# Inflation Report October – December 2007 and Monetary Program for 2008



BANCODEMEXICO

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#### BOARD OF GOVERNORS

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Unless otherwise stated, this document has been prepared using data available as of January 29, 2008. Figures are preliminary and subject to change.

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#### Introduction 1.

During the fourth quarter of 2007, world economic activity lost momentum and the balance of risks for 2008 deteriorated, in terms of both growth and inflation. In the case of the U.S., the latest information suggests a sharp reduction in the growth rate during that period. For 2008, the adjustment in the U.S. residential sector, in addition to its direct effect on productive activity, is expected to reduce households' real estate wealth. The latter, together with a weakening labor market and the increase in gasoline prices, could contribute to reduce household expenditure. The mortgage sector crisis has deteriorated financial conditions, exacerbating risks of a slowdown of aggregate demand in the U.S. All of the above increases the probability of a recession in that country.

The worsening of inflation prospects worldwide is mainly associated with price increases in food commodities and with new pressures on energy prices. In advanced economies, the effect of the increase in food prices on inflation has gained relevance in the last months. Nonetheless, inflationary pressures stemming from the dynamism of aggregate demand have decreased due to the phase of the cycle these economies are currently undergoing. As a result, longterm inflation expectations have remained well anchored. As for emerging market economies, the effect of the increase in food prices has been exacerbated by the high weight of foodstuffs in their consumption baskets. The latter, together with the vigorous growth recorded by several of these economies, has raised inflationary pressures.

During the fourth quarter, the uncertainty in international financial markets increased. The prospects of an additional hike in delinquency rates and foreclosures in the subprime mortgage market in the U.S., the announcement of significant losses in some commercial banks and securities insurance companies, the uncertainty regarding the magnitude of possible further losses in these and other financial institutions, and contagion to other segments of financial markets originated by these problems, among other factors, contributed to deteriorate financial market conditions.

Under this scenario, on the one hand, several central banks took actions to put short-term funding markets back in order. These measures included considerable liquidity provision to markets -together with efforts to improve their operations- and joint actions by different central banks which included introducing new foreign exchange schemes between some of them. On the other hand, various central banks have also reduced their reference rates, particularly the U.S., while others have stopped increasing them in order to lessen the effects that a greater astringency in credit markets could have on the rest of the economy. Although these measures contributed to diminish turmoil in financial markets, by the end of January 2008, uncertainty prevailed. The outlook of a weakening in economic activity and higher inflationary pressures worldwide have increased the challenges for monetary policy.

The turmoil in international financial markets has affected emerging market economies' financial conditions. The sovereign debt spreads of these countries have increased in the last months. Emerging economies' stock markets



showed a generalized decline at the beginning of 2008, in many cases exceeding the losses observed in advanced economies' markets.

During the fourth quarter of 2007, economic activity in Mexico grew moderately in annual terms, close to previous quarters' observed figures. Nonetheless, with seasonally adjusted data, this expansion meant a lower quarterly percentage change of GDP than those observed during the second and third quarters of the year. The lesser expansion of aggregate expenditure at a quarterly rate mainly reflected the deceleration of demand from the U.S. On the other hand, the reduced expansion of domestic demand and, particularly, of private consumption, was influenced among other factors, by the lesser growth of the wage bill. The slowdown in consumption is evidenced by a slower rate of growth of consumer credit.

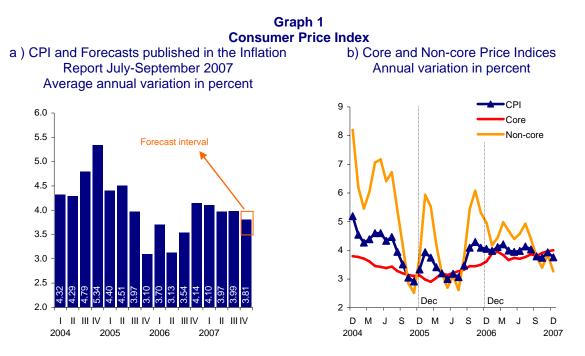
The increase in international prices of grains and other foodstuffs, such as dairy products, have affected significantly the domestic prices of various food products that use them as raw materials. In December, inflation of processed foodstuffs was 7.52 percent, therefore influencing core inflation (under its previous definition, which excluded education) to close the year at 4 percent. Nevertheless, and mainly because of both a reduction in vegetables prices (which are very volatile) and a freeze decreed by the Federal Government in gasoline, gas, and electricity prices for the last three months of the year, during the fourth quarter average annual headline inflation decreased as compared with the previous quarter, falling within the range forecasted by Banco de México in the previous Inflation Report.

Based on available information, from the many trends exhibited by the economy and the analysis exhibited throughout this Report, Banco de México's forecast for inflation in a 2-year horizon remains unchanged as compared to last quarter's Report. Nevertheless, monetary policy continues to face complex economic conditions. Indeed, inflation of commodities at the international level continues to be a cause of concern while risks for world growth, and therefore, for Mexican growth, have deteriorated. Under this setting, Banco de México's Board of Governors decided to keep the monetary conditions unchanged in November, December, and January, after having tightened them in October. The Board will remain attentive to the development of the balance of risks in terms of prospects for inflation, in order to meet the 3 percent target in the forecasted time frame.

# 2. Recent Developments in Inflation

#### 2.1. Inflation

During the fourth quarter of 2007, the average for annual headline inflation was 3.81 percent, figure within the 3.50 to 4.00 percent interval foreseen for the referred period in the previous Inflation Report, thus implying a reduction of 0.18 percentage points as compared with the 3.99 percent average recorded by this indicator during the third quarter of 2007. At the end of 2007, annual headline was 3.76 percent (Graph 1).



The reduction in annual headline inflation recorded during the analyzed period can be attributed to the CPI's non-core component. Nonetheless, these results were partially offset by the rebound in annual core inflation, whose average level increased from 3.81 to 3.96 percent (0.15 percentage points) during the fourth quarter of 2007, as compared with the previous period (Table 1).

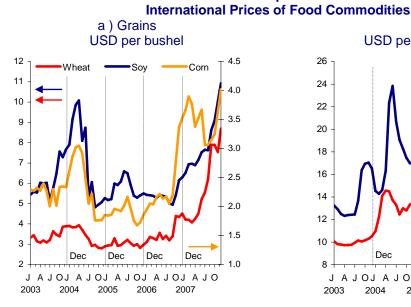
The increase in annual core inflation during the fourth quarter of 2007 was mainly due to the impact that the increase in both grains and milk prices in international markets had on processed foods' prices (Graph 2 and further details on Section 3.3.3).

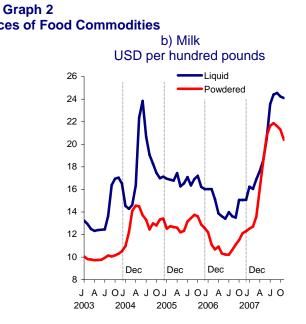
Table 1
<b>Consumer Price Index and Components</b>
Annual percentage change

	Annual percentage change Annual Change					Average Annual Change		
		percent				percent		
	Dec-2006	Sep-2007	Oct-2007	Nov-2007	Dec-2007	III-Q	IV-Q	
PI	4.05	3.79	3.74	3.93	3.76	3.99	3.81	
Core	3.61	3.80	3.91	3.97	4.00	3.81	3.96	
Merchandise	3.38	4.34	4.50	4.52	4.52	4.33	4.51	
Food products	5.10	7.03	7.57	7.63	7.52	6.95	7.57	
Dairy products <sup>1/</sup>	3.55	11.67	12.85	12.16	11.92	10.06	12.31	
Wheat products <sup>2/</sup>	6.83	8.35	9.71	10.10	10.93	7.38	10.25	
Services	3.87	3.21	3.27	3.37	3.43	3.25	3.36	
Housing	3.73	3.01	3.04	3.09	3.01	2.94	3.05	
Rest of services	4.02	3.45	3.54	3.69	3.94	3.61	3.72	
Food services	4.20	4.34	4.49	4.72	4.49	4.46	4.57	
Air transportation	4.48	-2.21	-2.13	-0.57	3.46	-0.16	0.25	
Package travel services	3.70	-1.31	-1.18	-1.45	2.68	-0.64	0.05	
Non-core	4.96	3.78	3.40	3.85	3.27	4.36	3.50	
Agricultural	8.30	3.52	0.48	4.85	3.42	5.88	2.90	
Fruits and vegetables	15.46	-0.60	-6.84	3.33	0.15	3.57	-1.25	
Tomato	10.18	-15.62	-37.35	-9.97	4.64	1.14	-17.65	
Onion	186.09	-32.04	-27.52	-35.87	-51.14	-11.55	-40.75	
Green tomato	77.10	-6.15	-44.45	-49.48	-47.74	-1.48	-47.36	
Livestock products	3.69	6.57	6.02	5.92	5.77	7.44	5.90	
Beef	-0.40	4.32	3.16	3.00	2.82	4.98	2.99	
Poultry	8.39	12.10	9.19	8.40	7.78	14.45	8.46	
Administered and Regulated	3.14	3.23	4.10	2.73	2.37	3.13	3.06	
Administered	4.42	4.16	5.82	3.77	3.41	3.86	4.30	
Low-octane gasoline	5.59	4.42	5.55	5.78	4.79	4.09	5.37	
High-octane gasoline	8.46	8.69	9.91	8.27	5.65	8.37	7.91	
Electricity	5.07	2.72	9.20	3.03	3.00	2.27	4.80	
Gas for residential use	1.53	4.33	2.08	1.33	1.76	4.20	1.72	
Regulated	1.83	2.33	2.40	1.64	1.26	2.42	1.77	
Education	5.71	5.67	5.67	5.67	5.68	5.74	5.67	

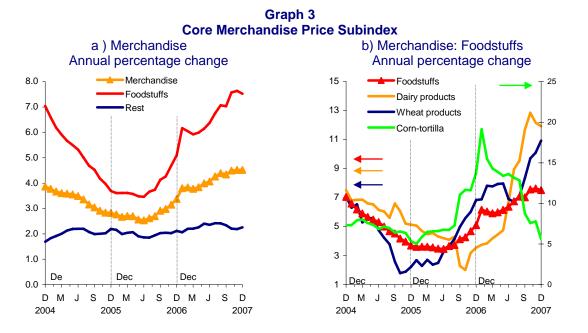
1/CPI dairy products are: Pasteurized and whole milk; Powdered milk; Evaporated, sweetened and condensed milk; Breastmilk substitute; Fresh unripened cheese; Yogurt; Stretched curd/string (*Oaxaca*) and broiler (*Asadero*) cheese; Cream; Unaged *Manchego* cheese and *Chihuahua* cheese; Other types of cheeses; Ice cream; American yellow cheese; and, Butter.

2/CPI wheat products are: Sweet rolls, White bread, Tin loaf, Pastries and cakes, Soup pasta, Popular cookies, Whole-wheat tortillas, Other cookies, Whole wheat, and Cereal flakes.





The average annual growth rate of the core price subindex of processed foods increased from 6.95 to 7.57 percent, from the third to the fourth quarter of 2007 (Table 1). As previously mentioned, this result was influenced by the price increase in wheat and dairy products; however, a factor that smoothed the effects of these increases was the decline in the annual growth rate of corn-tortilla prices (between September and December 2007 the annual growth rate of this item decreased from 8.75 from 5.60 percent, Graph 3). This reduction was the result of a higher base of comparison to estimate the annual growth rate of the core price subindex due to corn-tortilla price increases during the fourth quarter of 2006.

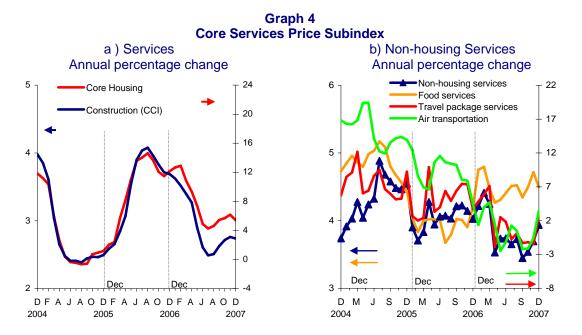


The path of core inflation during the third quarter of 2007 was also influenced, although to a lesser extent, by the performance of the services component, which recorded an annual average variation of 3.36 percent during the mentioned period, as compared with 3.25 percent during the previous quarter (Table 1). This result was due to higher contributions from the components housing and rest of services.

The average annual variation of the housing prices index shifted from 2.94 to 3.05 percent from the third to the fourth quarter of 2007 (Table 1). This result was mainly due to price increases in certain materials for home construction, such as cement (its annual price variation reached 5.74 percent in December, 4.68 percentage points above its figure in September, Graph 4 and Graph 6)

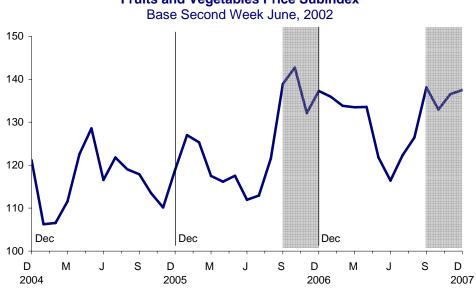
From the third to the fourth quarter of 2007, the average annual variation of non-housing services rose from 3.61 to 3.72 percent. This result was mainly determined by the upward movement in food and tourism-services prices (Graph 4). In both cases, increases were associated with the development of commodity prices. In particular, the jump in many foodstuff prices affected food services prices.

As for tourism services prices, air fares grew at a higher rate due to both price increases in fuel oil and normalization in the airline market after the number of new low-cost airline market participants entering the market stabilized. An additional factor was the higher hotel services prices in Oaxaca, whose occupancy levels had been affected by regional political turmoil.



The non-core price index recorded an annual average variation of 3.50 percent during the fourth quarter of 2007, as compared with 4.36 percent during the previous quarter (Table 1). This reduction was mainly due to the behavior of the agriculture price subindex. Nevertheless, the decline in the growth rate of the regulated prices subindex and the relatively small growth of the administered prices subindex also influenced this reduction (for more details on the behavior of both subindices see Section 3.3.2).

The agriculture price subindex recorded an average annual inflation of 2.90 percent during the fourth quarter of 2007, 2.98 percentage points below the figure recorded in the third quarter (5.88 percent, Table 1). This reduction was due to lower annual growth rates in the prices of both fruits and vegetables, and livestock. Regarding the former, this reduction was the result of a higher base of comparison to calculate their annual growth rates due to the significant increases in the prices of certain vegetables (Graph 5). As for the latter, its reduction was mainly influenced by the decline in the prices of both poultry and beef.

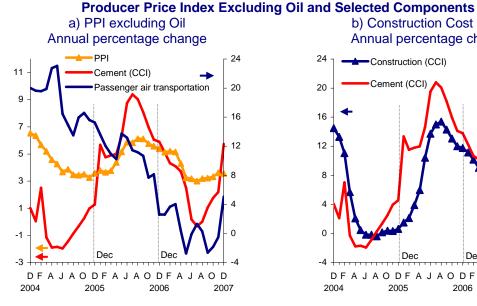


# Graph 5 Fruits and Vegetables Price Subindex

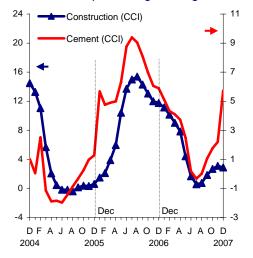
#### 2.2. **Producer Price Index**

The Producer Price Index (PPI) of merchandise and final goods excluding oil recorded an annual variation of 3.50 percent during the fourth quarter of 2007, as compared with 3.14 percent during the previous quarter (at the end of the year, it recorded 3.57 percent, Graph 6). The increase in PPI inflation was mainly influenced by the higher contribution of air fares and cement prices (cement is included in the Construction Cost Index, ICC).

