growth will continue depending to a greater extent on growth in the U.S.).

What sectors could pay more?

Those activities that could contribute more to tax revenue will be those that enjoy special treatment under income tax (ISR), as well as those that are more laborintensive (lower capital requirements and therefore lower

^{1 &}quot;Medición de la Evasión Fiscal en Mexico", ("Measurement of Tax Evasion in Mexico"), Samaniego, ITAM (November 2006). We do not rule out that the simplicity of the new scheme will allow greater revenue for the government by limiting the opportunities for tax evasion in the economy.

deductible investment). In particular we estimate that approximately 80% of the additional tax revenue due to the IETU will come from services: Retail-Restaurants-Hotels; Community-Social-Personal; and Transportation and Communications.

Tax Revenue from IETU

	% of GDP			
Total	1.2%			
Agriculture, livestock and fishing	0.08%			
Mining and oil	0.01%			
Manufacturing industry	0.14%			
Electricity, natural gas and potable water				
Construction	0.09%			
Retail, restaurants and hotels				
Transportation and communications 0.				
Financial, real estate and professional services	0.13%			
Community, social and personal services	0.37%			
Note: Government-managed companies and other sectors are not included	so the			

weighted sum does not coincide Source: BBVA Bancomer

Currently, the ISR (income tax) burden (excluding salaried workers) compared to the surpluses generated in each sector is relatively low (that is, services in retail-restaurants, construction, communication). In this context, additional tax revenue attributable to IETU by sector would cause taxes on economic activities to increase on average between 4.3% and 5.9% of the Gross Operating Surplus in the country. Those activities with lower tax contributions together with activities benefiting from special treatment would record the highest increases—proportionally to their surpluses. It is particularly significant that for the manufacturing industry the tax increases could be reduced due to investments (new and past) subject to these being deductible and/or creditable.

Importance of Tax Burden Before/After the IETU % of gross operating surplus, 2004



Source: Author's calculations based on SHCP reports, and assuming same proportion of current tax evasion rate Even though the additional tax cost will increase in general terms, the effect on the operating surpluses after payment of taxes would be limited. This does not mean that at a level of greater de-aggregation we would observe that those taxpayers with less efficient cost structures than those of their competitors would experience the greater complications of a higher tax burden.

Final Valuation

We believe that the economic impact of the tax reform is favorable and that the potential short-term costs are limited because:

(1) The tax revenue goal is reachable and will tend to be greater to the extent that efficiency in tax collection improves and the IETU increases over time.

(2) The financial position of the government improves and the structural risk of the economy is reduced. The benefits of the reform will be greater to the extent that additional resources permit higher public spending on projects with social profitability and boost public and private investment.

(3) The design tends to reduce differentiated tax treatments, which implies a better allocation of resources in the economy by limiting the artificial distortions on the profitability of sectorial projects.

(4) The coexistence of two groups of taxpayers (those who pay income tax vs. those who pay IETU) permits that companies that see their tax costs increase will not be inclined to transfer these costs to the final consumer—via prices—because of the risk of losing market share of taxpayers that have not seen their cost structures altered.

(5) The additional tax revenue in proportion to the operating surpluses in the economy is limited.

In sectorial terms, the effect of the IETU will tend to be greater for those activities that have low tax levels (that is, those subject to some special regime) and are laborintensive (such as services).

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Oil Prices: Prospect and Outlook for External Accounts

Oil prices have quintupled

International oil prices have shown a practically uninterrupted rise since 1999, causing the price of the Mexican oil mix to multiply five times in the last eight years (average of US\$10.2 dollars per barrel in 1999 vs. US\$61.7 dpb in 2007). This international trend is attributed to continued maladjustments between demand and supply of this energy source: the strength in the global consumption of oil —sustained by world growth and by the last expansive cycle of the U.S. economy— has combined with the rise in producer costs, to the extent that projections of oil prices have lost their accuracy relatively quickly, leading to frequent upward revisions.

On the domestic sphere, this dynamic has allowed reducing the deficit in the external accounts, and has become a source of fiscal resources for the government. Although, in recent times, the Mexican mix reached quotations higher than US\$80 dpb —maximum levels in real terms since 1982— it is pertinent to value what its trend might be next year and, in particular, the role that it could play in the current account under the present economic context.

