

# Annual Report Summary

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2008



**BANCO DE MEXICO**

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APRIL 2009





## I. Introduction

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The turmoil in international financial markets significantly affected the performance of the world economy in 2008. Despite the monetary and fiscal stimulus measures implemented by a large number of countries, global economic growth went down to 3.2 percent in 2008 from 5.2 percent in 2007. Moreover, the downturn in economic activity affected both emerging and advanced economies, though the slide was more pronounced in the latter countries. The U.S. economy fell into recession in December 2007 and continued to weaken throughout 2008. As a result, during the fourth quarter of the year, U.S. GDP registered an annualized quarterly contraction of 6.3 percent.

World inflationary pressures diminished considerably during 2008. This behavior partly responded to the downturn in world economic activity, although inflation was also influenced by commodity prices. In particular, the prices of these goods, which had continued to escalate during the first half of the year, decreased significantly during the second half. It is important to mention that the decline in inflation was more pronounced in advanced than emerging economies. In fact, several of the latter saw their margin of maneuver to implement counter-cyclical policies severely limited, partly as a result of the persistence of relatively high inflation rates.

Conditions in international financial markets worsened significantly during 2008. The higher levels of non-performing loans in the U.S. mortgage sector, first in the subprime sector and then in the sector as a whole, had a considerable impact on mortgage-backed assets. The lack of transparency regarding commercial banks' exposure to this type of instruments led to an increase in counterparty risk, which in turn gave rise to severe liquidity problems in the interbank market. The aforementioned problem together with high levels of indebtedness forced financial intermediaries to initiate a deleveraging process which pushed down the prices of some assets. In an environment of higher uncertainty, reduced liquidity, and the deterioration in asset prices, difficulties spread rapidly to other segments of the financial markets as well as to other countries.

Financial market problems worsened when Lehman Brothers filed for bankruptcy in September 2008. This event led to a substantial rise in global risk perceptions and increased uncertainty regarding the quality of some assets held by financial institutions. As a consequence, the cost of interbank lending rose sharply and liquidity in financial markets shrank further. The situation became more complicated due to the negative feedback loop between the financial and the real sector. Thus, besides the liquidity crisis, financial markets also faced a solvency problem which gave rise to the risk of collapse of the international financial system. Under these conditions, capital flows to emerging economies contracted significantly, affecting many of these countries' exchange rates as well as their equity and debt markets.

In response to the rapid deterioration of global financial conditions, a large number of advanced and emerging economies implemented measures to reestablish confidence in their financial systems. These actions included loosening monetary policy, the creation of facilities to supply liquidity to financial



markets, guarantees on new bank debt issues, an extension of savers' deposit protection limits, and initial efforts to bolster some institutions' capital. Moreover, authorities in several advanced countries implemented some of these measures in a coordinated manner in order to strengthen their impact. Although these actions reduced the risk of systemic collapse, uncertainty in financial markets continued until the end of 2008.

In response to the deepening of the international financial crisis from mid-September of 2008 and its increasing effects on emerging economies, Banco de México implemented several measures jointly with the Ministry of Finance to preserve the smooth functioning of domestic financial markets. On the one hand, the Foreign Exchange Commission decided to supply US dollar liquidity to the foreign exchange market through different mechanisms. On the other, preventive facilities were established to temporarily provide liquidity in domestic currency to commercial banks, while other measures designed to buoy liquidity in domestic debt markets were also adopted. Among the latter were: the modification of programs for government securities issuing in favor of short-term financial instruments; Bondes M and Udibono repo operations; and, interest rate swap auctions in which flows from long-term fixed interest rates were exchanged for those coming from short-term revisable rates. Finally, measures designed to foster a more orderly functioning of financial markets were introduced. Among these, Banco de México implemented a program to repurchase IPAB bonds; temporary regulatory facilities were introduced giving mutual funds greater flexibility to rebalance their portfolios; and, development banks established a program of guarantees on short-term private debt issuing.

As a result of the particularly adverse international environment, economic activity in Mexico lost momentum during 2008. During the first three months of the year, the economy slowed in response to the gradual deterioration of external demand, which basically affected the levels of activity in tradable goods sectors. Nevertheless, in the last few months of the year, the propagation of the external demand shock affected private domestic expenditure. The latter adversely affected GDP, which registered negative growth in the last quarter of 2008.