#### Graph 6







## Main Determinants of Inflation

#### 3.1. International Environment

The outlook for the world economy became more uncertain towards the end of 2007, as the slowdown of economic activity worsened, particularly in the U.S., and inflationary pressures rebounded. The latest information suggests that the rate of growth of economic activity in the U.S. declined significantly during the fourth guarter. The Euro and Japanese economies apparently continued to grow during the period October-December, although at a slower pace than in the third quarter. Emerging market economies, on the other hand, continued to grow vigorously, although some of them showed signs of some deceleration. Worldwide inflationary pressures increased at the end of 2007. Although this was mainly the result of price increases in energy and food, in some countries the rebound in inflation also reflected domestic demand growth. The outlook for world economic growth has deteriorated significantly due to the upsurge of additional turmoil in financial markets. The central banks of some of the main advanced economies have adopted measures to face these problems, including concerted actions to expand liquidity and cuts to policy interest rates. These actions eased the turmoil in short-term funding markets to some extent; however, in general, financial market conditions continued worsening.

#### 3.1.1. Global Economic Activity

The U.S. economy exhibited robust growth during the third quarter of 2007 (2.8 percent at annual rate and 4.9 percent at annualized quarterly rate). This result was driven by the growth of consumption, non-residential investment and net exports, as well as by higher inventory accumulation. The impulse given by these factors more than offset the reduction of residential investment, which fell at a sharper rate during this period. During the period July-September, residential investment fell for a seventh consecutive quarter, registering its sharpest fall during the real estate sector's current phase of adjustment.

Leading indicators suggests that GDP grew at a significantly slower rate during the fourth quarter. This result partly reflects the continued adjustment of the real estate market. Also, economic activity seems to have been affected by the vanishing of the effect provided in previous quarters by inventory accumulation and a reduced external deficit. Most recent information also indicates a modest growth of firms' spending in equipment and software, which seems to be influenced by uncertainty regarding the future development of economic activity. Private consumption growth also seems to have slowed, especially at the end of the quarter. As detailed further in this section, analysts expect the weakening of economic activity in the U.S. to aggravate during the first months of 2008, and they consider that the possibility of recession has increased.

Given the downward risks for economic activity, which have escalated due to the recent financial turmoil, the Federal Reserve reduced its target for the federal funds rate by a total of 125 basis points during its meetings of October 31 and December 11, 2007, and January 22, 2008 (for further details see Section 3.1.3 of this Report). In addition, at the end of this year, the U.S. government reached an agreement with members of the U.S. Congress to start up an

3.

economic growth program –based on fiscal incentives for firms and cuts to households' income tax- in order to boost investment and consumer spending.<sup>1</sup>

In the Euro economies, GDP grew above its medium-term trend (0.8 percent on a quarterly basis and 2.7 percent in annual terms) during the July-September 2007 period, boosted mainly by domestic demand growth. Leading indicators for the last three months of the year –investor and consumer confidence indicators, and purchasing managers and retail sales indices, among others-suggest a weakening of economic activity as compared with observed figures during the previous quarter. In Japan, GDP growth during the quarter (0.4 percent on a quarterly basis and 1.9 percent in annual terms) resulted from a rebound in non-residential investment and in exports' growth. During the October-December period, GDP growth apparently slowed, mainly due to a fall in residential investment.

In general, economic activity in emerging market economies remained strong during the fourth quarter of 2007. The latter compensated for the reduced growth of advanced economies; however, risks of an economic overheating prevail in certain economies. In particular, in China, GDP grew at an annual rate of 11.2 percent during the last three months of the year, despite measures to mitigate the higher demand. In Latin America, GDP seems to have grown at relatively high rates during the October-December period, mainly because of price increases in commodities. Analysts expect regional growth for 2007 to be around 5 percent. This figure is slightly below that recorded in 2006, although significantly above the average growth during the nineties. Economic activity in some emerging market economies seems to have started to be affected at the end of 2007 by the impact of the advanced economies' slowdown.

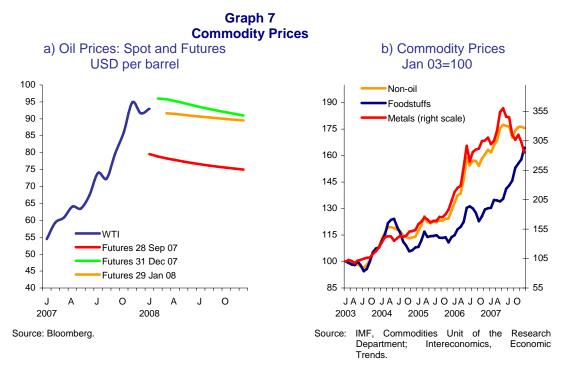
#### 3.1.2. General Trends of Inflation

Oil prices continued on an upward trend during October and part of November. The West Texas International (WTI) crude oil reached 98.9 US dollars per barrel on November 20, 2007.<sup>2</sup> Since then, crude oil prices have exhibited high volatility, fluctuating between 90 and 100 US dollars per barrel (Graph 7). The WTI recorded 90.7 US dollars per barrel on average during the fourth quarter of 2007, 15.5 US dollars above its average in the previous quarter. The Mexican crude oil export mix, on the other hand, averaged 76.9 US dollars during the October-December period, 12.8 US dollars above its average in the previous quarter. Crude oil price increases were influenced by strong demand (as a result of strong growth in emerging economies), a greater-than-expected reduction in the level of inventories, diverse geopolitical risks, and oil supply interruptions caused by adverse weather conditions. Both spot and future oil prices adjusted downwards at the beginning of 2008, mainly as a result of expectations of a greater than expected slowdown of the U.S. economy.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> The program includes the following elements: workers with income a 75,000 USD or less (per individual) and 150,000 or less (per family) income, are eligible to obtain a tax rebate of 300 USD (minimum) and 600 USD (maximum) per individual; and of 600 USD and 1,200 USD (maximum) in the case of a couple with a single tax form. Families are also to be granted a credit of 300 USD for each child. These measures will only be applicable in 2008. The program also includes two incentives for firms: i) a bonus that will allow them to depreciate an additional 50 percent off their investments in equipment and software in 2008; and, ii) small firms will be granted greater incentives for their investments during this year. This program is expected to bring around 150 billion USD to the economy in 2008.

<sup>&</sup>lt;sup>2</sup> The WTI oil recorded new record highs in January 2, 2008, reaching 99.6 US dollars.

<sup>&</sup>lt;sup>3</sup> In January 29, the price of the WTI was 91.6 US dollars per barrel.



The index for non-oil commodity prices published by the IMF continued to increase during the fourth quarter (9.5 percent at annual rate), although at a pace below that observed in the previous quarter (11.2 percent). This increase was mainly attributed to the food component (which accounts for almost 45 percent of the index), whose annual growth rate increased from 16.1 percent during the third quarter to 24.1 percent during the fourth (for further details, see Section 3.3.3 of this Report). The increase in food international prices has partly reflected temporary factors, which have affected its supply, such as bad weather conditions in some countries that are main agricultural commodity exporters. This path has also been influenced by the strong expansion of global demand, which is in turn the result of changes in many developing countries' food consumption patterns, and by the upsurge of new sources of demand for some agricultural goods, such as biofuel production. It is important to mention that metal prices fell during the fourth quarter (-1.9 percent in annual terms), after having increased 11.4 percent during the previous quarter.

The increase in food prices during 2007 was one of the main sources of inflationary pressures in both advanced and emerging economies (Table 2). However, food inflation has escalated more in emerging than in advanced economies. From November 2006 to the same month of 2007, food inflation is estimated to have grown from 7.4 to 16.9 percent in the former, and from 2.5 to 3.5 percent in the latter (Graph 8).<sup>4</sup> Considering the magnitude of the increase in food international prices, inflationary pressures originated by such price increases were relatively small in the case of Mexico (see Section 2.1 of this Report).

<sup>&</sup>lt;sup>4</sup> Food inflation was estimated based on statistics of prices of 40 countries, with data from the OECD and the national statistics agencies. Aggregate statistics were obtained as a weighted average based on each country's share in world GDP, being the latter adjusted according to the country's purchasing power parity. The group of countries used for these calculations accounts for nearly 83 percent of world GDP.

Indeed, during 2007, Mexico recorded one of the lowest levels of inflation in the American Continent.  $^{\rm 5}$ 

Table 2									
CPI and Food Inflation									
Annual percentage change									
	Annual	Inflation	Food Inflation						
	Dec-2006	Dec-2007	Dec-2006	Dec-2007					
America									
United States	2.54	4.08	2.13	4.93					
Canada	1.67	2.38	2.23	1.64					
Argentina	9.84	8.47	10.52	8.60					
Brazil	3.14	4.46	1.23	10.79					
Chile	2.57	7.82	1.28	15.16					
Mexico <sup>1/</sup>	4.05	3.76	6.76	5.83					
Mexico <sup>2/</sup>	4.05	5.70	5.10	7.52					
Venezuela	16.97	22.46	26.04	30.91					
Asia									
China <sup>3/</sup>	2.80	6.50	6.30	18.20					
India <sup>4/</sup>	6.72	5.51	14.86	7.75					
Japan	0.30	0.70	0.81	0.90					
Europe									
Germany	1.37	2.79	2.57	5.65					
France	1.53	2.59	1.79	3.27					
Italy	1.87	2.61	2.69	4.13					
United Kingdom	2.97	2.12	4.47	5.99					
Africa									
South Africa <sup>4/</sup>	5.79	8.42	8.12	13.39					

Source: Statistics agencies of different countries, Bloomberg, and Banco de México.

1/ Total foodstuffs (excluding spirits and tobacco).

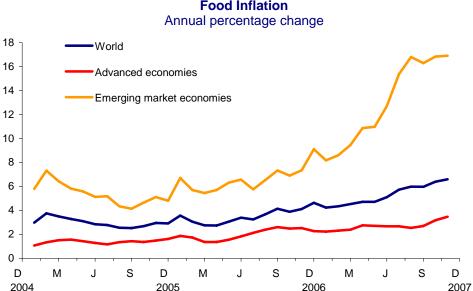
2/ Processed foods (core).

3/ Figures for food inflation for 2007 correspond to November 2007.

4/ Figures for 2007 correspond to November 2007.

In the U.S., headline CPI inflation followed a sharp upward trend during the fourth quarter, reaching an annual rate of 4.1 percent in December. This result was mainly determined by the increase in the prices of energy and food. Core inflation was 2.4 percent at annual rate in December, figure above that observed at the end of the previous quarter, but below its recent maximum level of 2.9 percent registered in September 2006. Although the rebound of inflation has raised concerns and the higher prices of energy continue to be a risk factor, analysts expect inflation to decline in the next months, while long-term inflation expectations have remained anchored at around 2.5 percent. The slowdown of economic activity and the moderate growth of wages, among other factors, have contributed to the aforementioned.

<sup>&</sup>lt;sup>5</sup> The latter was mainly the result of Federal Government actions to face the impact of supply shocks originated by the increase in the international prices of energy and food. Among these actions are the agreement between authorities and producers to stabilize the price of corn-tortillas at the beginning of 2007, and the interruption of the increase in *magna* gasoline and LP gas prices and electricity tariffs during the fourth quarter of 2007.



## Graph 8 **Food Inflation**

Source: Prepared by Banco de México with data from OECD, IMF, and Statistics agencies.

Inflationary pressures in the Euro area increased significantly during the last guarter of 2007, mainly as a result of price increases in energy and food. Headline inflation grew 3.1 percent in annual terms in December, figure above the European Central Bank target (slightly below 2 percent). In Japan, the consumer price index recorded positive figures in the last three months of the year, reaching 0.7 percent in December.

In various emerging and developing economies, inflation rebounded during the fourth quarter. The main factor behind this result was the price increases in energy and food. Food price increases have a larger impact on emerging economies than on advanced economies, due to their larger weight in the former's price indices. This was further aggravated by the significant growth of demand in some of these countries. Analysts emphasize the risks of an overheating of the Chinese economy, where annual CPI inflation reached 6.5 percent in December. Under this context, the People's Bank of China raised interest rates in December for a seventh time during the year and increased its cash requirements on several occasions.<sup>6</sup> The Latin American economies were also affected by the higher inflationary pressures during 2007, leading the central banks of many of them (Colombia, Chile, and Peru, among others) to tighten their monetary policy stances.

#### 3.1.3. **Financial Markets**

At the end of 2007 and the beginning of 2008, turmoil rose again in various advanced economies' credit markets. Although the central banks of these economies implemented many actions to help ease problems on short-term funding markets, the growing number of problems in other credit markets increased the risk of significantly affecting economic activity. The aforementioned

On December 20, one year loan rates increased 0.18 percent, reaching 7.47 percent, its highest level in nine years. One year bank deposit rates rose 0.27 percent, reaching 4.14 percent.

took place in an environment of increased world inflationary pressures, therefore limiting monetary policy's scope for action.

The measures implemented by some central banks during the third quarter of 2007 to address the problems observed in credit markets increased liquidity and calmed markets temporarily. Nevertheless, interbank premia rebounded again in November. The latter basically responded to the announcement of considerable losses by some banks and securities insurance companies, in a context of a further deterioration of the subprime mortgage market and greater uncertainty about the risks in other markets, and on the possible additional losses of financial institutions (Box 1).

The Federal Reserve responded to this new phase of financial market turmoil by implementing measures to:

- i) Supply liquidity to markets and improve their performance.
- ii) Act jointly with other central banks on foreign exchange swaps, in order to lessen problems regarding US dollar funding.
- iii) Change their monetary policy stance.

In order to mitigate the funding problems in interbank markets, the Federal Reserve announced in December a new instrument known as Term Auction Facility (TAF). The TAF offers funding in similar conditions to those of the discount window. Nevertheless, it has two advantages. First, it does not carry the stigma associated with the discount window. Second, it reduces the problems associated with monetary operations, because liquidity is supplied according to pre-established amounts. On the other hand, and just like the discount window, this measure allows the Federal Reserve to supply liquidity through a wider range of counterparts and collateral than through open market operations.

Additionally, foreign exchange swap lines were established between the Federal Reserve, the European Central Bank, and the Swiss National Bank so that the banks of these countries could have access through their central banks to funding in US dollars. The use of these schemes to increase liquidity was coordinated with similar operations in their own currencies by the Bank of Canada and the Bank of England.

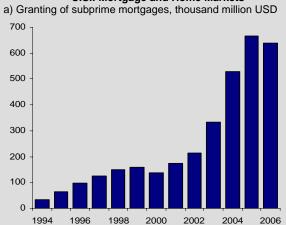
Based on the premise that measures to supply liquidity, although necessary, are not enough to eliminate the financial restrictions that affect the economy, and given the risk of an additional weakening of economic activity, the Federal Reserve Bank reduced its federal funds rate by 25 basis points in its October and December meetings. In view that financial market conditions deteriorated steadfastly and risks of slower economic growth escalated, in a non programmed meeting, the first since September 11, 2001, the Federal Reserve decided to cut its target for the federal funds rate by 75 additional basis points to 3.5 percent.