Oil: Mexican Mix Price Dollars per barrel, annual average



The role of oil and remittances in the external accounts during 2001-07

Between 2001 and 2007, the price of the Mexican oil mix tripled, from US\$18.6 dpb to almost US\$62 dpb, while the export base rose in the early years of the period and moderately dropped in the past two years. Just this last year, the level reached was almost US\$10 over our previous estimate, US\$9 over the prices seen in 2006 and US\$19 over the estimated price in the government budget for 2007. Thus, revenues from oil exports recorded a cumulative increase of US\$30 billion between 2001 and 2007. These resources served to cushion almost totally the deterioration in the non-oil trade balance, which rose to US\$30 billion in this period and caused the trade deficit to remain below US\$10 billion from 2000 to 2006 and in US\$11.2 billion in 2007.

Crude Oil Exports

Volume: thousands of barrels daily; Price: dollars per barrel



Source: BBVA Bancomer with INEGI dat





In addition to containing the trade deficit with oil revenues, higher revenues from remittances were favorable, rising from US\$6.6 billion to US\$24 billion between 2000 and 2007. With this, the estimated deficit in the current account in 2007 (US\$7.5 billion, 0.8% of GDP) stood well below what was recorded six years back (US\$18.7 billion, 3.2%). Therefore, worthy of note was the heterogeneity in the evolution of the current account aggregates during the period: a strong improvement in the oil and remittance balance; modest variations in factorial and non-factorial services; and the expansion in the non-oil trade deficit.

Current Account Balance



Nonetheless, in 2007, history seems to be changing: both oil exports and remittances lost dynamism, while the non-oil deficit continued to increase in face of the strength of internal demand. This situation led to a higher trade and current account deficit during 2007 vs. 2006. Should this trend continue, the deficit could return in a couple of years to levels of between 2% and 3% of GDP, a level that turns out to be modest and fully possible to finance with long-term resources (that is, foreign direct investment).





Outlook: a greater deficit in the current account in the short term

Currently, there is great uncertainty regarding the performance of critical factors for the current account (growth in the U.S., international demand for raw materials, etc). Nevertheless, there are elements that point to a gradual deterioration in the external accounts in the coming years.

As to the oil sector, recent history has shown that it is not easy to forecast oil prices, although there are some data that are evident: the rate of expansion in revenues from oil exports is not sustainable if we consider that the current oil prices are historically high, which makes it less probable to maintain the expansion of the last few years. To this we must add that the outlook for export volumes is decreasing.

For 2008, we estimate that the price of the Mexican oil mix could stand at close to US\$65 dpb (a high level but with a descending trend). In contrast to previous years, the outlook for gradually descending oil prices is sustained by expected growth below its potential in the U.S.. Under this assumption and extrapolating the recent trend of the oil export volume in 2008, Mexico would receive around an additional US\$2 billion from oil sales abroad.

Also, it is latent that remittances will moderate in 2008, as the construction sector in the U.S. continues to slow down and the migratory cycle is affected in the short term by the policies in that country. Finally, there is uncertainty regarding the degree of the slowdown in Mexico and the U.S.; it is probable that our growth will be higher than that country's, due to internal demand factors. This relative growth favoring Mexico would tend to decrease the country's net exports. If we add the previous effects, the current account could show a deficit of 1.1% and 2.4% of GDP in 2008 and 2009, respectively, a level possible for the economy to finance.

Current Account Deficit



Source: BBVA Bancomer with Banco de México data

The current account balance is very sensitive to oil prices. For example, if oil prices were to stand at their average of 1980 to date (US\$23.3 dpb), the current account deficit would be 4% of GDP. Although, these levels are not of concern in the current environment of world liquidity, it is a factor to be monitored in the short term.

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Financial Markets: In the Midst of Financial Turbulence and Inflationary Pressures

At the beginning of 2008, the uncertainty in the financial markets has continued to intensify as a result of the continuous and pronounced negative surprises in the timely indicators of economic activity in the U.S. This, together with the deepening of the adjustment in the real estate sector in the U.S.—and its effects on the financial system—and the greater restriction in credit conditions, increases the probability of a generalized and pronounced slowdown. Thus, the domestic financial markets will struggle between the implicit risk of slow growth in the coming quarters and short-term inflationary pressures.

Monetary position

After Banco de México was concentrated exclusively on the upward risks of inflation, the greater uncertainty—in view of the deterioration of the prospects for the United States—has led to a significant change in the balance of risks. During recent months, since the last preventive rise in October 2007, the messages of the monetary authorities have been more neutral, and in the last communication a greater concern regarding growth was clearly evident.