During 2008, the behavior of inflation in Mexico mainly responded to unprecedented rises in the international prices of food, metal and energy commodities, particularly during the first half of the year. These increases hit production cost structures in practically all sectors of the economy, as well as the pricing policy of federal government administered goods and services. Similarly, price behavior was also influenced towards the end of the year by the depreciation of the exchange rate which began in September. Thus, at the end of 2008, annual headline inflation was 6.53 percent, after having been 3.76 percent in December 2007.

The rise in inflation during 2008 did not significantly affect medium-term inflation expectations. This was mainly due to monetary policy actions designed to ensure that medium and long-term inflation expectations remained well "anchored". In light of the increase in inflation and the risks associated with it, Banco de México's Board of Governors raised the target for the Overnight Interbank Rate by 25 basis points in June, July and August. As a result of these measures, the target shifted from 7.50 to 8.25 percent. Afterwards, by taking into consideration that the smooth functioning of markets is essential for financial



stability, the Board of Governors decided to leave its monetary policy stance unchanged after September.

## II. International Environment

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During 2008, the world economy slowed down considerably to 3.2 percent. Advanced as well as emerging and developing economies recorded lower growth during the year.

Economic activity in the U.S. grew only 1.1 percent in 2008, significantly below the previous year figure (2.0 percent). Economic activity in other advanced countries followed following the events in the U.S., which was affected by the financial difficulties and the contraction of world trade. In all cases, the world economies performed less favorably than in 2007. Euro area, U.K., and Canadian GDP grew 0.8, 0.7 and 0.5 percent, while that of Japan contracted 0.6 percent. Although emerging economies continued to grow substantially more than most advanced economies, they also expanded at slower rates than in 2007.

Inflation fell in both advanced and emerging economies during the second half of the year in response to the slower rate of growth of economic activity and the decline in commodity prices, especially oil prices. After having been slightly below 100 US dollars per barrel at the start of the year, the price of the West Texas Intermediate (WTI) oil reached over 145 US dollars per barrel in July. Later, despite production cuts and geopolitical turmoil, this price followed a clear downward trend, ending the year at 45 US dollars per barrel. Prices of non-oil commodities followed an upward trajectory until the middle of the year after which they began to decline.

In the U.S., annual headline CPI inflation was 5.6 percent in July, its highest figure since 1991. The decline in commodity prices however also contributed to a rapid fall in headline inflation, causing this indicator to register the largest monthly drops in its history during the last quarter. As a result, annual inflation was 0.1 percent at the end of 2008.

Inflation in other advanced countries followed a similar pattern to that observed in the U.S. In June, headline CPI inflation in the Euro zone recorded its highest level (4 percent at an annual rate) since May 1992, although it started to fall as commodity prices declined, reaching 1.6 percent at the end of 2008. Annual headline inflation in Japan also rebounded briefly in the middle of the year, but ended 2008 at 0.4 percent in annual terms. In emerging economies, the inflationary outlook in 2008 was different across countries. While in some countries inflation decreased markedly during the second half of the year, in others it remained high and even rose.

Financial markets continued to be subject to substantial turmoil, which worsened after Lehman Brothers' collapse in September. In order to bolster confidence in financial markets and curb the decline of economic activity, advanced countries markedly loosened their monetary policy in 2008. In the U.S., the target for the federal funds rate was cut from 4.25 percent at the start of the year to between 0 and 0.25 percent. The European Central Bank reduced its



policy rate on three occasions for a total of 175 basis points, taking it to a level of 2.5 percent by the end of the year. The Bank of England cut its reference interest rate to historically low levels (2 percent at the end of 2008), while the Bank of Japan reduced its policy rate to 0.1 percent. It is important to mention that as part of the efforts to reduce problems in the financial sector and recessive trends, the European Central Bank, the Bank of England, the Bank of Sweden, the Swiss National Bank, the Bank of Canada, and the Federal Reserve Bank announced a coordinated reduction in their policy rates in October.