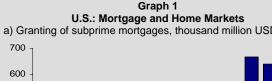
#### Box 1 **Global Liquidity Crisis and Central Banks' Reaction**

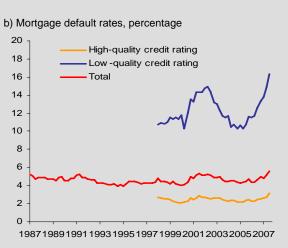
The low interest rates prevailing in the main economies over the last years, financial innovation in complex products, and the globalization of the financial system paved the way for the liquidity and credit problems that have affected global markets since the second half of 2007. These factors allowed, and to a certain extent promoted, the search for more profitable investment alternatives and, sometimes, the mispricing of risks associated with these investments.

One market where the low level of risk aversion was more evident was the real estate market in the U.S. The boom of the real estate sector was reflected in significant increases in home prices, which doubled in some regions between 2001 and 2006,. Under this context, people that traditionally did not have access to credit were able to obtain mortgage loans under very favorable terms. Financing people with hardly any or incomplete documentation regarding their payment capacity became common and credits were granted with very small down payments (Graph 1a). Most of these low-quality mortgage loans, known as subprime mortgages, were granted at interest rates that were low during the first years of the credit, but that later were adjusted upwards. The viability of these loans thus depended on the continuation of rising home prices.

The slowdown of the home market in the U.S. that began in mid-2006 resulted, months later, in an increase in subprime loan default rates (Graph 1b and 1c). Currently, one out of five of these credits linked to interest rates adjustment is on moratorium.



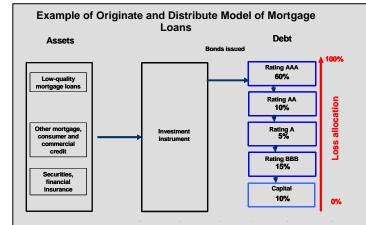




c) Annual change of S&P/ Case-Shiller Home Price Index, percent

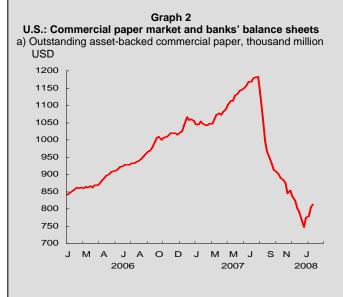


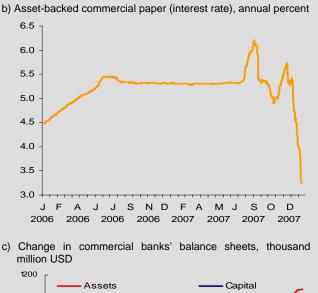
Another factor that contributed to the rapid growth of subprime mortgages was that these were granted under an originate and and distribute model. Under this model, the institutions that granted mortgage loans -usually specialized banks and nonbank financial institutions- grouped them with other similar loans and sold them to get rid of the default risk. Buyers of these loans -tipically the main commercial banks and investment bankssometimes reclassified these subprime mortgage-backed instruments with other credits in order to create new financial instruments. These investment instruments -known as structured products- also included credit and liquidity guaranties granted by both the same banks offering these products and by financial insurance companies. These products were usually divided in tranches with different risk and yield exposures. This combination of credits led to new financial assets with features that adjusted to the needs of the final investors.



The complexity of some of these structured products and the difficulties to determine the value of the assets that backed them up, led many investors to fully rely on evaluations by third parties, particularly credit rating agencies. As losses related with subprime mortgages escalated, these instruments had more losses than expected given the rating granted previously to these securities.

Investors' loss of confidence led to the settlement of risky assets, which not only included subprime mortgage-related instruments. Markets of both asset-backed commercial paper and merger and acquisition-funding issued notes were particularly affected (Graph 2a). The difficulty to place these types of assets in the market led banks that had previously granted credit lines backing them up to absorb them as part of their balance sheets. The higher number of risky asset holdings, together with the losses from the mortgage loans they had granted and kept in their balances, led to a sharp reduction in many banks' capitalization indices (Graph 2c). The complexity of all of these products complicated both their valuation and the accurate determination of each bank's degree of exposure.



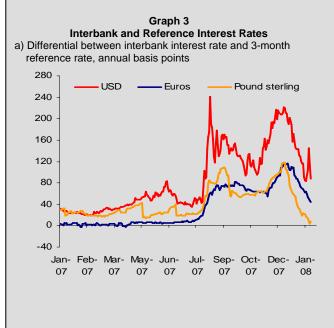




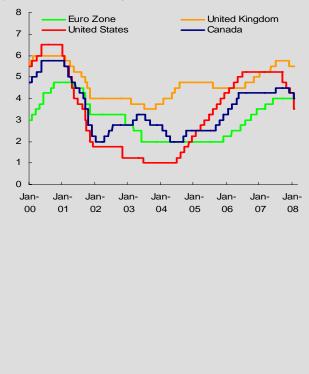
The significant deterioration in banks' balances and the uncertainty regarding their losses made financial institutions more cautious in terms of how they handled their liquidity and who they granted loans. This situation raised significantly the cost of credit, particularly the short-term interbank funding rate for financial institutions in both the U.S. and other developed countries. The increase in interbank funding rates in relation to less riskier assets reached unprecedented levels in the last years (Graph 3a).

In view of the liquidity problem in money markets, the central banks of various countries took measures to address this situation. In particular, the Federal Reserve increased the range of collateral for granting liquidity to banks, lowered the reference rate, and extended the terms for these loans. It also created a new facility of term financing for pre-established amounts and under conditions similar to the discount window, known as Term Auction Facility or TAF. The central banks of the Eurozone and the United Kingdom also extended their terms for liquidity operations and flexibilized their collateral requirements. Foreign exchange swap lines were established between the Federal Reserve, the European Central Bank, and the Swiss National Bank to provide short-term funding markets with US dollars. These measures calmed markets temporarily.

To lessen the effects on the economy of the deteriorating credit conditions, some of these central banks also took monetary policy actions. The Federal Reserve reduced its reference rate for the first time in four years by a total of 175 basis points. The Bank of England reduced its funding rate by 25 basis points, and the Bank of Canada by 50 basis points (Graph 3b).



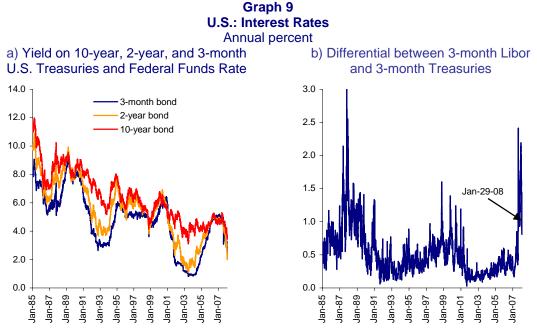
b) Reference rate, annual percent



Other central banks also loosened their monetary policy stances. The Bank of England adjusted its policy rate downwards in December (by 25 basis points) for the first time since 2005, and the Bank of Canada cut its reference rate by a quarter of a percentage point both in December 2007 and January 2008. The European Central Bank left its reference rate unchanged, despite the increase in inflationary pressures, due to concerns over the potential impact of the problems in credit markets on GDP growth. The Bank of Japan also left its policy rate unchanged during the fourth quarter of 2007 and in its meeting of January 2008. Although the crisis in financial markets has not affected the Japanese economy significantly, it has contributed to raise doubts about the end of deflation in that country.

The actions adopted by the main central banks to face the liquidity crisis contributed to reduce uncertainty in short-term funding markets, allowing interbank interest rates to decline significantly. Nevertheless, by the end of January 2008, the differential between interbank rates and the yield on U.S. Treasuries was still at record highs (Graph 9). Besides, the deterioration of financial conditions in other markets continued.

Long-term interest rates in the U.S. decreased at the beginning of the quarter in response to investors' search for low risk assets. In December, they slightly rebounded as uncertainty was contained through announcements of additional actions by the central banks. However, by the end of the quarter and at the beginning of 2008, the deterioration in the outlook for economic growth in the U.S. and expectations of additional monetary loosening measures during 2008



exerted downward pressures on long-term interest rates, with 2-year long-term rates falling the most. As a result, the yield curve moved downwards.

Source: Bloomberg.

Source: Bloomberg.

Although stock markets in advanced economies fluctuated sharply during the fourth quarter, at the end of the year many of them were significantly below the level reached at the end of September. During January 2008, stock markets of these countries continued on a downward trend in view of renewed concerns over the performance of economic activity in the U.S., and only recovered slightly after the announcement of a 75 basis points cut in the federal funds rate. From the end of September 2007 to January 29, 2008, the Standard & Poor's index (U.S.), the Nikkei (Japan), and the FTSE (United Kingdom), fell 10.8 percent, 19.7 percent, and 9 percent, respectively. During the last guarter of 2007, stock markets of emerging economies exhibited mixed results. Some of them -including those of India, Russia, and Brazil- ended their period with positive returns, while others -mainly those of Eastern Europe- registered losses. Nevertheless, in January 2008, stock markets of emerging economies fell on a generalized level, and, in many cases, more than in advanced economies, although several of them have partially recovered after the cut of the federal funds rate.

The U.S. dollar continued to depreciate during the fourth quarter, although at a slower pace than in the previous quarters (depreciation, measured by the Federal Reserve's effective exchange rate index for the US dollar against the main currencies, was 1.5 percent during the fourth quarter and 10.1 during 2007).<sup>7</sup> At the beginning of 2008, this index was still depreciating.

Turmoil in credit markets of advanced economies was reflected in wider sovereign risk spreads for emerging market economies. The EMBI Global

<sup>&</sup>lt;sup>7</sup> The Federal Reserve's effective exchange rate index is the dollar's average foreign-exchange value against the euro, the yen, the Canadian dollar, the pound sterling, the Swiss franc, the Australian dollar, and the Swedish crown, which is weighted according to the level of importance of the corresponding trading partner with the U.S.

Composite reached a record low at the beginning of June 2007. From that date up to the end of December, this index increased by 104 basis points (41 points during the fourth quarter). The EMBI Global continued to increase in January, reaching, on January 28, 35 basis points above its level at the end of 2007. These results show that the worsening financial conditions in industrialized countries have started to contaminate emerging economies.

#### 3.1.4. Outlook

The long period of financial volatility has deteriorated the outlook for world growth for 2008. Both advanced and emerging economies are expected to lose strength.

The balance of risks for world economic activity is tilted downwards. The real estate market in the U.S. is expected to continue to worsen, due to the high level of home inventories and the risk that home prices continue falling. The adjustment in the real estate sector could have a greater effect on economic activity, due partly to the impact of a lower value of real estate assets on households' balances, and therefore, on consumption. The increase in oil prices and the slower rate of growth of job creation are additional factors that slow down consumption. Moreover, the deteriorating financial conditions originated by the mortgage sector crisis imply risks for demand.

Greater problems in the financial sector should not be discarded. Despite the measures implemented by the U.S. authorities, delinquency and foreclosures rates for mortgage credits, especially high-risk credits, are expected to continue to increase, given that many debtors will face higher interest rates in their mortgages as specified in their original contracts.<sup>8</sup> The contagion of mortgage market's problems to other types of assets has complicated the outlook. Under these conditions, the probability of recession has increased.

The weaker conditions in the U.S. economy are expected to affect the path of economic activity in other industrialized countries and in developing countries as well. Moreover, there are risks of a greater than the currently expected impact of U.S. reduced growth on the rest of the world.

A world economic slowdown is expected to contribute to alleviate the inflationary pressures originated by the increase in oil and food prices. However, risks are tilted upwards and the possibility of a higher pass-through of price increases in primary goods to core inflation has escalated. Inflationary risks are higher for emerging market economies, as many of them could face an outlook of rapid growth and higher prices of commodities, in combination with price indices more sensitive to any increase in food prices. The outlook of higher risks for inflation and lower risks for economic activity has increased the challenges for monetary policy authorities in both industrialized countries and emerging economies.

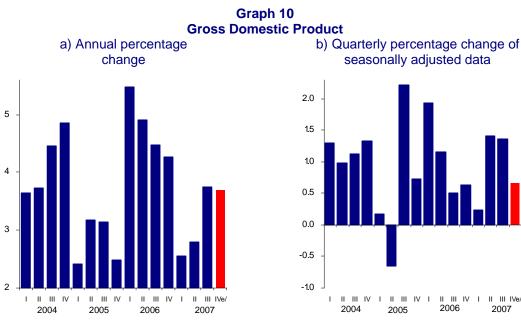
<sup>&</sup>lt;sup>8</sup> In order to help the increasing number of subprime mortgage debtors that will face higher interest rates, the U.S. Treasury announced at the beginning of December a debt-support program for all debtors with stable income and relatively-clean payment records, that are unable to pay their mortgage loans under the higher interest rates. This program, which is not supported by government resources, is based on three elements: 1) increased efforts to reach debtors facing difficulties to pay their mortgage loans; 2) developing new mortgage products that can allow a greater number of debtors to keep their homes; and, 3) implementing a process that can solve rapidly and efficiently the problems of a high number of loans subject to interest rate increases.

Although the US dollar depreciation and the weakening of economic activity have helped to improve the U.S. external balance, the magnitude of the external imbalance is still very high. In particular, growth in many economies is still supported considerably on maintaining their external current account surpluses. Thus, the adjustment in current account disequilibria could generate further turmoil in financial markets.

Regardless of the aforementioned, the world economy's capacity to face shocks has strengthened significantly in the last years. For example, the U.S. corporate sector is in a sound financial position and, in general, the variety and flexibility of the U.S. economy make it more capable of recovering. Throughout the years, many emerging market economies have implemented measures that have enabled them to strengthen their economic foundations, thus making them less vulnerable to the different cyclical phases of the world economy.

#### 3.2. Aggregate Demand and Supply in Mexico

During the fourth quarter of 2007, economic activity in Mexico recorded moderate growth in annual terms, close to figures recorded during the previous quarter. Nevertheless, this growth implied, with seasonally adjusted data, that GDP grew at a quarterly percentage rate lower than that observed during the second and third quarters of the year (Graph 10). The slower growth at quarterly rates was observed in indicators of both aggregate demand and production.



e/ Estimates

Source: INEGI. Seasonal adjustments by Banco de México.

In general, the main aspects characterizing aggregate demand during the fourth quarter were: i) domestic demand grew at a rate close to that observed during the third quarter; ii) growth of private consumption spending was below that recorded during the previous quarter (Graph 11a);<sup>9</sup> iii) investment annual growth

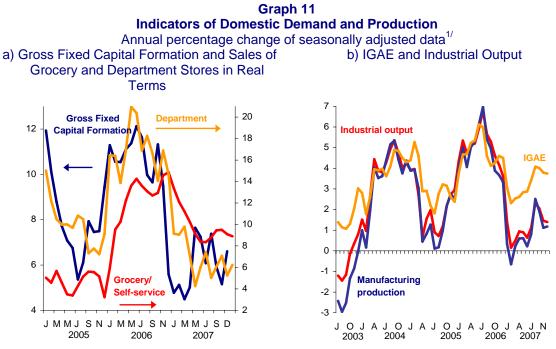
<sup>&</sup>lt;sup>9</sup> Private consumption indicators reveals that ANTAD sales in real terms grew at an annual rate of 8.7 percent during the fourth quarter, as compared with 9.2 percent during the third quarter and 10 percent during the first three quarters of the year.

was above that recorded during the third quarter, in line with the significant expansion in financing to firms (see Section 3.4.2 of this Report);<sup>10</sup> and, iv) exports of goods and services grew at a slower annual rate.