The latest economic indicators in the U.S. sustain the view of a generalized slowdown, which validates our change of forecast in a scenario of credit moderation for the U.S. economy from 2.2% to 1.7% in 2008. However, the risks are high, and this projection clearly has a downward bias.

The central scenario for Mexico continues to be positive (GDP growth of 2.7% in 2008). However, the dominant factor at this time is the increasing probability of a more pronounced slowdown in the U.S., which, in our opinion, changes the risk balance and consequently the possible strategy of the central bank. This risk, which has already materialized in a change in the monetary position of the Federal Reserve, bringing the reference rate down to 3.0% (a relaxation of 225 bp up to now) has left the short-term interest rate spread between Mexico and the U.S. at 450 bp, a level that had not been seen since the end of 2005. This greater spread has served as an anchor for the exchange rate in this period of greater risk aversion, but could become a reference variable for global investors with a shorter-term vision if the monetary authorities don't give clear signals of possible action in case the risks regarding activity continue to increase and inflation expectations tend toward convergence in 2009.

The Mexican economy will face two demand shocks with an impact on inflation: lower economic activity In the U.S. and the relative strength of the exchange rate. Given that the risk is that both elements will exacerbate, the probability of observing a more mitigating convergence of inflation has increased. Thus, in an environment of more moderate economic activity, there would not be space for restricting monetary conditions, and there could be positive surprises in inflation, associated with lower demand pressures in the second part of the year and a lower transfer of the effect of the IETU (the new single rate corporate tax) to final prices, which would justify a monetary relaxation. This strategy would not be in conflict with the

VIX* Index and Corporate Spread in the U.S. (BAA) Basis points



Inflationary Expectations Annual %



Real Interest Rate (Ex-post) %



06 F M A M J J A S O N D 07 F M A M J J A S O N D Source: BBVA Bancomer with Banco de México data

Mexico-U.S. Interest Rate Spread **Basis points**



Non-Commercial Net Positions in Chicago for the Peso and the Exchange Rate



Annualized Yield for Carry Operations Risk-Adjusted Peso - dollar



Source: BBVA Bancomer

program of inflation targets, since the scenario supports the convergence of inflation toward the 3.0% target in 2009.

The timing of the drop will depend on the extent of deterioration in the outlook for the U.S. and whether Mexico's central bank implements a preventive action without transferring the deterioration of economic activity in the U.S. to Mexico. Given that the delayed reaction of the influence of monetary policy is much greater than that of contagion from the slowdown in the U.S. to the Mexican economy, the central bank could very well choose to withdraw over the following months the two preventive increases carried out in 2007 and which have already shown results. The first drop could occur during this first quarter of 2008, but the dominant uncertainty at this time could justify one more month of monetary pause. The downward margin this year would stand at between 75 and 100 bp (toward more neutral levels of monetary policy), provided there is no recession in the U.S. (which we believe would open the margin to more than 200 bp of relaxation).

Mexican currency: the strength of the peso

The lag between the monetary cycles of Mexico and the U.S. has been extended. This lag has increased the interest rates spreads between the two countries to a greater extent than the risk perceptions, which has made carry opportunities more attractive as well as financial investments favoring the peso. Investment opportunities in pesos in the curve again became attractive in view of the broad spread between interest rates and the perception that the Banco de México will have to relax its monetary policy in light of the growing economic uncertainty. Thus, in a context of a monetary pause for just a few more months (with relaxation close at hand) moderate GDP growth, slow inflationary convergence, and average risk aversion levels in recent months, the outlook of a strong peso persists. Additionally, fundamental factors favor the peso in these times of volatility, such as the fact that the pressures derived from the evolution of the balance of payments are not yet considerable, that domestic investment will be proportionally high and the debt structure of the federal government.

Two points should be highlighted: 1) the conditions that guarantee low-risk financial investments in Mexico are lower than those perceived in the first half of 2007. This fact explains the reason why the peso was not able to remain under 10.80 pesos per dollar in a sustained manner. One way of looking at this is through the moving average of the last two months of the implicit volatility of the peso for different terms and the volatility of earnings generated by carry transactions. The adjusted earnings due to this type of risk are lower. 2) This means that the return on investments is compensating their risk; that is, a greater spread between interest rates does not imply an automatic appreciation of the peso (below 10.70 pesos per dollar). To summarize, there are investment opportunities in pesos, but they are lower than in other countries: during periods of risk, this factor supports a lower volatility of the peso vs. other currencies in emerging economies (as has occurred in recent months).