As the margin of maneuver for traditional monetary policy (i.e. the adjustment of policy interest rates) narrowed, the major central banks decided to use non-conventional measures to stimulate their economies and support their financial systems. These measures included the creation of new financing facilities, currency swaps between different central banks, giving greater access to central bank financing to other types of borrowers and with a wider range of collateral categories, as well as direct purchases of financial instruments. These actions led to a substantial growth in the balance sheets of the major advanced economies' central banks. Although monetary policy loosened in a large number of emerging economies during 2008, it was implemented very differently from one country to another as compared with advanced economies.

As economic activity weakened further and the effectiveness of the monetary policy transmission mechanisms diminished, several countries turned to fiscal stimulus policies to boost demand.

As mentioned above, due to the sharp deterioration of conditions in international financial markets, monetary authorities unveiled a series of measures designed to avoid a total collapse of the financial system. On October, the U.S. Department of the Treasury unveiled the Troubled Assets Relief Program (TARP) destined, among other goals, to raise the capitalization levels of banks and other eligible institutions. The advanced economies of Europe unveiled different measures to increase the protection of savings deposits, provide guarantees on newly issued debt and the first initiative to bolster commercial banks' capital. In emerging economies, the implemented measures included strengthening their local banking systems, implementing programs to provide access to US dollar liquidity, intervening the foreign exchange market, and granting guarantees on financial institutions' debt.

The actions taken by the U.S. and other countries, mostly during the last quarter of 2008, succeeded in reducing both the risk of collapse in the international financial system and the uncertainty in some segments of financial markets. Nevertheless, concerns regarding the viability of some financial institutions and the effectiveness of support programs, mainly in the U.S., continued until the end of 2008.

### III. Developments in the Mexican Economy: General Overview

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#### III.1. Economic Activity

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As a result of a particularly adverse international environment, economic activity in Mexico weakened throughout 2008. During the first three quarters of the year, the economy slowed mainly in response to the gradual deterioration of external demand, which mostly affected activity in sectors producing internationally traded goods. Nonetheless, in the last few months of the year the effects of the external shock spread to the private component of domestic expenditure, which in turn weakened non-tradable goods production, causing this sector to grow in negative terms during the last quarter. Thus, although during the first three quarters of the year GDP grew 2.4 percent in annual terms, this aggregate contracted 1.6 percent in annual terms during the last quarter of 2008. As a result, GDP grew 1.3 percent during the entire year.

In 2008, the performance of the Mexican economy was mainly characterized by the following:

- a) Among the components of domestic demand, private expenditure followed a very different pattern than public expenditure. In particular, while private consumption and investment tended to weaken towards the end of the year, public expenditure, especially investment, remained positive.
- b) Exports of goods and services began to grow at significantly lower rates in annual terms during the second quarter of 2008. In seasonally adjusted terms, the external component of aggregate demand fell 8.8 percent during the last quarter of 2008, clearly revealing the greater effect of the external shock towards the end of the year.
- c) Annual GDP growth reflected falls in its tradable goods component and a slowdown in its non-tradable goods component. It is important to mention that even the latter recorded falls in activity during the fourth quarter.

Neither aggregate demand nor economic activity growth in 2008 exerted pressure on Mexico's output capacity; therefore, they were not a source of inflationary pressures for prices. This conclusion can be made after taking into account the fact that the use of output capacity slowed considerably during the year, while GDP grew at modest rates in the first three quarters of 2008 and contracted in the last quarter.

#### III.2. Employment, Earnings, and Productivity

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The slowdown of economic activity in 2008 led to a lower demand for labor, particularly in the formal sector, as well as to an increase in the national unemployment rate. In line with the development of economic activity during the

year, the decline in the demand for labor and the increasing levels of unemployment became more noticeable in the last few months of 2008.

The most relevant aspects of the labor market during the year were:

- a) Formal employment lost strength throughout the year, leading to a reduction in the number of workers insured by the Mexican Social Security Institute (*Instituto Mexicano del Seguro Social*, IMSS) at the end of the year. Lower formal employment originated from a fall in permanent jobs and the growth of temporary jobs in urban areas.
- b) The national unemployment rate was higher than in 2007.
- c) The proportion of the population in informal employment and the underemployment rate remained high throughout the year.