The moderate growth of GDP during the fourth quarter was mainly attributed to the slower expansion of external demand. Other aspects of external conditions that were not favorable for growth of both domestic expenditure and national production also added to the aforementioned. In general, external conditions were characterized by: i) the slowdown of demand from the U.S. worsened -as reflected by the weak results of automotive exports- and reduced growth in the rest of non-oil exports to the U.S.; ii) in annual terms, revenues from workers' remittances remained practically unchanged during the fourth guarter; therefore, at the margin, they did not contribute to expand private consumption expenditure; and, iii) the weakening of confidence indicators in the U.S. and the significant downward revision of forecasts for economic activity in that country affected negatively expectations regarding the Mexican economy and confidence and business climate indicators. The aforementioned did not contribute to increase private sector expenditure in the country. The results of Banco de México monthly survey conducted among private sector's analysts (both national and foreign) indicate that during the fourth quarter of 2007, external conditions were the main factors affecting negatively economic activity in Mexico.<sup>11</sup> However, during the fourth guarter, the oil trade balance surplus increased as compared with its previous quarter's level and external demand from non-U.S. countries increased significantly.

<sup>&</sup>lt;sup>10</sup> During the October-November period, investment is expected to have grown 7.5 percent in annual terms, after having grown 6 percent in both the third guarter and the first nine months of that year.

<sup>&</sup>lt;sup>11</sup> During the fourth quarter of the year, external conditions (weak external markets and world economy; unstable international financial conditions; level of external interest rates; and a possible reduction in the supply of foreign resources) accounted for 49 percent of responses regarding the main factors that could limit the rate of growth of domestic economic activity in the next months. This percentage compares with 37 and 27 percent during the third quarter and first half the year and with 26 percent during the second half of 2006. For more details, see Banco de México Survey of Private Sector Economic Analysts Expectations.

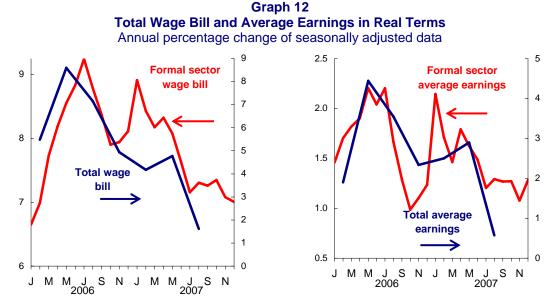


Source: INEGI for data on Investment; IGAE, Industrial and Manufacturing Output, and ANTAD for data on sales of Grocery and Department Stores.

1/ Seasonally adjusted data and 2-month moving average. In the case of (a), seasonal adjustments by Banco de México.

A factor that contributed to reduce consumption growth during the fourth quarter 2007 was the slowdown trend that the total wage bill in real terms recorded for both the total economy and the formal sector (Graph 12). This trend is attributed to more moderate increases in real earnings and employment.<sup>12</sup> On another front, during the reference period, financing to private consumption expenditure grew at high annual rates, although below those recorded during the third quarter, in line with consumption results (see Section 3.4.2 of this Report).

<sup>&</sup>lt;sup>12</sup> In the formal sector, the total wage bill in real terms grew at an annual rate of 7.2 percent during the fourth quarter of 2007, after having grown 8.5, 8 and 7.3 percent during the first, second, and third quarters of the year. The total wage bill in the Mexican economy is expected to have grown close to 1.6 percent in real terms during the third quarter, as compared with 4.2 and 4.8 percent during the first and second quarters of the year.



Source: Prepared with data from IMSS and INEGI (Occupation and Employment Survey (*Encuesta Nacional de Ocupación y Empleo*, ENOE) using earnings per hour-worked, hours worked per week, and remunerated employees. Seasonal adjustments by Banco de México.

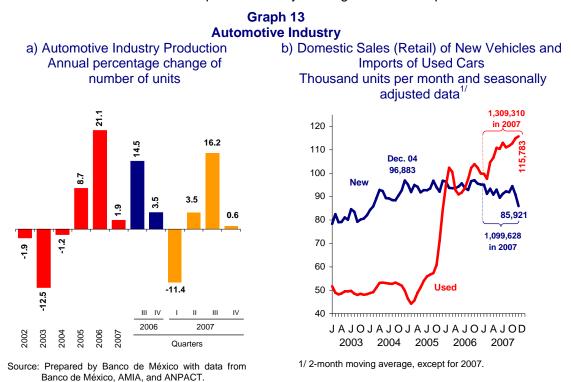
As for aggregate supply, during the fourth quarter of 2007, two main trends were observed: on the one hand, GDP grew at annual rates close to those observed during the third quarter;<sup>13</sup> and, on the other, imports of goods and services grew significantly. GDP growth during the reference period resulted from increases in the three sectors that compose it (services, industrial, and agricultural sectors), being the highest in the services sector.

Just like in the third quarter of 2007, the industrial sector recorded small growth (Graph 11b).<sup>14</sup> This result was basically attributed to the development of its most important sector, the manufacturing industry. Growth of this activity partly reflected the slowdown of the terminal automotive industry as compared to the third quarter (Graph 13a). This result was due to the combination of a decline in the number of vehicles assembled for the domestic market and a modest increase in those for the external market. The latter was the result of two factors: a fall in sales of vehicles in the United States, the main export market for Mexican-assembled vehicles, and a significant increase in the number of car exports to non-U.S. markets. During the fourth quarter of 2007, domestic sales of new vehicles in Mexico fell 5.5 percent in annual terms. With seasonally adjusted data, in December 2007, monthly domestic sales of new vehicles were below the figures recorded during the same month in 2004 (Graph 13b). This result reflects an increase in imports of used vehicles, whose number, in 2007, exceeded by 20

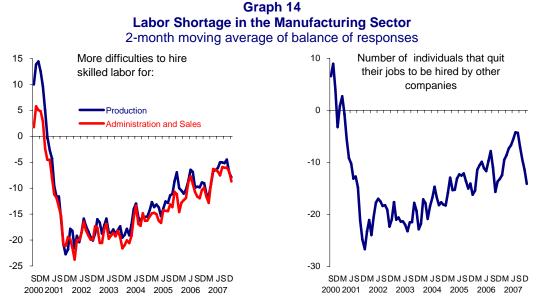
<sup>&</sup>lt;sup>13</sup> Regarding GDP indicators, the Global Indicator of Economic Activity (*Indicador Global de la Actividad Económica*, IGAE) recorded an annual increase of 4.3 percent during the period October-November 2007 (3.3 percent during the first eleven months of the year), as a result of increases in its three sectors: industrial (2 percent); services (5.1 percent); and agricultural (8.4 percent).

<sup>&</sup>lt;sup>14</sup> Industrial production grew 2 percent during the period October-November 2007 (1.7 percent during the third quarter), influenced by the manufacturing sector, which grew 1.9 percent (1.6 during the third quarter). The latter figure was the result of a 5.2 percent increase in the automotive industry (13.5 percent during the third quarter) and a 1.2 percent increase in the non-automotive manufacturing industry (annual fall of 0.6 percent during the third quarter). Thus, during the first eleven months of 2007, the industrial sector and its manufacturing component grew at very small rates, 1.2 and 0.9 percent, respectively. During that period, the automotive industry and the non-automotive manufacturing industry grew 3.7 and 0.3 percent, respectively.

percent that of new vehicles sold in the domestic market. The latter not only has affected negatively automotive production, but also it has contributed to increase the number of old vehicles in the country, with negative implications in terms of both fuel-consumption efficiency and high levels of air pollution.



The aforementioned results, together with various indicators for economic activity, allow for estimating that GDP might have grown close to 3.7 percent in annual terms during the fourth quarter of 2007. This result would imply that, in 2007, GDP grew between 3.2 and 3.3 percent. The slower growth of economic activity during the fourth quarter is clearly reflected in the results using seasonally adjusted data, as GDP is expected to have grown at a quarterly rate of around 0.7 percent (Graph 10b), after having recorded 1.4 percent on average during the second and third quarters of the year.



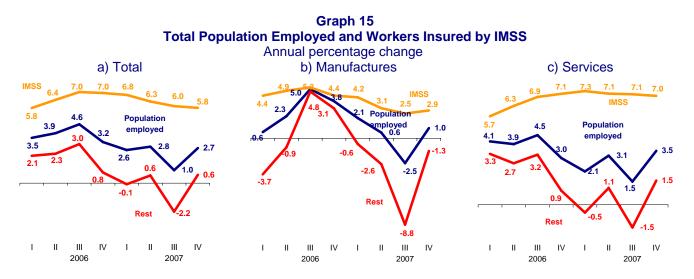
Source: Results obtained from Banco de México's Monthly Survey on Manufacturing Activity. Balance of responses refers to the weighted percentage of companies mentioning that had face difficulties to hire labor (or companies mentioning an increase in the number of workers that quit their jobs in order to start working for other companies), minus those mentioning that had face less difficulties to hire labor.

The rate of growth of economic activity during the fourth quarter of 2007 and, in general, throughout the year, did not imply pressures on the economy's production capacity that might have become a source of inflationary pressures. The latter considering the following: i) both GDP and domestic expenditure grew moderately during the reference quarter and during the entire 2007 and therefore, the gap between the rate of growth of both items did not widened; ii) GDP grew close to its potential rate during the year, while different indicators of GDP gap continued, in general terms, at levels close to zero; iii) in the particular case of the manufacturing industry, it grew at a small rate, due mainly to external demand. Various manufacturing indicators prepared by Banco de México show that in 2007 the manufacturing sector did not face skilled labor shortage problems that would imply wage pressures (Graph 14); iv) in recent years, Mexico's production capacity has gradually strengthened, mainly as a result of an increase in investment expenditure. This expansion has allowed to raise more capital and to make it more modern and productive; and, v) the small deficit of the current account of balance of payments in 2007 (the same as the small increase in the non-oil trade balance deficit), and the results exhibited by the exchange rate of the peso vs. the US dollar, are additional indicators that suggest that during the year no demand pressures arose that could have affected significantly the external accounts, the exchange market, or domestic prices.

#### 3.2.1. Employment

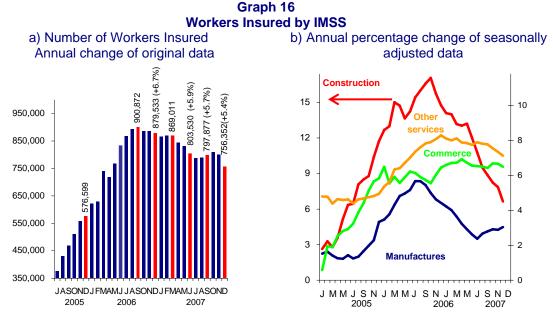
The smaller growth rates of GDP during 2007 as compared to 2006 were accompanied by a smaller growth rate of demand for jobs. This trend was observed in the results of the Occupation and Employment Survey (*Encuesta Nacional de Empleo*) from INEGI, which covers the total labor market in the country (Graph 15). On another front, the formal occupation indicator, represented by the number of workers insured by the IMSS, although it grew at a rate above

that of GDP, it also recorded a slowdown during the year. The results of this indicator might be reflecting IMSS greater fiscal efforts on Mexico's firms.



Source: INEGI and IMSS. Employed Population data was obtained from the Occupation and Employment Survey (*Encuesta Nacional de Ocupación y Empleo*, ENOE) from INEGI and includes the secondary and services sectors. Both government and international organizations are excluded from the latter. Figures for Employed Population for the fourth quarter of 2007 are estimated by Banco de México. IMSS data includes the same sectors and the item Rest is obtained by deducting the number of workers insured by the IMSS from the employed population from the ENOE.

At the end of 2007, the number of workers insured by the IMSS (permanent and temporary in urban areas) was 14,721,910, which implied an annual increase of 756,352 workers (5.42 percent) (Graph 16a). As revealed by the corresponding figures at the end of 2006 (879,533 workers and 6.72 percent), this indicator reduced its rate of growth during the year. The variation recorded by this indicator of formal employment in 2007 implied an increase of 374,515 permanent jobs (3.3 percent annual increase) and 381,837 temporary jobs (15.2 percent increase) in urban areas. The 50.5 percent growth in the number of workers insured by the IMSS corresponded to temporary workers in urban areas, although the share of the latter in the total number of workers insured by the IMSS was only 19.7 percent. This result could be signaling that, given the rigid conditions faced by firms, they are trying to make their productive processes more flexible by employing workers in temporary positions. As for job creation in the formal sector, the tertiary sector recorded higher growth than the industrial sector (Graph 16b). The most noteworthy growth was recorded by commerce (181,629 workers and 6.6 percent in annual terms) and services for firms, individuals, and households (287,377 workers and 9 percent). In the industrial sector, the number of workers insured by the IMSS grew at a smaller rate (by 209,308 workers and 3.9 percent), especially in the manufacturing industry (by 119,162 workers and 3 percent).





Source: IMSS. Seasonal adjustments by Banco de México.

#### 3.2.2. External Sector

The moderate growth of both aggregate demand and GDP during the fourth quarter of 2007 resulted in a small deficit for both the trade balance and the current account of the balance of payments. The higher surplus in the oil products trade balance (which reflected the significant rebound in the price of the crude oil export mix) added to the aforementioned results.<sup>15</sup>

During the fourth quarter of 2007, Mexico's external sector was characterized by the following:

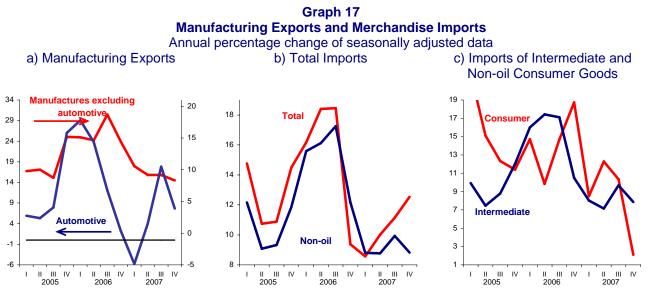
- i) Non-oil exports grew at a smaller rate than in the third quarter.<sup>16</sup> These results are attributable to the slowdown of manufacturing exports (Graph 17a).<sup>17</sup>
- ii) The smaller growth of non-oil exports responded to the slowdown of external demand from the U.S., as industrial activity in that country started to grow at a slower rate (Graph 18a and b). The reduced growth of exports to the U.S. also responded to a weakening in automotive exports, as a result of a fall in U.S. car sales. In contrast, exports to the rest of the world continue to grow significantly, thus increasing their

<sup>&</sup>lt;sup>15</sup> The oil products balance recorded a surplus of 5.230 billion US dollars during the fourth quarter of 2007, while 4.638 billion US dollars during the third quarter.