In conclusion, in our central scenario of credit moderation, we believe that the exchange rate could fluctuate within ranges of strength between 10.7 and 11.1 ppd during 2008, and close the year at 10.95. The risks regarding growth in Mexico are high in view of the probability of a recession in the U.S. economy. In this context of deteriorating dynamism of activity, and consequently more aggressive impending drops in the funding rate, the peso would tend to weaken during the second half of 2008. The exchange rate would remain strong in an initial phase and it would be after the initial quarters of very low growth, and with short-term rates dropping to their minimums, that pressures on the peso (due to risk and a drop In expectations regarding the value of the peso) would bring the exchange rate to levels of more than 11.0 ppd.

The structure of interest rates

The reaction of the curve in this period of volatility that began in the month of August presents two facets: in the first, until early January of 2008, the curve went to higher levels and the slope increased, reflecting on one hand, a greater aversion to risk, and on the other, the inflationary pressures at the close of 2007. In a second phase, as of the middle of January of this year, the curve flattened. That is, medium- and long-term interest rates dropped, in line with the downward shift of the curve in the U.S.

We should highlight that this episode of the flattening of the curve in Mexico, in a period of financial turbulence and generalized drops in the stock markets, is an event that we had not seen in a persistent manner. Currently the curve responds, to a greater extent, to an environment of weakness in economic activity and perspectives of a rally in interest rates, rather than to a lower appetite for risk in the international markets. In fact, the current slope is practically flat. Implicit inflationary expectations in the M10 with relation to the 10-year Udibond, fluctuate at close to 3.9%, so that it would seem that the markets have finally assimilated that the convergence of inflation will take place in the times projected by the central bank and that the risk balance, which would support a faster drop in inflation, is concentrated on the uncertainty regarding the future performance of economic activity.

We estimate that the risk premium of equilibrium between the onemonth interest rate and the 10-year bond is close to 40-50 bp (see inset "Short- and long-term risk premium: an initial approximation".) This means that currently the market is beginning to discount a future monetary relaxation and we would expect the curve to fluctuate around those limits during 1H08 (below this margin or in equilibrium). We foresee an M10 (equivalent curve) close to 7.5% during this 1Q08, and only the intrinsic volatility of a more hostile financial environment than that observed at the beginning of the year could pressure temporarily the long part of the curve, increasing investment opportunities in this context of change in the risk balance of the central bank. In our central scenario of credit moderation we expect an M10 close to 6.9% for the end of this year (bank funding at 6.5%), whose 40 bp slope would respond to a convergence of inflation with the central bank target in 2009 (with a bias toward a faster drop than expected), and to a more neutral communication from the central bank.

International Carry*







Ten-year Swap Spread and M10 in 1 Year



Implicit Inflation in the Market



Source: BBVA Bancomer with Bloomberg data

Central Financial Scenario of Credit Moderation

	Bank funding	M10	Peso
2007 (eop) Average 2008 (eop) Average	7.50 7.20 6.50 6.96	8.20 7.82 6.90 7.18	10.86 10.92 10.95 10.98
eop end of Source: BBVA	period		

In view of the possibility that the Mexican economy would face a greater adjustment, we would have to expect an increase in the volatility of the slope of the curve. This would reflect greater risk premiums in the long part, as well as a more pronounced reduction in the bank-funding rate should the credit crunch in the U.S. materialize with the imminent effects on our country. The profile of monetary relaxation in this scenario of risk could propitiate a more pronounced inverted curve. However, once the aggressive downward cycle in short-term interest rates is defined, we would expect a slope of considerable magnitude toward the end of 2008.

Final Comments

Since the middle of 2006, both the U.S and Mexican economies began a cycle of lower economic growth. Up to now, and despite the revaluation of financial risk, the slowdown in Mexico has been soft and concentrated on a few sectors. Nevertheless, it is important to note that every time the economic cycle enters a less dynamic phase, the sensitivity of the financial variables increases and the degree of uncertainty is greater. The implementation of economic and institutional reforms as well as consolidation of the strength of domestic demand will be key in terms of economic strength and the perception of financial risk.

Short- and Long-term Risk Premium: An Initial Approximation

The structure of interest rates is an indicator that captures, if not efficiently, a vast range of information, and its behavior or dynamism reflects the interpretation or expectations of investors to fluctuations in liquidity conditions and the economy. In this way, the appropriate interpretation of the changes in the curve become an indispensable tool in evaluating the economic effects of what the market expects and therefore define the corresponding action of economic policy.