Some of the most important issues regarding earnings and output per worker during 2008 were:

- a) The IMSS reference wage, which includes all workers insured by this institute and average contractual wages, grew similarly in annual terms to 2007.
- b) The increase determined for the general minimum wage in 2009 was larger than that negotiated during the previous year.
- c) Average output per worker calculated using information from the National Employment Survey (*Encuesta Nacional de Ocupación y Empleo*, ENOE) and Mexico's National Accounts grew at a lower rate than in 2007.

### **III.3. External Sector**

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The fall in world economic activity and tighter credit conditions influenced the development of Mexico's external accounts during 2008. Such an environment contributed to the following: a decline in the rate of growth of non-oil exports; a slower growth rate of imports, particularly by the end of the year; a drop in revenues from workers' remittances; and, tighter conditions to access foreign financing (for both lending and investment).

In 2008, Mexico's external sector was characterized by the following:

- a) The growth of non-oil exports slowed down throughout the year, resulting in a negative annual variation in the last quarter.
- b) The value of oil exports reached unprecedented levels in response to high crude oil prices, which prevailed in international markets during the first half of 2008. Nonetheless, the annual growth of both the price and the volume of crude oil exports fell during the second half of the year.
- c) Merchandise imports continued to grow at high levels, although slightly below those observed during the previous year. However, the weakening of aggregate demand during the last quarter led to a



reduction in imports of consumer and intermediate goods, while imports of capital goods slowed by the end of the year.

- d) Revenues from workers' remittances fell 3.6 percent in annual terms (as compared with the 2 percent growth recorded in 2007). The flow of remittances lost momentum throughout 2008, particularly during the second half of the year.
- e) The capital account recorded surplus of 21,438 million US dollars due to the net result of the following: inflows from foreign investment (both direct and in the money market), external financing channeled to the non-bank private sector and to investment projects known as *Pidiregas*; outflows associated to public sector and commercial banks' payments of foreign debt, withdrawals of foreign investment from the stock market; and increases in Mexican residents' assets abroad.
- f) A 7,450 million US dollar increase in net international reserves. Thus, on December 31, 2008 such reserves amounted to 85,441 million US dollars.

#### **III.4. Public Finances**

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In 2008, public finances' results were in line with the goals established in the economic package approved by the Mexican Congress and there were excess revenues with respect to those originally considered in the Federal Revenues Law for 2008 (*Ley de Ingresos de la Federación 2008*, LIF-2008). These results were achieved despite the effects of both, the economic downturn and lower oil prices on public finances, particularly during the last quarter of the year. On the basis of its goal to maintain fiscal balance equilibrium, the public sector recorded a deficit equivalent to 0.1 percent of GDP. This result excluded the fiscal cost of the ISSSTE Law reform, which at the time the economic package was approved, implied recognizing a contingent liability of unknown size because it depended on the number of workers that would decide to change to the new pension plan. The fiscal cost of changing the ISSSTE's pension scheme amounted to 292 thousand million pesos, equivalent to 2.4 percent of GDP. After including this cost, the public sector deficit totaled 2.5 percent of GDP. It is important to mention that although this cost raised the public sector deficit and debt in 2008, the new pension scheme will reduce pension expenditure pressures on public finances in the medium term.

In 2008, budgetary revenues amounted to 2,857.1 thousand million pesos (23.6 percent of GDP), implying a real increase compared to revenues recorded in 2007 and above those forecasted in the LIF-2008. The latter mainly resulted from the higher oil prices observed during most of the year and from non-recurrent revenues. In addition, the coming into effect in 2008 of the fiscal reform approved in 2007 strengthened non-oil tax revenues.

As a result of the greater fiscal revenues in 2008, public expenditure exceeded its programmed level and increased in real terms as compared to 2007. In 2008, budgetary expenditures totaled 2,865.3 thousand million pesos (23.7 percent of GDP). Public expenditure grew 9.8 percent in real terms compared to

2007 mainly due to an increase in programmable expenditures (10.5 percent at constant prices), among which capital expenditure grew at a real annual rate of 24.6 percent and accounted for 4.4 percent of GDP.