<sup>&</sup>lt;sup>16</sup> During the fourth quarter of 2007 total exports grew at an annual rate of 15.2 percent (11.1 percent during the third quarter and 8.8 percent during the entire year). This rate resulted from increases of 52.2 percent in oil exports (11.9 and 9.9 percent during the third quarter and during the entire year, respectively) and of 9.7 percent in non-oil exports (11 and 8.6 percent during the third quarter and during the entire 2007, respectively).

<sup>&</sup>lt;sup>17</sup> During the fourth quarter, manufacturing exports grew at an annual rate of 8.9 percent, rate lower than that observed during the third (10.9 percent). This result is attributed to increases of 7.4 percent in automotive exports (18.4 percent during the third quarter) and of 9.4 percent in exports from the rest the manufacturing industry (8.5 percent during the third quarter).

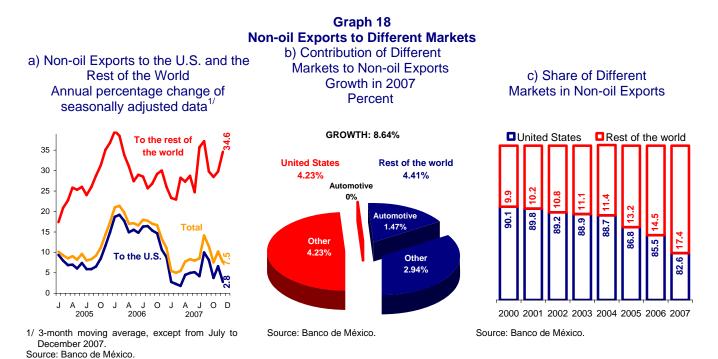
share in foreign sales (Graph 18c).<sup>18</sup> These results were influenced significantly by the depreciation of the peso against non-US dollar currencies.



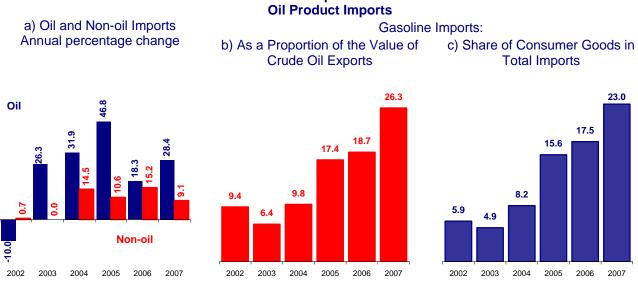
- Source: Banco de México.
- iii) The value of oil exports recorded its highest annual growth rate in seven quarters. This clearly reflected an unprecedented level of the Mexican crude oil export average price during the quarter, after this price had fallen in the last months of 2006 and at the beginning of 2007. The value of oil exports increased significantly in 2007; however; imports of these goods exceeded them (Graph 19a). The latter implied a reduction in the oil products trade balance surplus, from 19 billion US dollars in 2006 to 17.2 billion US dollars in 2007. As for foreign trade of oil products, the value of gasoline imports remained high. In 2007, the latter equaled 26 percent value of crude oil exports (Graph 19b and c).
- iv) The three items that make up merchandise imports (intermediate, capital, and consumer goods) continued to grow at a significant annual rate.<sup>19</sup> Nevertheless, this growth and, particularly that of intermediate and consumer goods imports, declined from the third to the fourth quarters, after deducting oil product imports (Graph 17b and c).

<sup>&</sup>lt;sup>18</sup> Non-oil exports growth in annual terms decreased from 11 to 9.7 percent from the third to the fourth quarter. Non-oil exports to the U.S. increased 5.4 percent during the fourth quarter, after having grown 7.2 percent during the third quarter. Non-oil exports to non-U.S. countries grew at annual rates of 32.1 and 33.7 percent during the third and fourth quarters of the year, respectively.

<sup>&</sup>lt;sup>19</sup> Merchandise imports grew 13.5 percent in annual terms, as a result of 11.1, 20.3 and 19 percent increases in intermediate, consumer, and capital goods imports. Nevertheless, total imports and intermediate and consumer goods imports excluding oil products grew at significantly lower rates: 9.6, 9 and 4 percent, respectively (rates lower than those recorded during the third quarter).



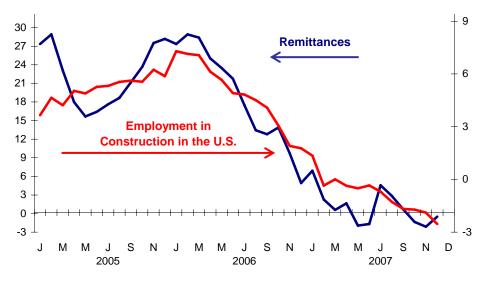
Throughout 2007, revenues from workers' remittances slowed down significantly in all states (Graph 20). During the fourth quarter, remittances totaled 5.781 billion US dollars and during the entire 2007, 23,979 billion (annual variations of -0.2 and 1 percent, respectively). These results are attributed to several factors, such as: i) the slowdown of economic activity in the U.S., particularly in the construction industry, which continues to be an important source of employment for a significant number of Mexican workers; ii) the greater difficulties Mexican workers face to migrate to the U.S., due to greater surveillance at the border from U.S. authorities; iii) the increasing difficulties Mexican illegal migrants face in the U.S. to find jobs, due to stricter government controls; and iv) the gradual disappearance in remittances' statistics of the upward effect created by an improvement in the coverage and measurement of these transactions.



Graph 19

Source: Banco de México

Graph 20 Workers' Remittances to Mexico<sup>1/</sup> and Employment in Construction in the U.S. Annual percentage change of seasonally adjusted data



Annual percentage change of 2-month moving average of data in million US dollars. Moving average does not 1/ apply for 2007.

Source: Banco de México and Bureau of Labor Statistics (U.S. Department of Labor).

Based on the aforementioned, and on available information on other items of the external accounts, during the fourth quarter of 2007, the current account of the balance of payments is expected to have recorded a deficit of approximately 1.9 billion US dollars. Thus, the current account is estimated to have closed 2007 with a moderate deficit of around 7.2 billion US dollars, accounting for 0.8 percentage points of GDP. During the fourth quarter of 2007, the capital account is expected to have recorded a surplus of nearly 6.7 billion US dollars (including errors and omissions) and approximately 17.5 billion for the entire year. This balance would be the result of the following: revenues from foreign investment flows (direct and portfolio); external financing for Pidiregas

projects; and, outflows from both public sector's payment of foreign debt and an increase in assets held abroad.<sup>20</sup> Finally, during the fourth quarter of 2007, Banco de México's net international reserves increased by 4,767 million US dollars; thus during the entire 2007, they increased by 10,311 million. At the end of December 2007, the stock of international reserves was 77,991 million US dollars.

### 3.3. Costs and Prices

### 3.3.1. Wages and Unit Labor Costs

Most recent data on wage indicators reveals that:

- The Occupation and Employment Survey (*Encuesta Nacional de Ocupación y Empleo*, ENOE), which represents the total number of workers remunerated in Mexico, shows that nominal earnings increased 4.6 percent during the third quarter of 2007 (the average increase during the first three quarters of 2007 was 6.1 percent).
- ii) The IMSS reference wage, which corresponds to workers insured by the IMSS, recorded an average increase of 5.1 percent during the fourth quarter of 2007 (during the first three quarters of 2007 the average increase was of 5.6 percent).
- Contractual wages granted by firms under federal jurisdiction recorded an average increase of 4.1 percent during the fourth quarter of 2007.<sup>21</sup> Privately-owned firms granted an increase of 4.4 percent and publiclyowned firms, of 4.0 percent.
- iv) The minimum wage recorded an increase of 4.0 percent for 2008 (3.9 percent during the previous year). The minimum wage was thus fixed at 50.84 pesos/day.<sup>22</sup>

<sup>&</sup>lt;sup>20</sup> The increase in assets held abroad reflects the day-by-day transactions in goods and services, and financial markets of a country highly integrated to the world economy, like Mexico. These transactions include a significant flow of direct investment from Mexican firms abroad; bank deposits Mexican firms (exporters and importers) require for their commercial and financial transactions abroad; assets of investment funds held abroad; bank deposits of the private and public sectors; and, assets of public entities held abroad.

<sup>&</sup>lt;sup>21</sup> Contractual wages will remain unchanged for one year. Thus, wages recorded during the fourth quarter of 2007 will be the same up to the third quarter of 2008.

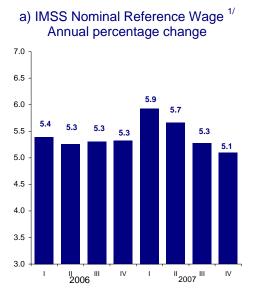
<sup>&</sup>lt;sup>22</sup> The minimum wage is equivalent to the average of minimum wages of regions A, B and C, weighted by the number of workers that in each region are remunerated at one minimum wage.

b) Contractual Wages by Sector <sup>2/</sup>

Publicly-owned firms

Privately-owned firms

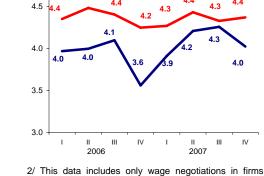
Percent



Graph 21 Wages

5.5

5.0

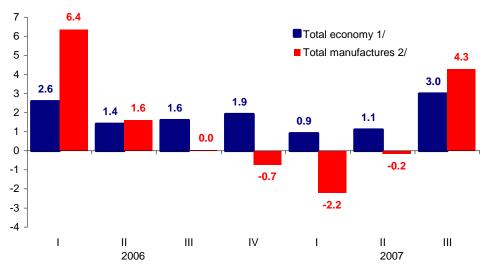


 This indicator considers exclusively workers insured by IMSS. Coverage: 36.6 percent of total workers remunerated (39.8 million individuals).

2/ This data includes only wage negotiations in firms under federal jurisdiction. Coverage: 4.6 percent of total workers remunerated (39.8 million individuals).

According to estimates using the results from the ENOE survey and data from the National Accounts, output per worker for the total economy grew 1.67 percent on average during the first three quarters of 2007 (during the same period of 2006 it grew 1.87 percent, Graph 22). Output per worker in the manufacturing industry was 0.63 percent.





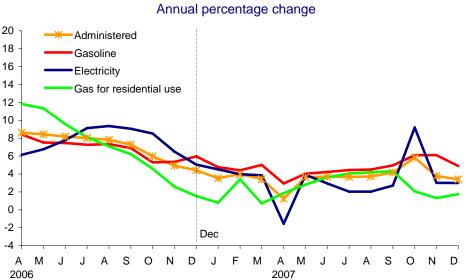
1/Average output per worker for the total economy is obtained from the ratio GDP National Accounts to employed individuals from the ENOE survey.

2/Average output per worker for the manufacturing industry is obtained from the ratio manufacturing output volume of the National Accounts to employed individuals in the manufacturing sector as reported by the ENOE survey.

## 3.3.2. Administered and Regulated Prices of Goods and Services

At the end of 2007, the administered prices' subindex recorded an annual variation of 3.41 percent, as compared with 4.16 percent at the end of September 2007. The results exhibited by this indicator during the fourth quarter were mainly influenced by the Federal Government's suspension of price increases in *Magna* gasoline, LP gas, and electricity tariffs (Graph 23).<sup>23</sup> The prices of these energy goods had been growing during the first three quarters of the year at annual rates of 5.4, 3.9, and 3.9 percent. If these prices would have continued to grow at the same rates during the October-December period, the administered prices' subindex would have contributed with around 0.08 additional percentage points to annual headline inflation in December.

As for the regulated prices' subindex, its annual variation fell from 2.33 to 1.26 percent from September to December 2007. This result was mainly due to the temporary discount rates some telephone service companies granted during November and December. In particular, the prices of telephone services recorded an annual variation of -2.92 percent at the end of 2007, as compared with 0.44 percent in September.



### Graph 23 Subindex of Administered Prices

### 3.3.3. Commodities

International prices of grains have followed an upward trend since 2006. This pattern continued during the fourth quarter of 2007. Between September and December, the international prices of corn, soy, and wheat increased 27.7, 26.8, and 10.1 percent, respectively. These increases, which were mainly expected by

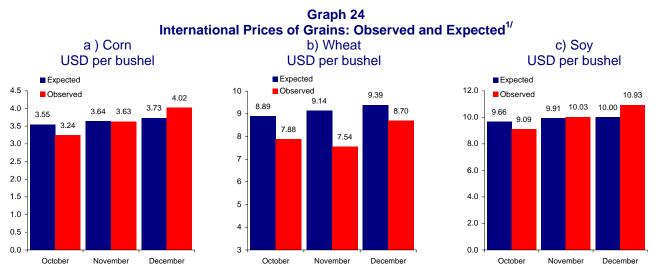
<sup>&</sup>lt;sup>23</sup> The new formula to calculate high consumption (DAC) electricity tariffs will change in January 2008. In the new formula, the weight of fossil fuels increases from 20 to 35 percent, as well as the number of PPI subindices that are used to measure the inflation updating component (Timber Industry; Oil, Rubber, and Plastic Chemical Industries; Non-metal Mineral Products; Basic Metal Industries; Metal Products, Machinery and Equipment; Other manufacturing Industries; and Construction), from 3 to 6.



futures markets, responded to different factors that affected the level of world inventories. In the case of wheat, by the end of 2007 its inventories were at its lowest levels observed in the last thirty years (Graph 24 and Graph 25).

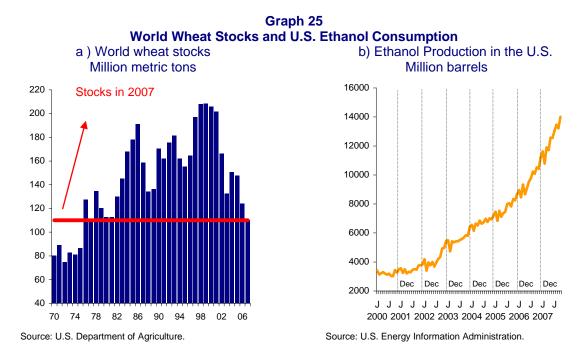
- i) Worth mentioning is the revision of expectations of demand for corn in China, which, at the end of 2007, sold its corn reserves in the domestic market and fixed export duties on this grain (despite being the second world producer).<sup>24</sup> The faster rate of growth of ethanol production in the U.S. also added to the aforementioned.
- Among the current economic factors affecting corn and wheat prices was the adverse weather that important world producers of these grains (Argentina, Australia, and France) faced.

Futures prices of grains suggest that the upward trend followed by spot prices could extend during the current year (Table 3). In particular, futures curves show that the average prices of corn, wheat, and soy for 2008 could be 5.06, 9.31 and 12.53 US dollars per bushel, respectively, while in 2007 these prices were 3.51, 5.85 and 7.99 US dollars per bushel.



1/Prices expected at the end of the third quarter of 2007 according to average prices of futures contracts for the reference month (Chicago Board of Trade, September 28, 2007). Prices observed correspond to the average of the reference month.

<sup>&</sup>lt;sup>24</sup> Since January 1, 2008 China imposed a 5 percent duty on corn, rice, and soy exports.