We have witnessed an exponential growth of studies that based on various viewpoints seek to determine the causes and effects of the dynamism of the structure of interest rates. In this section, we will only concentrate on deriving an approximation of the risk premium of short- and long-term interest rates in the Mexican bond market (represented by 3-month Cetes or Treasury Certificates and M10). The risk premium on a bond at term $T_{\rm r}$ in accordance with the hypothesis of expectations, is the difference between this bond's interest rate and the average of expected shorter-term interest rates in a lapse of time T. In other words, it is the residual between the yield of holding a T bond and the "rollover" of lowerterm bonds during the term T. Having an approximation of this risk premium will allow us to infer regarding the equilibriums we may expect throughout the length of the curve after taking market expectations into account¹.

Short-term risk premium

Different methodologies can be used in calculating a risk premium in the short segment of the curve; in this section we estimate directly the interest rate on a 3-month bond (generic) in terms of interest rates at one-month from today and that of the next two months (each one divided by three). We use the GMM methodology with the aim of approximating the variables observed in the future to those expected today by the market (monthly data 1996-2007). Residuals of the variables as well as of the funding rate are included as instruments. In this case, the constant estimated plus the residual represents the risk premium implicit in the structure of rates in its short segment; it is the additional premium independent of the expectation regarding the future movement of interest rates (our statistics are met satisfactorily). The volatility of this risk premium is quite high for the 1996-2002 period, despite the fact that we included three-month moving averages for this sub-sample; once inflation is consolidated within a range of 3.0% and 4.0%, this premium converges toward a much more stable range. As can be seen in the graph, since 2005 this premium has fluctuated between 21 bp and 4 bp. The average for the risk premium in its stable segment is 7.6 basis points. In the United States the rule of thumb is to add 1 bp per month to the longer-lasting instruments in their initial segment. In this case, our estimates signal that we should add around 3.8 bp per month in this short segment of the curve.

The market, by consensus, was not expecting an increase in the funding rate; if it had expected a rise to 7.5% in September, the 91-day Cetes rate should have been around 7.56%-7.58%. If it had not expected this, and had only added the 3.8 bp premium, the 91-day Cetes rate should have stood at 7.33%. The average rate of those last days was 7.37%; that is, assuming that the Cetes rate that only incorporates the average risk premium is 7.33%, the probability that the market is assigning at this moment to a rise in the funding rate, implicit in the 91-day Cetes rate, is 17%. The last datum on 91-day Cetes (7,42%) indicates a probability of 0.36%.

Estimated Risk Premium at a 3-month Term Basis points



Long-term risk premium

The approaches that have been implemented with the aim of estimating the risk premium implicit in long-term fixed-income bonds vary, and range from VARs, analysis of expectations, latent variables and the estimation of lineal models (affine); our estimates are based on the methodology developed by Cochrane and Piazzasi (2005) and (2006). The theory of the hypothesis of expectations can be expressed in terms of the expected interest rate,

The recent publication of the BIS Quarterly Review June 2007, includes a very illustrative chapter on the current status of research regarding risk premiums in the bond market.

of the forwards implicit in rate expectations, and of the yields obtained by keeping the bonds for a determined period of time, by which, according to this theory, the expected yield should be equal to a yield premium, which in turn depends on the inflationary risk, on the movement of interest rates and a risk premium, which we want to estimate. Thus, by using this last definition, we estimate the following equation for a 10-year bond:

$$E(R_{10,t+1}) - i_t = \Theta_{10,t}$$

Where the term on the left is the additional yield over a short-term interest rate (28-day Cetes) from holding a 10-year bond for one year (generic values); the term on the right is the expected yield. With the aim of obtaining the expected yield or the yield premium, we run the earnings obtained by a 10-year bond in 260 working days against a series of factors that are significant in forecasting this yield.

We use the level or changes in the forwards implicit at one year in the 28-day TIIE (interbank equilibrium interest rate) swap curve, for instruments at 3 months, 1 year, 3 years, 7 years and 10 years. Daily data of December 2002 to July 2006. As of that date, the quarterly yields of the 10-year bond are used, to extend the period to May 2007. All the explanatory variables are significant, so we constructed a single variable (factor 1: average of the futures level used). We added an AR(1) to correct autocorrelation. The R² goes from 62% without the autoregressive variable, to 96% by including it, so that we can say that the specification of the model is appropriate and the correction is only to gain efficiency and greater reliability in the statistics².