In response to the worsening of economic growth expectations and their possible impact on the Mexican economy, the federal government announced three fiscal programs designed to stave off the impact of the deteriorating world economic growth on the Mexican economy: in March the Economic Support Program (*Programa de Apoyo a la Economía*), in May the Household Economy Support Program (*Programa de Apoyo a la Economía Familiar*), and in October the Program to Boost Employment and Growth (*Programa para Impulsar el Crecimiento y el Empleo*, PICE). The first two programs mainly set out to reduce firms' costs and tax burdens and protect households' income and improve their access to basic food. These two programs did not generate pressures on public finances because they did not affect the annual public balance target.

The PICE was implemented in response to the greater deterioration of economic activity during the last quarter of 2008 and to expectations of lower economic growth for 2009. The program included measures to boost domestic demand through higher government investment in infrastructure and greater direct and induced financing by development banks. These measures were included in the economic program approved by the Mexican Congress for 2009, which modified the public balance target from traditional equilibrium to a 227.5 thousand million pesos deficit (1.8 percent of GDP).

Finally, it is important to mention that at the end of 2008, the Mexican government announced it had secured derivatives contracts to hedge oil exports using funds from the FEIP. These derivatives are designed to hedge net Mexican crude oil exports (330 million barrels per year) at an average price of 70 US dollars per barrel during 2009. With this measure, the government intends to offset the expected decline in oil revenues that could result from a fall in the oil price with respect to the one budgeted in the LIF-2009.

### **III.5. Monetary and Credit Aggregates**

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The financial crisis worsened since mid September 2008 and its effects spread around the world. The extreme risk aversion prevailing in this highly uncertain environment led investors to search for safer financial assets; while the global deleveraging process intensified, resulting in the sale of positions in different financial markets. These two processes affected foreign exchange and other financial markets, particularly those of emerging countries. The exchange rates of these countries' depreciated significantly and became more volatile, while their sovereign and corporate debt spreads widened considerably and conditions of access to foreign financing tightened. Regarding emerging countries' domestic markets, as a result of these effects and the decomposition of portfolios towards safer and shorter-term assets, liquidity in medium and long-term security markets declined.

The worsening of financial conditions in other domestic markets led Banco de México and the Ministry of Finance to adopt coordinated measures to preserve the orderly functioning of Mexico's financial markets. These measures were designed to inject liquidity to the foreign exchange market; ensure the supply



of domestic liquidity to the banking system; improve liquidity conditions in securities markets; and, provide other measures to eliminate some of the obstacles to the orderly functioning of financial markets.

As for US dollar funding, in October, the Foreign Exchange Commission decided to provide liquidity to the market through two types of auctions (only Mexican commercial banks and development banks can participate in both types of auctions). First, the mechanism to carry out daily US dollar auctions with announced minimum price was reintroduced on October 9. Through this mechanism Banco de México auctioned 4,178 million US dollars. Second, and in order to meet the exceptional demand for currency, in October, extraordinary auctions of US dollars were carried for a total of 11,000 million US dollars. On October 29, Banco de México also established a temporary currency arrangement (swap line) with the U.S. Federal Reserve for up to 30 billion US dollars.

Regarding domestic liquidity for the banking system, in October, Banco de México decided to establish an additional temporary facility to provide liquidity to commercial banks. This preventive measure was based on the experience of other countries which have recently faced situations where banks have encountered difficulties in obtaining money market financing.

In order to improve liquidity conditions in securities markets, the Mexican government and the Bank Savings Protection Institute (*Instituto Bancario de Protección al Ahorro*, IPAB) modified their primary security placement program for the fourth quarter of 2008, increasing the amount of short-term placements and reducing issues of medium and long-term securities. Second, the federal government held auctions to repurchase *Bonos M* (of which 4,342.1 million pesos were allocated) and *Udibonos* (of which 712.6 million UDIs were allocated). Banco de México carried out interest rate swap auctions, exchanging long-term fixed rates for short-term floating rates (interest rate swaps), and of which 4,400 million pesos were allocated.