During 2007, international prices of powdered and liquid milk grew significantly, reaching an accumulated growth of 68.5 and 59.9 percent at the end of the year. At the end of the first half of the year, futures markets expected these prices would fall significantly during the second semester; however, prices declined less than expected (Graph 26). Futures curves suggest that prices for both liquid and powdered milk for 2008 will be at an average level below those recorded in 2007 (Table 3).

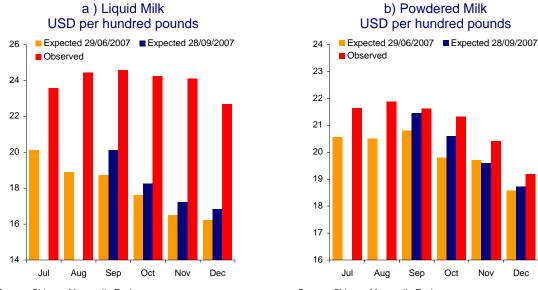
		Price Annual a			
USD per bushel USD per CWT (100 Lb)					
Date	Corn	Wheat	Soy	Liquid milk	Pow dered milk
2005	1.89	3.01	5.75	16.72	12.88
2006	2.39	3.58	5.46	14.54	11.11
2007	3.51	5.85	7.99	20.79	18.35
20081/	5.06	9.31	12.53	16.84	15.82
	Percen	tage change betv	veen reference	years	
2006 - 2005	26.15	19.13	-5.12	-13.09	-13.70
2007 - 2006	46.93	63.27	46.54	43.02	65.15
2008 - 2007 <sup>2/</sup>	44.34	59.01	56.73	-18.99	-13.77
2008 - 2005 <sup>3/</sup>	167.52	209.27	117.91	0.69	22.89

# Table 3

1/Estimated average price according to futures curves corresponding to January 28, 2008.

2/ Estimated annual variation based on the futures curves corresponding to January 28, 2008.

3/ Variation forecasted for the period 2005-2008, based on the futures curve corresponding to January 28, 2008.

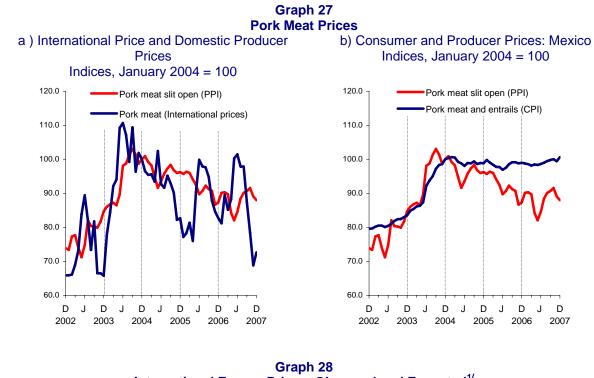


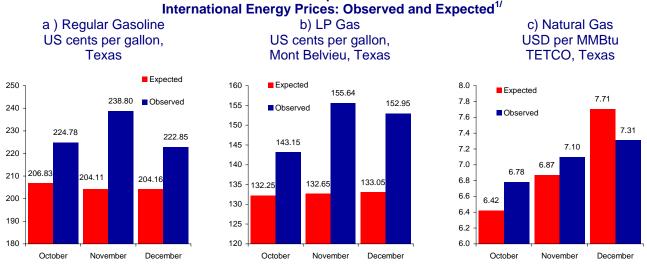
Graph 26 International Milk Prices

Source: Chicago Mercantile Exchange. Source: Chicago Mercantile Exchange. Note: Expected prices at the end of the second and third quarters of 2007, according to average prices of futures contracts of the reference month (Chicago Mercantile Exchange, June 29 and September 28, 2007). Observed prices correspond to the average of the reference period.

In contrast with the results in the grains market, from the third to the fourth quarter of 2007, international prices of pork meat decreased on average 22.3 percent. This result was mainly influenced by an increased production of pork meat in the U.S. during the referred period (preliminary figures from the U.S. Department of Agriculture show that pork meat production during the fourth quarter of 2007 was 7.6 percent above its figure during the same period of 2006). However, despite the significant fall in the international prices of this type of meat, its effect has not been reflected in domestic prices (Graph 27). On previous occasions, Banco de México has identified reductions in the international prices of other products, which are not reflected at the domestic level in lower consumer prices. This could be the result of distortions in the production chain or retail problems originated by the low level of competition in this industry.

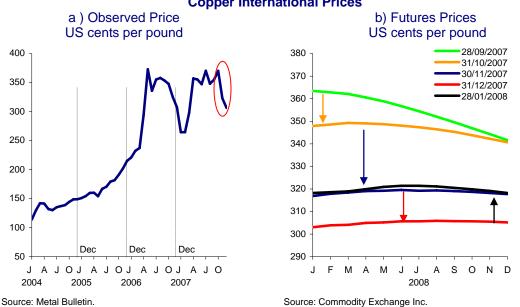
During the fourth quarter of 2007, the increase in crude oil spot prices affected the prices of oil products (Section 3.1 describes the causes of this increase). Prices of gasoline and LP gas were above those expected by futures markets at the end of September (in the case of the former, its average price was 11.6 percent higher than expected, while the latter, 13.5 percent). As for prices of natural gas, during the October-December period they were 12.1 percent on average above its previous quarter figure, and close to that expected in September (Graph 28).





1/Expected prices at the end of the third quarter of 2007, according to average prices of futures contracts for the reference month (New York Mercantile Exchange, September 28, 2007). Observed prices correspond to the average of the reference period.

International prices of copper fell 6.9 percent on average during the fourth quarter of 2007. Futures prices of this metal for 2008 adjusted gradually downwards during the referred quarter (Graph 29).



Graph 29 Copper International Prices

### 3.4. Monetary and Credit Aggregates

## 3.4.1. Monetary Base, Net Domestic Credit and International Assets

In 2007, the monetary base grew at a decreasing rate. During the fourth quarter, it grew at a nominal annual rate of 11.1 percent, while during the same period of the previous year it grew at a rate of 17.3 percent (Graph 30a).<sup>25</sup> Thus, the average annual rate of growth of this aggregate during 2007 was 12.7 percent while in 2006 it was 16.2 percent. This slowdown is mainly explained by the slower rate of growth of economic activity, and by the fading of the effect of temporary factors that took place in 2006, such as a greater use of money that usually occurs during federal elections. As mentioned in previous Inflation Reports, these results indicate that although the higher demand for money has slowed, the remonetization process continues.<sup>26</sup>

<sup>&</sup>lt;sup>25</sup> Variations calculated based on the quarterly average of daily stocks.

<sup>&</sup>lt;sup>26</sup> When an economy transits from an environment of high inflation that erodes the purchasing power of money and discourages its demand, to an environment of low and stable inflation, the demand for money usually increases as agents gradually replenish their bills and coins. This phenomenon is reflected in a gradual increase in the monetary base measured as a percentage of GDP and is known as remonetization process.

Table 4
Monetary Base, International Assets, and Net Domestic Credit
N ATHLE A A

	Sto	cks	Annual % Change	Flows in 2007				
	At 31 Dec. 2006	At 31 Dec. 2007	At 31 Dec. 2007	I	Qu	iarter III	IV	Accumulated at 31 Dec. 2007
(A) Monetary base (Pesos)	449,821	494,743	10.0	-40,007	-1,087	3,714	82,302	44,922
(B) Net international assets (Pesos) 1/ 2/	824,967	952,227	15.4	-5,090	22,230	46,922	54,446	118,508
Net international assets (USD) 2/	76,304	87,235	14.3	-421	2,051	4,259	5,042	10,931
(C) Net domestic credit (Pesos) [(A)-(B)] <sup>1/</sup>	-375,145	-457,484	21.9	-34,918	-23,317	-43,208	27,856	-73,586
(D) International reserves (USD) [(E)-(F)] 3/	67,680	77,991	15.2	1,516	744	3,285	4,767	10,311
(E) Gross reserves (USD)	76,330	87,211	14.3	-479	2,083	4,234	5,043	10,881
PEMEX				2,573	3,087	3,437	3,802	12,899
Federal government				-2,132	-412	-708	-397	-3,648
Sale of US dollars to banks 4/				-1,996	-1,407	-504	-333	-4,240
Others <sup>5/</sup>				1,076	815	2,009	1,971	5,870
(F) Liabilities with less than six months to maturity (USD)	8,650	9,220	6.6	-1,995	1,339	950	276	570

1/ Net international assets' cash flows in pesos are estimated based on the exchange rate applied to each transaction.

2/ Net international assets are defined as gross reserves plus credit agreements with foreign central banks with more than six months to maturity, minus total liabilities payable to the IMF and credit agreements with foreign central banks with less than six months to maturity.

3/ As defined by the Law governing Banco de México.

4/ Daily sales of US dollars according to the mechanism to reduce the pace of international reserve accumulation (see Foreign Exchange Commission's Press Release of March 20, 2003).

5/ Includes yields on net international assets and other transactions.

Net international assets increased by 10,931 million US dollars in 2007, thus reaching 87,235 million at the end of the year.<sup>27</sup> During this period, the monetary base increased by 44,922 million pesos. As a result, Banco de México's net domestic credit decreased by 73,586 million pesos during the period (Table 4).

#### 3.4.2. Monetary Aggregates and Financing

The analysis of the economy's financial flows over the last years shows, on the side of its sources, an increase in its domestic sources of financing (M4), and less reliance on external sources. As for its uses, smaller flows have been allocated to finance the public sector and more resources have been destined to the private sector (Table 5).<sup>28</sup>

Regarding the sources of financing, in the last months, in a context of moderate growth of economic activity, the narrow monetary aggregates grew at slower rates. From September to November, the monetary aggregate M1 reduced its nominal annual rate, from 11.6 to 8.5 percent (Graph 30a). On the other hand, the broad monetary aggregates showed more stable growth rates over the period. In particular, between September and November the monetary aggregate M4 grew at a real annual rate around 8.5 percent (Graph 31b).

<sup>&</sup>lt;sup>27</sup> For a definition of international assets and international reserves refer to the glossary of the weekly press release on Banco de México's balance sheet. Banco de México's broad credit position with the domestic market (net domestic credit) is obtained by subtracting international assets from the monetary base; i.e., financing granted or received domestically by the central bank. The international reserves definition excludes Banco de México's short-term (less than six months) foreign currency liabilities.

excludes Banco de México's short-term (less than six months) foreign currency liabilities.
<sup>28</sup> The annual flow of financing to firms, as a percentage of GDP, rose from 1.3 to 3.2 percent, from the third quarter of 2006 to the same quarter of 2007. The flow of financing to households during this period decreased from 2.5 to 1.9 percentage points of GDP. However, these flows are affected by a change in CNBV accounting standards, which state that since January 2007, credit statistics of commercial bank and Sofoles should reclassify bridge financing for housing construction from mortgage loans (households) to credit to firms. Without this reclassification, in the third quarter of 2007, resources to finance firms and households and firms would have been 2.6 and 2.4 percent of GDP, respectively.

	Annual Flow: Quarter-III				Stock in 2007 III	
	2003	2004	2005	2006	2007	% of GDP
Total sources	5.3	5.6	8.0	6.0	5.5	76.3
M4	5.3	5.1	7.6	6.2	6.4	57.1
Foreign financing	0.0	0.5	0.4	-0.2	-1.0	19.1
Total uses	5.3	5.6	8.0	6.0	5.5	76.3
International reserves 1/	1.1	0.8	0.7	0.6	0.7	8.4
Public sector <sup>2/</sup>	2.3	1.8	1.5	0.3	1.3	35.4
States and municipalities	0.2	0.2	0.2	0.0	-0.1	1.3
Private sector	1.1	1.6	2.4	3.8	5.0	32.4
Households	1.3	1.6	1.9	2.5	1.9	14.5
Consumption	0.5	0.8	1.1	1.4	1.1	5.3
Housing <sup>3/</sup>	0.8	0.9	0.8	1.1	0.8	9.2
Firms	-0.1	-0.1	0.6	1.3	3.2	17.9
Credit granted by financial intermediaries 4/	-0.1	0.2	0.0	0.9	2.2	8.5
Issue of debt instruments	0.7	0.1	0.1	0.0	0.1	1.7
External	-0.7	-0.4	0.5	0.4	0.9	7.7
Other <sup>5/</sup>	0.5	1.3	3.2	1.3	-1.5	-1.2

#### Table 5 **Total Financial Resources (Uses and Sources)** Percentage of GDP

Note: Figures may not add up due to rounding.

1/ As defined by the Law governing Banco de México.

2/ Public Sector Borrowing Requirements (Requerimientos Financieros del Sector Público, RFSP), and their historical stock (SHRFSP), as reported by the Ministry of Finance (SHCP).

3/ Total portfolio of financial intermediaries and of the National Employees' Housing Fund (Instituto del Fondo Nacional de la

Vivienda para los Trabajadores, INFONAVIT). Includes debt-restructuring programs. 4/ Total portfolio of financial intermediaries and of the Includes debt-restructuring programs.

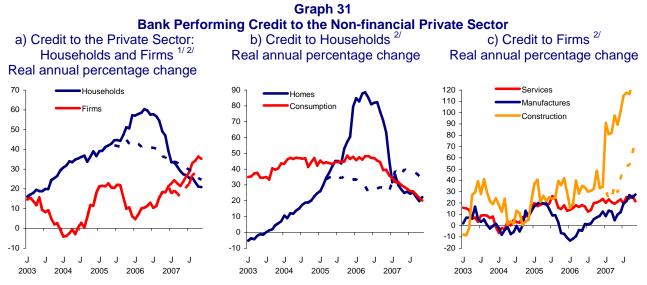
5/ Refers to non-sectorized assets, capital accounts and results, other assets and liabilities of both commercial and developments banks, Banco de México, non-bank financial intermediaries, and INFONAVIT, and non-monetary liabilities from IPAB, among others.

#### Graph 30 **Monetary Aggregates** a) Monetary Base and Monetary Aggregate M1 b) Monetary Aggregate M4 Nominal annual change Real annual change in in percent percent 25 16 M1 Monetary base 14 20 12 10 15 8 10 6 4 5 2 0 0 J J .1 J J J J J J J J J J J J J J J J J 2003 2004 2005 2006 2007 2003 2004 2005 2006 2007

1/ In the case of the monetary base, the annual nominal change of the monthly average of daily stocks is considered.

As for the use of financial resources, most of the financial flows destined to finance the private sector came from commercial banks' credit, and continue to grow at high annual rates (Graph 31a). The dynamics of bank credit in 2007 have been the result of a slower rate of growth in credit for households -particularly for consumption- and a significant rebound in the rate of growth of credit for firms.

In the last months, direct performing credit for consumption has recorded a reduction in its annual rate of growth, from 27.6 percent in June 2007 to 20.2 percent in November 2007, while direct performing mortgage credit has shown a more moderate slowdown, from 25.7 to 22.3 percent during the same period (Graph 31b). <sup>29</sup> The delinquency rate of banks' credit to households was 4.6 percent in November (5.7 percent for consumer credit and 2.6 percent for mortgage credit), 1.0 percentage points above last year's figure.<sup>30</sup>



1/ Performing loans to households include banks' purchase of Sofoles mortgage portfolio.

2/ According to CNBV regulations, it includes reclassified bridge financing from mortgage loans to loans to firms since January 2007. In Graph 31a and b, and in the cases of household and mortgage loans, the dotted line excludes the purchasing of Sofoles performing loans portfolio and reclassified bridge financing for construction. In Graph 31c, and in the cases of financing to firms and to construction, the dotted line excludes the effect of reclassified bridge financing for construction.