The parameter of the factor1 is quite variable, so that we do a "rolling" estimate every 100 observations. In 80% of the cases, this parameter is significant and always maintains the expected sign. This parameter captures not only the risk premium from yield, but in general a yield premium that considers inflationary expectations, etc. For this reason, we first estimate a VAR that includes daily annual inflation (Udis), funding rate and the orthogonal variables of the curve that represent the level, the slope and the curve of the structure of interest rates. With this, we obtain an estimate of these orthogonal variables, whose estimates capture the effect of the macroeconomic variables. Thus, we proceed to estimate the evolution of the parameter of factor1 against the projections of the slope, curve and level of the rate structure. The risk premium on the yield is equal to the constant. But the constant is a dynamic variable, so we estimate it under the space-status methodology.

The graph presents the evolution of the risk factor on yields (monthly averages). It also presents the risk premium implicit in the M10. This indicates the M10 level as a result of the expected percentage yield. The difference between this and a short-term rate (28-day Cetes) gives us the premium in basis points. The volatility of the results is high, an uncomfortable characteristic that is also present in estimates for other countries. We show the evolution as of the beginning of 2002. The risk premium converges toward a range between 65 bp and .07 bp. The average for this premium from 2004 to date is 40 bp. Today it is close to 50 bp. This implies that an equilibrium M10 (which only considers a risk premium) would be close to 7.9%.



The market is covered today in the long segment against a surprise in monetary policy, but specifically it does not discount a restrictive cycle. If the rate were to fall below 7.9%, the market would be ruling out the risk of a rise and would only pay the risk premium. Up to before the financial turbulence, the M10 was at levels close to 7.7%.

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Risk Premium on Expected Yield of the M10 and its Correspondence in Basis Points

² It is corrected with the Hansen-White method to minimize the problem of overlapping.

United States Indicators and Forecasts

	2006	2007	2008	l′07	II'07	III'07	IV'07	l'08	II′08	III′08	IV'08
Economic Activity											
GDP (real annual % change)	2.9	2.2	1.7*	1.5	1.9	2.8	2.5	2.3	1.8	1.1	1.5
Personal consumption expenditures	3.1	2.9	1.2	3.2	2.9	3.0	2.5	1.5	1.3	1.0	0.9