In order to remove certain obstacles to the orderly functioning of financial markets, the following actions were taken. First, Banco de México implemented a program to auction IPAB bonds for up to 150,000 million pesos, of which 146,702 million were allocated. Second, temporary regulatory facilities were also introduced, giving investment funds greater flexibility to restructure their portfolios. Finally, in order to encourage the renewal of security issues in the private debt market, development banks implemented a program of guarantees for short-term securities. Short-term issues that used this program in 2008 amounted to 9.5 thousand million pesos.

At the end of 2008, the monetary base grew, on average, 12.5 percent at an annual rate. The expansion of the monetary base increased towards the end of 2008. This behavior might have responded to a change in the composition of private sector's portfolio between cash and bank deposits as a result of the tax on cash deposits (*Impuesto a los Depósitos en Efectivo*, IDE) which came into effect in July 2008, as well as the increase in remittances valued in pesos after October 2008.

In 2008, under the economic slowdown, the monetary aggregates grew, on average, below 2007 figures in annual terms. Monetary aggregates grew at slower rates during the first three quarters of 2008. Nevertheless, during the fourth

quarter of the year, in response to increased uncertainty and higher risk aversion in financial markets, the composition of financial asset portfolios changed in favor of assets with safer nominal yields. An additional factor explaining the recovery in the annual growth of the broad monetary aggregates (M2, M3 and M4) is the impact of the implementation of the new ISSSTE law, in December 2008, on private sector holding of domestic financial assets. In 2008, the monetary aggregate M1 recorded a nominal annual average variation of 8 percent, figure below the 9.7 percent observed in 2007. In 2008, the broad monetary aggregate M4 registered a real average annual variation of 7.3 percent; excluding the ISSSTE law's impact, this monetary aggregate's real annual growth was 6.9 percent, as compared with 7.2 percent in 2007.

The worsening of the international financial crisis in the last few months of 2008 led to conditions of extreme risk aversion and tighter liquidity in all financial markets. Under these conditions, the supply of funding declined, while access to some financial markets diminished significantly. On another front, the slowdown in economic activity and the deterioration of the medium-term economic outlook have reduced private sector's demand for financing. These effects resulted in a decline in the growth of both foreign and domestic financing to the non-financial private sector, as well as in an increase in the cost of this type of credit through debt issue and credit granted by the financial system.

In 2008, the rate of growth of total financing to the non-financial private sector deteriorated significantly, mainly towards the last quarter of the year. In December 2008, this financial aggregate grew at a real annual rate of 8.9 percent, as compared with the 10.6 percent of same month of 2007. In December 2008, total financing to households contracted 1 percent in real annual terms, as compared with a 9.6 percent at the end of 2007. Commercial banks, the financial intermediary with the largest share in the credit to households' market (52.9 percent in December 2008), was the one that contracted the most as a percentage of GDP. As a result, total financing to households declined from 12.8 percentage points of GDP in December 2007 to 12.5 percentage points at the end of 2008. As for financing to firms, a breakdown of the sources of this type of credit reveals that both foreign (expressed in US dollars) and domestic financing grew 3.6 percent (as compared with 5.6 percent in 2007). In particular, in December 2008, securities placed in international financial markets decreased at a rate of 12 percent in annual terms (as compared with a 16.7 percent growth in December 2007), while domestic financing to the non-financial private sector also grew at slower rates during 2008 (12.4 percent in real annual terms, as compared with 18.7 percent in 2007).

### **III.6. Inflation**

At the end of 2008, annual headline inflation was 6.53 percent, 2.77 percentage points above the 3.76 percent observed in December 2007. In 2008, different events affected the supply of goods and services in Mexico. Worth mentioning are the increases in the international prices of food, metal and energy commodities, particularly during the first half of the year. These increases had a significant impact on production cost structures in practically all sectors of the economy. Furthermore, prices were affected by exchange rate-related pressures from September onwards.

Annual core inflation reached 5.73 percent in December 2008, 1.59 percentage points higher than the figure observed at the end of 2007. The higher costs stemming from increases in the price quotes of food and metal commodities had an upward influence on the prices of processed foods and food services. Prices of metal commodities affected housing construction costs and therefore construction-related prices.