Commercial banks' performing direct credit to firms grew at a real annual rate of 35.2 percent in November 2007, as compared with 26.5 percent in June (Graph 31c).<sup>31,32</sup> As for firms financing through domestic debt securities, the stock of medium-term private securities recorded an increase in its real rate of growth, from 4.2 percent in June 2007 to 11.3 percent in November of the same year.

In 2007, the lending rates for consumption remained stable at relatively high levels (Graph 32b). Commercial banks' lending rates for firms increased slightly during the year. In November 2007, the simple average of banks' lending

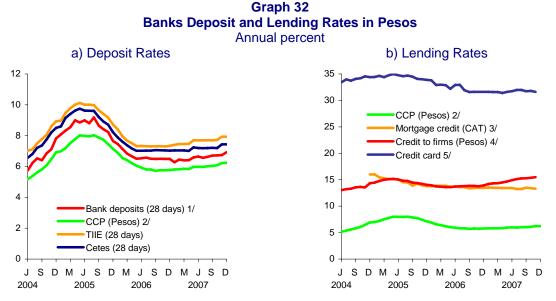
<sup>&</sup>lt;sup>29</sup> When excluding the effect of the reclassifying bridge financing for construction from mortgage loans to loans for firms, the annual growth in real terms of commercial banks' direct performing mortgage credit decreased from 39.7 percent in June 2007 to 38.2 percent in November of the same year.

<sup>&</sup>lt;sup>30</sup> As for commercial banks' direct credit for consumption, the delinquency rate of credit card lending rose from 5.5 percent in November 2006 to 6.8 percent in the same month of 2007. The delinquency rates of consumer credit for durable and other type of goods increased from 2.9 to 3.9 percent during the same period.

<sup>&</sup>lt;sup>31</sup> When excluding the effect of the reclassifying bridge financing for construction from mortgage loans to loans for firms, the annual growth in real terms of commercial banks' direct performing credit to firms increased from 21.0 percent in June 2007 to 28.8 percent in November of the same year.

<sup>&</sup>lt;sup>32</sup> In November 2007, the delinquency rate of commercial banks' performing credit to firms was 1 percent, practically the same as in the previous year.

rates for firms was 15.5 percent, 1.7 percentage points above last year's figure. As mentioned in previous Reports, this increase is mainly explained by the growth in credit for smaller-size firms, which, in general, entail higher credit risk.



1/ Monthly average of payable rates (individuals and firms) settled in over-the-counter and trading floor operations.

2/ Includes term liabilities of banks in pesos, except liabilities from subordinate liabilities to be converted into capital, from the granting of guarantees, and from operations among credit institutions.

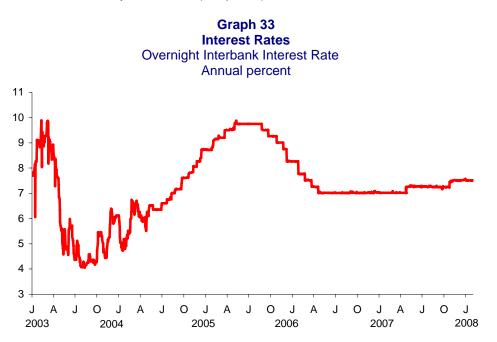
3/ Average of indicator that summarizes the Annual Percentage Rate of Charge or APRC (Costo Annual Total, CAT) and comprises costs due to interest rates, commissions, bonuses, obligatory insurance, and other financial services. Mortgage lending figures are obtained from the Simulator of Mortgage Credits available at Banco de México's web page.

4/ Simple average of nominal interest rates on credits granted by commercial banks in pesos during the period. Information obtained from the regulatory report R04C of the National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, CNBV).

5/ Simple average of interest rates excluding VAT charged by banks including all credit card traditional products according to the report "Bancos: tasas de interés de tarjetas de crédito" by Infosel.

### 4. Monetary Policy

In October 2007, the Board of Governors of Banco de México decided to tighten the monetary conditions by 25 basis points, after having kept them unchanged since April of the same year. The overnight interbank interest rate therefore rose from 7.25 to 7.50 percent. In its monetary policy announcements of November, December, and January, Banco de México did not modify the monetary conditions (Graph 33).



In Mexico, the inflationary environment has been affected since 2006 by the significant increase in world's food inflation. On average, annual headline inflation during the year was 3.97 percent, 0.34 percentage points above the average observed during the previous year.

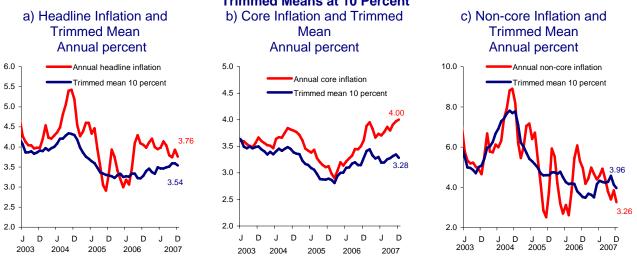
Various indicators that allow for analyzing the conditions that affect both inflation and the outlook for inflation have been mentioned in previous Reports. These indicators are part of a set of tools used by the central bank to analyze the determinants in the price formation process of the economy, as well as the main risks surrounding the central bank's prospects for inflation.

The trimmed means of inflation are useful to assess the recent developments in trend inflation. Regarding headline inflation, its trimmed mean was 3.54 percent in December, 22 basis points below headline inflation (Graph 34a). During the fourth quarter of 2007, the gap between both indicators continued to narrow. Recently, this narrowing is mainly the result of lower annual inflation, due to the decline in inflation of some items included in the non-core price subindex (Graph 34c).

Regarding core inflation, its trimmed mean exhibited a relatively stable behavior during the quarter and, in December, it was 3.28 percent, 72 basis points

below core inflation figures.<sup>33</sup> As shown in Graph 34b, the gap between this indicator and core inflation continued to widen during the fourth quarter. This result was mainly attributed to the increase in the international prices of food commodities, which continue to affect the prices of certain products included in the processed foods' group of the core merchandise price subindex.





1/The trimmed mean excludes the contribution of extreme variations in certain items' prices from headline inflation. To strip these variations, the following calculations are done: i) monthly seasonally adjusted variations of CPI prices are arranged in descending order; ii) the items with the highest and lowest variation are excluded, considering up to 10 percent of the CPI basket, respectively, in each distribution tail; and, iii) with the remaining items, which, by construction, are located at the center of the distribution, the trimmed mean indicator is constructed.

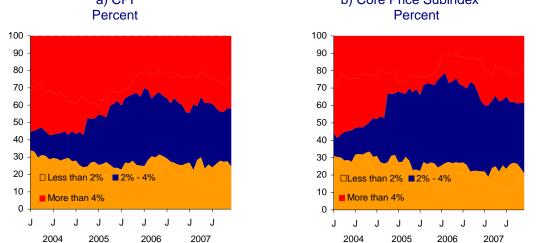
Another set of indicators that provides information on the effect of supply shocks on the referred prices is constructed using the proportion of the CPI and core baskets corresponding to those price items exhibiting annual variations in a specific range. In the case of the CPI, the proportion of the basket whose prices have been growing above 4 percent (red shaded area, Graph 35a) remained relatively stable during the fourth quarter, although slightly above the figures exhibited during the first half of 2007.

In the case of the core price subindex, the proportion of the basket with prices that have been growing at annual rates above 4 percent has remained relatively stable during the fourth quarter (Graph 35b). As mentioned in previous Reports, the increase recorded by this indicator during the second half of 2006 was mainly associated with developments in sugar, corn, and wheat-related food products' prices. These items are included in both the processed foods group of the core merchandise price subindex and the food services group pf the core services price subindex.<sup>34</sup>

<sup>&</sup>lt;sup>33</sup> Since this Inflation Report covers up to December 2007, the definition of core inflation that excludes the items of the private education price subindex is used.

<sup>&</sup>lt;sup>34</sup> Among the food items of the merchandise core subindex that during 2006 moved from the range with annual variations in their prices below 4 percent to that above 4 percent are Sugar, Bottled soda, Sweet rolls, Pastries and cakes, and other Canned fruit products, Corn, Corn flour and dough, Wheat flour, Wheat-flour tortillas, White bread, and Tin loaf. Small cafeterias and restaurants, which are included in the food-services group of the core services price subindex, also moved to the range after recording variations above 4 percent in 2006.

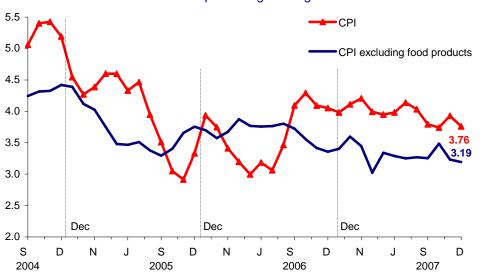
#### Graph 35 Share of Items in the CPI and in the Core Price Subindex with Annual Price Variations within a Range <sup>/1</sup> a) CPI b) Core Price Subindex



1/ The share of a price index's basket whose annual price variations fall within a range is calculated as follows: i) interest ranges are defined; ii) annual inflation of each of the items of the price index is calculated; iii) items are classified in the interest ranges according to their annual inflation; and, iv) the weights of the items in each range are added.

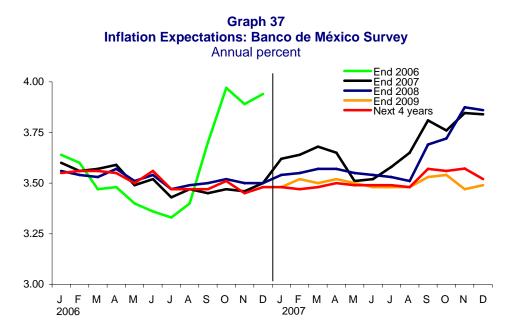
Summing up, the previous exercises show that the increase over the last years in the international prices of food commodities has mainly affected the prices of certain items that use them as raw materials. Indeed, up to now, the rebound in food inflation apparently has not affected the prices of other items nor wages. The aforementioned is observed in the next graph, which shows the annual variation of a price index that excludes from the CPI basket food products –both, those items that are included in the processed foods' group (included in the core price subindex) as well as those included in the agriculture group (included in the non-core price subindex). In December 2007, headline inflation was 57 basis points above non-food inflation indicator (65 basis points on average during the year).

### Graph 36 Non-food Inflation Indicator<sup>1/</sup> Annual percentage change



1/ Non-food inflation excludes from the CPI basket the items from the group of agricultural products and the group of processed foods and beverages of the merchandise price subindex (except tobacco-related items). This indicator accounts for 77.86 percent of the CPI basket. The exercises and analyses presented to date are prepared using a *backward-looking* approach on inflation. In order to complement the analysis on the outlook for inflation, a second group of indicators must be used, which reveal information on economic agents' *prospects* for inflation. Among these are the inflation expectations that are obtained from Banco de México's monthly survey conducted among private sector economic analysts. Graph 37 shows that, during the second quarter of 2007, indicators of inflation expectations for different horizons were at levels near 3.5 percent. As expected, in the presence of the referred supply shocks, as expected, during the second half of the year, inflation expectations for shorter-term horizons were revised upwards. In particular, those for the end of 2007 and 2008 were revised in December at 3.84 and 3.86 percent, respectively.

However, inflation expectations for longer terms, in this case, those corresponding to the end of 2009 and the average for the next 4 years, despite being revised slightly upwards in September of last year (Graph 37), in December they were revised partially downwards at 3.49 and 3.52 percent, respectively.<sup>35</sup>



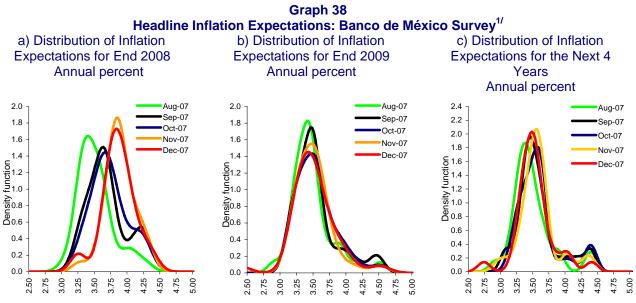
An indicator that obtains even more information from surveys is based on doing a monthly proxy on the probability distribution of surveyed analysts' responses. This type of indicator complements information reported in Graph 37, which only refers to the *average* (mean) responses. Graph 38a, which shows an indicator for inflation expectations for the end of 2008, reveals that between August and November 2007 the entire distribution shifted to the right, thus implying that the increase in the mean reported in Graph 37 is due to an overall increase in economic analysts' expectations for inflation for the end of 2008.

Graph 38b presents the same indicator for expectations for the end of 2009. In this case, the distribution shifts slightly to the right in September.

<sup>&</sup>lt;sup>35</sup> Inflation expectations from the Infosel survey show similar results. In January 25, those for the end of 2008 were revised at 3.86 percent, those for the end of 2009 at 3.47 percent, and those for average inflation for the next four years at 3.41 percent.

However, this distribution remained relatively stable between October and December. Finally, the last graph in the panel shows the distribution of expectations for average inflation for the next four years slightly shifting to the right in September and October and partially reverting these shifts in November and December.

Summing up, indicators of inflation expectations obtained from Banco de México's survey show that in the last months, economic agents revised their inflation expectations for the end of 2008 upwards, and did not change significantly those for the end of 2009 and for the average inflation for the next four years.<sup>36</sup>



1/ Graphs represent probability distributions calculated to adjust inflation expectations data from Banco de México's monthly survey of private sector economic analysts.

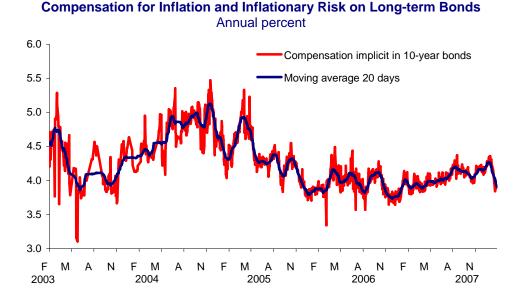
Finally, another indicator that draws information about the prospects for inflation is obtained from the yields on different assets in financial markets. The compensation for inflation (inflation expectations plus a risk premium) that investors demand for holding peso-denominated long-term bonds reveals information about long-term inflation expectations. As mentioned in previous Reports, this indicator is obtained by subtracting from the nominal yield on the 10-year bond, the real yield associated with indexed-debt instruments (*Udibonos*) with the same maturity. The moderate growth compensation for inflation had exhibited in the last two months of 2007 has reverted in the last weeks (Graph 39). These changes seem to reflect part of the usual volatility exhibited by the series.

Summing up, the recent behavior of indicators of trend inflation as well as of other more forward-looking indicators suggests that, up to now, the supply shocks that have affected the prices of certain items have not contaminated

<sup>&</sup>lt;sup>36</sup> It is important to mention that economic agents' inflation expectations for the end of 2008 were partly revised upwards after the release of the Inflation Report July-September 2007, in which Banco de México revised upwards its prospects for inflation for 2008.

significantly the price determination process in the economy nor long-term inflation expectations.