Gross fixed investment	2.4	-2.9	-0.1	-4.5	-3.3	-2.3	-1.2	0.8	-0.5	-0.6	-0.2
Non-residential	6.6	4.8	3.2	2.5	4.1	5.1	7.4	7.0	4.3	1.9	-0.3
Structures	8.4	13.2	4.3	10.2	12.4	13.8	16.0	15.6	7.7	1.4	-5.9
Equipment and software	5.9	1.4	2.9	-0.5	0.7	1.5	3.7	4.1	3.3	2.3	2.0
Residential	-4.6	-16.9	-14.3	-16.5	-16.5	-16.5	-18.3	-18.0	-17.5	-13.5	-7.3
Total exports	8.4	7.9	5.1	6.6	7.1	10.3	7.7	8.1	6.9	3.0	2.8
Total imports	5.9	2.0	-0.1	2.9	2.0	1.7	1.4	0.2	0.6	-0.7	-0.4
Government consumption	1.8	2.1	2.5	1.2	1.9	2.7	2.5	2.5	2.5	2.5	2.5
Contribution to Growth (pp)											
Personal consumption expenditures	2.2	2.1	0.8	2.3	2.1	2.1	1.8	1.1	1.0	0.7	0.6
Private investment	0.5	-0.8	0.1	-1.1	-1.0	-0.6	-0.4	0.2	0.0	-0.2	0.3
Net exports	-0.1	0.6	0.6	0.2	0.5	0.9	0.7	0.9	0.7	0.5	0.4
Government consumption	0.3	0.4	0.4	0.2	0.3	0.5	0.4	0.4	0.4	0.4	0.4
Drives and Costs (annual % sharps sugress)											
Prices and Costs (annual % change, average)	2.2	2.0		2.4	2.7	2.4	4.0		2.4	2.1	2.2
Coro	3.Z 2.E	2.9	3.3	2.4	2.7	2.4	4.0	4.4	2.0	3.1	3.Z
	2.0	2.5	2.3	2.0	2.3 2.2	2.2	2.3	2.0	1.0	2.2	2.0
Core	2.0	2.5	2.7	2.3	2.3	2.1 1.0	3.4 2.1	3.5	3.1 2.2	2.7	2.2
CDP deflactor	2.2	2.1	2.1	2.4	2.0	1.7 2.4	2.1	2.5	2.2	2.0	1.0
Productivity	1.0	1.6	10	0.4	0.7	2.7	2.0	2.1	1 3	0.2	0.4
Real compensation per hour	0.7	1.0	0.8	2.2	2.2	33	-0.2	17	1.5	0.1	0.3
Unit labor cost	2.9	3.1	1.8	4.2	4.2	3.1	1.0	1.8	1.9	1.9	1.7
Other Indicators											
Industrial production (real annual % change)	4.0	1.9	1.5	2.5	1.8	1.6	1.8	2.4	1.6	0.9	0.9
Capacity utilization (%)	81.7	81.6	81.0	81.4	81.7	82.0	81.5	81.1	81.0	80.9	80.8
Light Weight Vehicle sales (millions, annualized)	10.0	10.2	15.8	16.5	16.1	1 200	1 1 5 1	15.7	15.8	15.8	15.8
Housing starts (thousands, annualized)	1,812	1,344	1,042	1,460	1,404	1,300	1,151	1,087	1,080	1,011	990
Noniami payiolis (mousands of new jobs, average)	1/5	45	13 E 1	109	105	/ 1	94 4 0	-10	5 0	10 E 1	30
Porsonal savings rate	4.0	4.0	0.0	4.5	4.5	4.7	4.0	4.7	0.2	0.1	0.4
Trade balance (LIS\$ billions)	-1.5	-0.2	-625	-0.0	-0.4	-0.1	182	-0.3	-0.2	-168	-147
Current account halance (LIS\$ hillions)	-757	-7/10	-668	-1/7	-177	-174	-102 -102	-150	_104	.171	_147
% of GDP	-6.2	-747	-000	-175	-746.4	-706.3	-173	-663.8	-175	-682.5	-634.6
Fiscal balance (US\$ billions, fiscal year)	-248	-163	-399								
% of GDP	-1.9	-1.2	-2.8			_	_	_	_	_	_
Brent (dollars per barrel, average)	69.1	77.0	69.3	64.9	72.1	78.9	92.1	79.1	69.3	66.6	62.3
Financial Markets (eop)											
Fed Funds (%)	5.25	4.25	2.00	5.25	5.25	4.75	4.25	2.50	2.00	2.00	2.00