At the end of 2008, annual non-core inflation reached 8.72 percent (as compared with 2.71 percent in December of the previous year). The growth of this index responded mainly to the increase in the international prices of energy commodities, which was later reflected in the domestic prices of these goods, and also in the increase in agricultural prices.

## **IV. Monetary and Exchange Rate Policy**

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### **IV.1. Monetary Policy**

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#### **IV.1.1. General Overview**

After having left the target for the Overnight Interbank Rate unchanged at 7.50 percent from January to May 2008, Banco de México's Board of Governors decided to raise it by 25 basis points on each occasion in June, July and August. As a result, the target rose from 7.50 to 8.25 percent. These actions aimed at preventing the rise in inflation (originated by the increase in commodity prices) from affecting the "anchorage" of medium-term inflation expectations and, thereby, the economy's price formation process.

Later, the substantial increase in risk aversion in international financial markets in September, October, and November translated into higher volatility in emerging economies' financial markets, including Mexico. Under this setting, and despite the worsening economic outlook, the Board of Governors decided to leave the target for the Overnight Interbank Rate unchanged at 8.25 percent from September onwards.

During the fourth quarter of 2008, Banco de México and the Ministry of Finance implemented several measures to preserve the well functioning of domestic capital markets. If these actions had not been taken, the effects on economic activity in Mexico would have been extremely damaging.

In order to put the abovementioned monetary policy actions into context, the factors that affected inflation during 2008 need to be analyzed. Among supply side factors are: i) the increases in international commodity prices during the first half of 2008; ii) the federal government's pricing policy for certain public goods and services. In particular, the freezing of fuel prices during the last quarter of 2007 together with the upward adjustment in the prices of these goods in the last quarter of 2008, led to considerable increases in the annual variations of these

prices in the last few months of the year; and, iii) the possible pass-through effect of the depreciation of the peso's exchange rate to consumer prices by the end of the year. Due to their characteristics, these factors tend to affect firms' costs and therefore might influence economic agents' prospects for inflation.

In an environment where economic activity weakened throughout the year, no inflationary pressures from the demand-side were identified.

Under this setting, inflation followed an upward trajectory in 2008. As will be shown below, during the year this led to deterioration in various indicators which offer information on both the behavior and expectations on inflation. In this regard it is important to mention that the pass-through of increases in international commodity prices to consumer prices in Mexico is usually not immediate (lagged effect). For this reason, although these prices started to decline during the third quarter of the year, the impact of the previous increases were still reflected in the price increases of certain products in Mexico during the second half of the year.

The behavior of indicators which offer information on the outlook for inflation reveals that, as would be expected in an environment where inflation deteriorated during the year, inflation expectations for shorter terms rose. However, the increase in medium-term expectations was significantly lower.

The events described above were reflected in the yield curve dynamics. Given the problems in U.S. financial markets that began since August 2007, investors' search for risk-free instruments during the first months of 2008 together with expectations of a slowdown in economic activity led to a reduction in interest rates for all terms in the U.S. Under these conditions, medium and long-term interest rates in Mexico decreased during the first quarter of the year, causing the yield curve to flatten. Nonetheless, in response to risks of higher inflation in Mexico, longer-term interest rates began to rise during the second quarter of the year, causing the yield curve to steepen. It is also possible that a significant part of the increase in interest rates has reflected investors' greater demand for inflationary risk premia. Later, during the third quarter, the yield curve flattened. The previously mentioned monetary policy actions led to an increase in short-term yields. Meanwhile, longer-term interest rates declined mainly in response to the lower inflationary risk premia resulting from the decline in international commodity prices, which started in July, and the monetary policy actions described above.

The behavior of interest rates in Mexico towards the end of the third quarter and the beginning of the fourth were influenced by factors affecting the conditions in international financial markets. The level and volatility of long-term interest rates in Mexico rose significantly during this period. The latter took place in an environment where medium and long-term interest rates remained reasonably well "anchored". Thus, the significant steepening of the yield curve possibly reflected the increase in risk aversion which led many investors to offload their positions in emerging markets.