Nevertheless, the analysis presented in this Report reveals that monetary policy continues to face complex economic conditions. On the one hand, available information shows that there are no elements that suggest the presence of overall inflationary pressures from the demand side. Long-term inflation expectations have remained relatively stable, although above the 3 percent target, and wage negotiations do not seem to have been contaminated in the last months. On the other hand, the persistence of food inflation continues to be a main cause of concern.

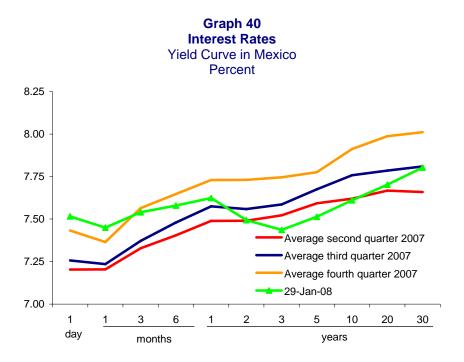


Graph 39

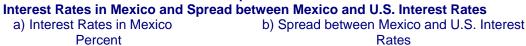
Based on the previous considerations, the Board of Governors decided to leave the monetary conditions unchanged in November, December, and January, after having tightened them in October.

Under these conditions, the performance of the yield curve in Mexico has been determined by both the effects of monetary policy actions and the conditions prevailing in international financial markets. On the one hand, the Board of Governors' decision to tighten monetary conditions by 25 basis points at the end of October led to an increase in short-term yields (Graph 40 and Graph 41). On the other hand, in a context in which global risk appetite declined during the fourth quarter of 2007, medium and long-term interest rates increased as compared to the levels exhibited during the second and third quarters of the year. Since longer term rates increased more, the yield curve "steepened" during the fourth guarter (Graph 40), despite the fact that, as indicators in this section have described, long-term inflation expectations remain well anchored, albeit half a percentage point above the 3 percent inflation target. In the last weeks, in an environment where the federal funds rate in the U.S. fell significantly and medium and long-term yields in that country have also decreased, medium and long-term interest rates in Mexico have declined and therefore reverted the "steepening" in the yield curve observed at the end of the previous year.

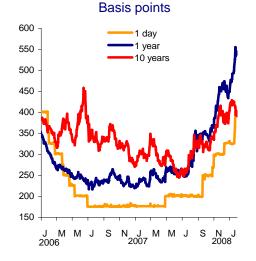
Finally, during the fourth quarter, the increase in interest rates in Mexico together with the reduction in interest rates for all terms in the U.S. contributed to increase significantly the differentials between both countries' yields (Graph 40b). The behavior of interest rates in both countries over the last weeks has led to a further increase in short-term differentials and to a slight reduction in longer term differentials.



Graph 41







### Prospects for Inflation and Balance of Risks

Banco de México expected economic scenario is based on the following considerations:

- i) Expectations for economic activity in the U.S. have deteriorated in the last months. On the one hand, the real estate sector is expected to continue adjusting and its effect on the rest of the economy is expected to increase during 2008. On the other, weakening employment and the increase in oil prices are additional factors that limit households' spending in the U.S. economy. The most recent consensus between analysts' expectations for U.S. growth in 2008 is 2.0 percent and, in the case of industrial production, 1.5 percent.<sup>37</sup> The economy is expected to slow down during the first half of the year and then recover during the second semester.
- ii) The conditions for access to international financing are expected to deteriorate to some extent.

Based on the aforementioned, the scenario for the Mexican economy forecasted by Banco de México is as follows:

**GDP Growth:** Between 3.2 and 3.3 percent in 2007 and 2.75 and 3.25 percent in 2008.

**Employment:** 756 thousand jobs (number of workers insured by the IMSS) were created in the formal sector in 2007. For 2008, an increment of 620 thousand jobs is expected.

**Current Account:** Current account deficit of around 0.8 percentage points of GDP in 2007 and 1 percent in 2008.

This scenario for economic activity in Mexico is conditional to, as suggested by most recent data, the U.S. economy not slowing so markedly and that this event is short-lived. As a more adverse scenario materializes, the Mexican economy could grow less due to:

- i) A greater reduction in external demand for Mexican products.
- ii) A greater reduction in the amount of remittances sent by Mexicans in the U.S.
- iii) Tighter conditions in international financial markets.

Nevertheless, some factors are currently present which -unlike other periods in which the U.S. economy transited through the low phase of the business cycle- could mitigate the negative effects of the strong slowdown in the U.S. on the Mexican economy:

5.

<sup>&</sup>lt;sup>37</sup> Although these figures reflect most recent information on projections of a large number of analysts, expectations for U.S. growth have been adjusting downwards. For example, in its forecasts of January 29, the International Monetary Fund estimated GDP growth of 1.5 percent for 2008. Similarly, various financial brokers have revised downwards their growth forecasts for industrial production in that country in 2008.

- A greater diversification of non-oil exports, in terms of destination markets. A significant part of this diversification has responded to the depreciation of the Mexican peso vs. non-US dollar currencies.
- ii) A strong domestic market and, particularly, the current growth of financing to the private sector.
- iii) Expectations that public expenditure in infrastructure and housing budgeted for this year boost significantly economic growth.

Additionally, it is important to remember that the impact of the slowdown of U.S. production on Mexico perceived in 2001 was magnified by the initial effect of China's entry to the World Trade Organization on Mexican non-oil exports to the U.S. Under this context, the effect of lesser economic activity in the U.S. during 2008 would not be once more influenced by this type of shocks.

**Inflation:** The forecasted path for annual headline inflation for the following two years remains unchanged in relation to the one published by the central bank in the previous Inflation Report. The latter, given that available information continues to suggest that, in the future, no aggregate demand pressures are expected, and developments in inflation are foreseen to be determined mostly by the rise and fading of the previously identified supply shocks. On this occasion, the inflation forecast for an 8-quarter horizon covers up to the fourth quarter of 2009.

As for annual headline inflation during 2008, as shown in Table 6, it is expected to follow an upward trend during the first half of the year, mainly as a result of two possible shocks: first, the revision on public transportation fares in some cities; and, second, the impact, although uncertain in terms of its magnitude and timing, the flat rate business tax (*Impuesto Empresarial a Tasa Única*, IETU) could have on prices. In addition, the low level recorded by the agricultural price subindex during the second quarter of 2007 could also have an incidence on the calculations for the annual CPI growth corresponding to the second quarter of 2008.

A factor that will also contribute to raise inflation during 2008 is the restoration of price increases in low octane gasoline, LP gas, and electricity, after having been suspended from October to December 2007. The increase in gasoline prices will reflect the new sales tax on this fuel, whose total revenues will be fully transferred to state governments.<sup>38</sup> Nonetheless, it is important to note that the effects of these increases on inflation will be similar to those recorded prior to the price freeze on the referred goods and services' prices decreed by the Federal Government.

In contrast with the aforementioned, an element that could mitigate the increase in prices during the first quarter of 2008 is the program jointly agreed by ANTAD and the Federal Government to grant discounts to more than 300 grocery products. This program will be in effect from the second week of January to the end of March of 2008.

The effects of the recent price increases in dairy and wheat products on annual inflation calculations are expected to start to fade during the second half of 2008. Thus, during the referred period, annual headline inflation could follow a

<sup>&</sup>lt;sup>38</sup> The Federal Sales Tax on Gasoline and Diesel will raise low and high octane gasoline prices on a monthly basis 2 and 2.44 cents, respectively, starting January 2008 for the following 18 months.

slight downward trend (for annual core inflation it could be even more noticeable). Nevertheless, this result is contingent to additional shocks not taking place, particularly in the food sector.

As for annual headline inflation in 2009, it is expected to remain on a sharper downward trend. Any effects coming from the abovementioned supply shocks should therefore fade.

Quarter	Previous Forecasts	Cent Current Forecasts		
2007-IV	3.50 - 4.00	3.81 <sup>1/</sup>		
2008-I	3.75 – 4.25	3.75 - 4.25		
2008-II	4.00 - 4.50	4.00 - 4.50		
2008-III	4.00 - 4.50	4.00 - 4.50		
2008-IV	3.75 – 4.25	3.75 – 4.25		
2009-I	3.50 - 4.00	3.50 - 4.00		
2009-II	3.50 - 4.00	3.50 - 4.00		
2009-III	3.00 - 3.50	3.00 - 3.50		
2009-IV	n.a.	3.00 - 3.50		

Table 6

1/ Observed figure.

Among the main upward and downward risks that might influence the expected path of inflation are the following:

- i) The possibility that new shocks arise and affect the prices of food commodities or that the shocks that have already taken place have a longer-than-expected effect. In particular, the international prices of both liquid and powdered milk have decreased at a significantly slower rate than as expected by futures prices of these foodstuffs at the end of the last quarter. International prices of grains continued to follow the expected upward trend, and their impact may not yet have been passed on completely to the prices of other foods that use them as raw materials.
- ii) Prices of oil-related products have been at higher levels than those expected at the end of the previous quarter. As a result, in some cases, the gap between the international references and domestic prices of these products has widened.
- iii) The magnitude and velocity the effect of the higher tax burden due to the new flat rate business tax (*Impuesto Empresarial a Tasa Única a los Precios*, IETU) could have on consumer prices. This risk, which is difficult to estimate, is subject to a high level of uncertainty due to the downward phase of the business cycle the Mexican economy is undergoing.
- iv) Expectations that headline inflation will remain high during the next months increase the risk of contaminating the price and wage determination processes.

Based on the aforementioned conditions, the prospects for inflation, and the balance of risks associated to these prospects, Banco de México's Board of Governors decided to keep monetary conditions unchanged in November, December, and January, after having tightened them in October. The Board will remain attentive to the development of the balance of risks in order to meet the 3 percent inflation target in the forecasted time frame.

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### Monetary Program for 2008

The Law Governing Banco de México states that in January of each year the central bank must send to both the President and Congress a report on monetary policy for the following year.<sup>39</sup> Following are the guidelines for monetary policy conduct during 2008.

Monetary policy in Mexico will be conducted under an inflation targeting framework, which is characterized by: a) the announcement of an explicit multiannual inflation target; b) a systematic analysis of the current economic conditions and of inflationary pressures; c) a description of the instruments used by the central bank to attain its objectives; and, d) a communication policy that fosters monetary policy's transparency, credibility, and effectiveness.<sup>40</sup>

### 1. Objectives

Banco de México's monetary policy is conducted to attain an annual CPI inflation of 3 percent and to remain around that level. Nonetheless, although monetary policy is implemented to attain this objective, it is subject to a certain degree of uncertainty due to the multiple shocks the economy is exposed to, and to the fact that the relationship between monetary policy actions and its results regarding inflation is imprecise.

A variability interval of plus/minus one percentage point has thus been set around the 3 percent inflation target. The referred interval around the inflation target was not set as a margin of indifference or tolerance for the monetary authority. It only represents explicitly the inaccuracy that relentlessly surrounds the achievement of the inflation target, due to the different shocks and deviations that can affect CPI inflation. Banco de Mexico's monetary policy actions will be oriented towards achieving the 3 percent inflation target. Nonetheless, given the volatility of CPI inflation, in the short term, such actions might deviate temporarily from the target.

### 2. Monetary Policy Decisions

Central bank's monetary policy actions have a lagged effect on the economy, and especially, on the price level. Therefore, to reach the inflation target, the monetary authority must base its decisions on a careful assessment of both the current economic conditions and the outlook for inflation.

Under an inflation targeting regime, when inflation pressures come from the demand side, the monetary authority should tighten the monetary policy stance in order to promptly contain such pressures from becoming widespread and therefore prevent a permanent rebound in inflation.

On the other hand, when inflation pressures originate from the supply side, they usually reflect changes in relative prices, which affect inflation

<sup>&</sup>lt;sup>39</sup> See Article 51 of the Law Governing Banco de México.

<sup>&</sup>lt;sup>40</sup> See the Monetary Program for 2001 for some considerations on the inflation targeting framework.

temporarily. In such case, the monetary authority should not try to counter such pressures, as these only have a temporary effect on inflation. However, if such pressures contaminate inflation expectations and the determination of other prices, or the balance of risks should deteriorate significantly, the central bank must tighten monetary policy to prevent subsequent price increases.

An accurate identification of the origin of inflation pressures and its possible effects on economic agents' expectations is therefore crucial for monetary policy decisions. Banco de México's monetary policy decisions are based on a systematic analysis of the current economic conditions and of the inflationary pressures originated by such conditions, using a wide range of variables and indicators, as well as different economic and statistical models.<sup>41</sup> Such analysis allows for identifying the factors that affect the expected development of inflation in order to evaluate their impact on economic agents' inflation expectations and on the price determination process, which are key elements to determine the monetary policy stance.

### 3. Monetary Policy Implementation

Central banks have different instruments to conduct monetary policy, which are used to affect monetary conditions so that the stance of monetary policy is consistent with the attainment of the inflation target. The central banks usually have an operating target to guide their monetary policy implementation.

As announced in its Inflation Report of the third quarter of 2007, since January 21 2008, Banco de México adopted as an operating target the overnight interbank rate (*tasa de fondeo bancario*) to substitute the level of commercial banks' current account balances at the central bank (*corto*). This change makes easier the understanding of monetary policy actions, standardizes its implementation to that adopted by various central banks, and concludes the transition process in monetary policy implementation in Mexico that began in 2003.<sup>42</sup>

The formal migration to an operating interest rate target does not change the way Banco de México carries out its operations, given that since April 2004 the market has been operating *de facto* following the interest rate signaled by Banco de México. Likewise, this change does not affect Banco de México's monetary policy stance.

### 4. Communication Policy

In order to attain price stability through an inflation targeting framework, the central bank must clearly communicate to the public its objectives, strategy and instruments. The announcement of inflation targets is important as it facilitates the convergence of economic agents' expectations to the targets. This responds to the central bank's commitment to take the necessary measures to attain its inflation target. Transparency in monetary policy decisions has allowed Banco de México's Board of Governors to explain the reasons supporting its actions. Such transparency generates more certainty among the public and

<sup>&</sup>lt;sup>41</sup> The forecast for the monetary base for 2008, which can serve as a reference to monitor the current economic conditions, can be consulted at Banco de México's web page (<u>www.banxico.org.mx</u>).

<sup>&</sup>lt;sup>42</sup> For more details on the change in monetary policy implementation in Mexico, see Annex 3 of the Inflation Report July-September 2007.

fosters the attainment of the central bank's objectives. Greater transparency, together with the communication policy, has contributed to strengthen the accountability of the central bank.

Among the main documents that support Banco de México's communication strategy are the Monetary Program and the Inflation Reports. In addition, since 2003, Banco de México has been announcing on pre-established dates its monetary policy decisions, together with a press release explaining the Board of Governors' decisions regarding the monetary policy stance.<sup>43</sup>

Finally, as part of Banco de México's communication strategy, since May 2007, a "statement pause" was established prior to the monetary policy press releases.<sup>44</sup> This means that, since 9 a.m. on Monday, on the week of the monetary policy announcement, and until its release, both the members of the Board and Banco de México officials are not allowed to disclose any opinion related with monetary policy.

<sup>&</sup>lt;sup>43</sup> These dates are published in the Inflation Report of the third quarter of the previous year.

<sup>&</sup>lt;sup>44</sup> For further details on this measure, see Banco de México's press release of May 11, 2007 (available only in Spanish).