eop CPI PCE end of period Consumer price index Personal consumption expenditures index

Mexico Indicators and Forecasts

	2004	2005	2006	2007	2008	l'07	II′07	III′07	IV'07	I′08	II′08	III′08	IV'08
Economic Activity GDP (seasonally-adjusted series) Real annual % change Per inhabitant (US dollars) US\$ billions	4.2 6,729 683	2.8 7,484 769	4.8 8,115 841	3.3 8,549 894	2.7 8,998 950	2.7 8,239 858	2.9 8,388 876	3.7 8,610 901	3.8 8,955 940	3.4 8,875 933	3.0 8,857 934	1.7 8,937 944	2.6 9,322 987
Inflation (eop, %) Headline Core ¹	5.2 3.8	3.3 3.4	4.1 3.8	3.8 4.1	3.8 3.5	4.2 4.0	4.0 3.9	3.8 4.0	3.8 4.1	3.7 4.1	4.1 3.9	3.7 3.8	3.8 3.5
Financial Markets Interest rates (eop, %) Bank funding 28-day Cetes 28-day TIIE 10-year Bond Exchange rate Pesos per dollar, average	8.55 8.60 9.00 9.70 11.30	8.25 8.00 8.60 8.50 10.70	7.00 7.00 7.40 7.60 10.90	7.50 7.44 7.93 8.04 10.85	6.50 6.47 6.77 6.90 10.95	7.00 7.04 7.46 7.82 11.12	7.25 7.22 7.70 7.67 10.83	7.25 7.22 7.70 7.81 11.03	7.50 7.44 7.93 8.04 10.85	7.50 7.39 7.84 7.60 10.88	7.25 7.14 7.54 7.20 10.95	6.75 6.64 6.94 7.00 11.12	6.50 6.47 6.77 6.90 10.95
Public Finances Fiscal balance (% of GDP) FRPS (% GDP)	0.2 -1.0	0.1 -1.4	-0.1 -0.9	0.0 -1.7	0.0 -2.0	nd nd	nd nd	nd nd	0.0 -1.7	nd nd	nd nd	nd nd	0.0 -2.0
External Sector ² Trade balance (US\$ billions) Current account (US\$ billions) Current account (% of GDP) Oil (Mexican mix, dpb, eop)	-8.8 -6.6 -0.9 31.0	-7.6 -5.2 -0.6 42.8	-6.1 -2.2 -0.2 50.1	-11.2 -7.4 -0.8 80.0	-12.0 -9.7 -1.1 58.1	-9.4 -5.2 -0.6 50.5	-11.7 -6.8 -0.8 60.0	11.8 -7.5 -0.9 67.3	-11.2 -7.4 -0.8 80.0	-7.2 -4.4 -0.5 72.1	-6.3 -3.7 -0.4 64.9	-8.0 -5.6 -0.6 60.5	-12.0 -9.7 -1.1 58.1
Monetary Agreggates & Banking A Core bank deposits Commer. banks performing loans ³	Activity 3.1 26.4	(ann. % c 3.2 29.0	:hge., eo 0.9 26.9	p) 7.3 23.4	4.1 11.8	-3.3 25.3	-1.4 25.1	1.4 28.2	7.3 23.4	9.6 22.7	8.0 18.0	5.3 10.8	4.1 11.8
Agreggate Demand (ann. % chge., Total Domestic demand Consumption Private Public Investment Private Public External demand Imports	seasona 6.17 4.3 3.6 4.1 -0.4 7.5 8.8 4.7 11.7 11.6	ally-adju: 4.4 5.2 4.6 5.1 0.2 7.6 9.7 1.6 7.0 8.5	sted) 7.0 6.1 5.1 5.0 6.0 10.0 11.5 2.0 11.2 12.3	4.5 4.3 3.8 4.3 -0.2 6.0 7.1 0.7 5.1 7.6	3.4 4.2 3.8 3.9 2.8 5.6 5.7 5.5 2.9 4.8	3.5 3.2 2.7 3.5 -3.6 4.9 7.1 -5.5 4.2 5.7	4.3 4.5 3.9 4.6 -1.9 6.9 6.8 3.4 3.6 7.5	5.6 4.8 4.4 4.9 0.8 6.0 6.8 2.2 7.4 9.7	4.5 4.6 4.2 4.2 3.9 6.1 6.8 2.9 5.1 7.5	4.0 4.3 3.7 3.9 2.1 6.5 6.8 5.1 4.5 5.2	3.7 4.7 4.5 4.9 1.8 5.2 5.2 5.0 3.0 5.2	2.6 3.3 3.0 2.9 4.1 4.6 4.4 5.4 2.3 4.3	3.2 4.4 3.9 4.0 3.2 6.5 6.5 6.5 6.3 1.9 4.7
GDP by sectors (ann. % chge., seat Agriculture Industrial Mining Manufactures Construction Electricity, gas and water Services Retail, restaurants and hotels Transportation and communications Financial, insurance and real-estate Community and personal	sonally-a 3.4 4.2 3.5 4.0 6.0 2.8 4.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4	adjusted, -1.5 1.7 2.0 1.4 3.3 1.7 4.0 2.8 7.1 5.8 1.9) 4.9 5.0 2.4 4.7 7.3 5.5 4.9 3.7 9.1 5.4 2.9	2.0 1.4 0.2 1.0 2.1 4.0 4.4 2.7 8.7 5.0 2.4	2.1 1.9 1.7 1.2 4.4 3.2 3.4 3.4 5.4 4.3 1.0	0.7 0.9 -0.8 0.2 2.6 5.2 3.9 1.8 7.9 4.9 2.3	1.9 1.1 1.5 0.8 1.3 3.1 3.9 2.4 7.4 4.7 2.1	3.6 1.6 -0.2 1.5 2.1 2.9 4.7 3.2 9.5 5.3 2.4	2.1 1.8 0.3 1.5 2.6 4.7 5.0 3.3 10.0 5.3 2.7	4.5 2.4 1.2 2.2 3.9 2.8 4.0 3.3 7.1 4.3 1.8	0.8 1.9 1.5 1.2 4.6 3.1 3.3 6.3 4.4 1.6	2.0 1.1 2.1 0.3 4.1 3.3 2.6 3.2 3.8 4.3 -0.7	1.0 1.9 2.0 1.3 5.0 3.4 3.5 3.9 4.4 4.2 1.5

eop dpb FRPS

end of period dollars per barrel Financial Requirements of the Public Sector, % of GDP not available **Bold** figures are forecast

na Note:

1 2 3

Core index that does not include education Accummulated, last 12 months To the private sector, includes Hipotecaria Nacional



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