As the previously described actions to preserve the well functioning of Mexico's financial markets took effect, towards the end of the year the increase in longer-term interest rates that had been observed began to revert. Other factors which contributed to this decline were the deteriorating outlook for economic activity and the markets' perception (as reflected by the performance of the

futures curve for the 28-day TIEE) of lower short-term interest rates in the foreseeable future.

## **IV.2. Exchange Rate Policy**

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The environment of global deleveraging and higher risk aversion that began in September 2008 led some investors to offload their positions in emerging markets. Furthermore, the sharp economic downturn in advanced economies also affected economic activity in emerging economies, while the international prices of commodities continued to decline and conditions in financial markets tightened. In this environment, most emerging countries' sovereign debt spreads increased considerably and their currencies depreciated substantially. The foreign exchange markets of these countries also underwent significantly higher volatility after September.

The foreign exchange market in Mexico (and in other economies like South Korea and Brazil) experienced a lack of liquidity on several occasions from October onwards. In some cases, this resulted from the extraordinary demand from some firms to meet their positions in foreign currency derivatives and which, later, recorded significant losses.

As mentioned in previous Inflation Reports, the Foreign Exchange Commission is responsible for conducting Mexico's foreign exchange policy. The Commission is composed of three officers from the Ministry of Finance (the Secretary and two Under Secretaries, one of which is directly appointed by the Secretary) and three from Banco de México (the Governor and two other Board members chosen by the Governor).

Taking into account the risks a highly volatile foreign exchange market implies for financial stability, the Foreign Exchange Commission implemented several measures to supply liquidity to the foreign exchange market, and, thereby, ensure its proper functioning. Among these measures were: daily auctions offering up to 400 million US dollars at a minimum exchange rate of 2 percent above that on the previous business day; extraordinary auctions during October to meet the exceptional demand for foreign currency (only Mexican commercial banks and development banks can participate in both types of auctions); and, the establishment of a temporary swap line with the US Federal Reserve for up to 30 billion US dollars effective from October 29, 2008, and originally valid until April 30, 2009.

These actions, together with other additional measures previously mentioned, helped prevent the episodes of volatility in international markets from affecting the stability of Mexico's financial markets and the high cost this could have in terms of economic activity and the economy's price determination process. Thus, conditions in the foreign exchange market improved by the end of the year.

## V. Final Remarks

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In a environment of an extraordinary uncertainty in international financial markets, the world economy weakened significantly during 2008. Although the economic downturn mostly affected advanced economies, GDP growth in emerging countries also slowed significantly.

On another front, the downturn in the world economy reduced demand-side pressures on output capacity. International commodity prices fell considerably since the second half of 2008 as well. As a result, after having followed an upward trend during the first half of the year, world inflation declined substantially during the remainder of 2008, especially in advanced economies.

Economic activity in Mexico lost momentum throughout 2008 due to the particularly adverse global environment. During the first three quarters of the year, economic weakness mainly resulted from the deterioration of external demand and, therefore, mostly affected those sectors producing tradable goods. However, at the end of the year the external shock spread to the rest of the economy, leading to a sharp contraction in GDP in the last quarter. The economic slowdown during 2008 was also reflected in the gradual deterioration of labor market indicators.

Headline inflation in Mexico increased during 2008. This trend was the result of a series of supply shocks mainly associated with significant increases in the international prices of different commodities. In particular, price increases of some grains affected the production costs of processed food and livestock products, which, in turn, also affected consumer prices of both of these types of goods. Moreover, prices of steel and copper rose significantly during 2008, affecting the cost of construction materials and therefore the housing price index. On the other hand, increases in international fuel prices partly affected domestic prices of these energy goods. However, it is important to mention that no considerable demand-side pressures were identified during 2008.

Although the growth in inflation during 2008 deteriorated short-term inflation expectations, medium and long-term expectations remained relatively well “anchored”. This behavior was mainly due to the monetary policy measures implemented by Banco de México. In particular, the Board of Governors’ decision to raise the target for the Overnight Interbank Rate by 25 basis points on each occasion in June, July, and August. Afterwards, in light of the high volatility financial markets were exhibiting, the Board decided to leave its monetary policy stance unchanged from September onwards.