Inflation Report
October – December 2000
and
Monetary Policy Program for 2001

BANCO DE MEXICO

January, 2001

THE BOARD OF GOVERNORS

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Article 51 of Banco de México's Law contains provisions to reconcile the autonomy of the Central Institute with the necessary accountability for its management. The method which the Legislative Branch considered most appropriate to this end was the presentation of periodic reports by the Central Bank on its policies and activities. This article states, in section I, that in January of each year, the Central Institute will send the President and Congress, and in the recess of the latter to its Permanent Commission, a statement on the monetary policy to be conducted by the institution during the year.

As from the enactment of its current Law, Banco de México has implemented monetary policy with the priority objective of permanently abating inflation. A fundamental element of the inflation abatement strategy has been to strengthen the Central Institute's credibility with regards to the attainment of its objective. To this end, Banco de México has made an unprecedented effort to make public its interpretation of events that affect the national economy, in addition to the actions and policies adopted to facilitate the economy's improved performance. The aforementioned has translated into a more transparent monetary policy, by increasing both the volume and the timeliness of information supplied by Banco de México to the public.

Therefore, as of April 2000, the Board of Governors of Banco de México agreed to publish Quarterly Inflation Reports in January, April, July and October. These reports contain a detailed description of the evolution of inflation and the main factors that affect it, as well as an evaluation of the international environment, which have been the basis for the monetary policy actions implemented to fulfill the Constitutional mandate of maintaining the stability of the national currency's purchasing power. The Inflation Reports corresponding to the first, second and third quarters of 2000 were sent in due time to the President and Congress.

The present document includes both the "Inflation Report: October-December 2000" and the "Monetary Policy Program for 2001." In compliance with Article 51, section I of Banco de México's Law, the aforementioned Program presents a statement on the monetary policy to be conducted throughout the period from January 1 to December 31, 2001.

FOREWARNING

Banco de México has always given the utmost importance to the publication of information that will help decision-making and allow the public to evaluate the execution of its policies. This text is provided only as a convenience to the reader, and discrepancies could eventually arise from the translation of the original document into English. The original and unabridged Inflation Report in Spanish is the only official document.

Unless otherwise stated, this document has been prepared using data available as of January 25th, 2001. Some figures are preliminary and subject to change.

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I. Introduction

The performance of the Mexican economy in the year 2000 was much better than expected at the beginning of that year. Annual inflation fell from 12.32 percent in December 1999 to 8.96 percent in December 2000. The annual inflation target of less than 10 percent inflation was thus attained by a wide margin. Furthermore, GDP is estimated to have increased by more than 7 percent in real terms last year, thus the average growth rate of the Mexican economy over the last five years has been higher than 5.3 percent. Inflation fell by 43 percentage points over the same period, thereby confirming that the abatement of inflation is a necessary condition for economic growth and development.

The six year crisis cycle which had troubled Mexico for more than two decades was finally broken in the year 2000. This was due, among other factors, to the prudent application of macroeconomic policies over the last few years, efforts made in order to reduce the domestic economy's vulnerability to sudden changes in the availability of external financing, and to an orderly election process.

Even though considerable advances have been made in the reduction of inflation, the growth rate of prices in Mexico is still high and therefore constitutes an obstacle to sustained and balanced economic development. The Board of Governors of Banco de México has thus established the convergence towards 3 percent inflation in 2003 as the medium term objective and, accordingly, in October 2000 the Central Bank announced a short term target of less than 6.5 percent inflation for 2001.

In the last few years, the monetary policy strategy has been going through a process of change in order to make it more effective and transparent in accordance with the changes that the Mexican economy has undergone. This development has led to a gradual convergence towards an inflation targeting scheme. Such a scheme has been successfully employed by a large number of central banks in both emerging and developed economies. This document outlines the principal aspects of the aforementioned scheme.

The effort to abate inflation throughout 2001 will have to be carried out in a less favorable international environment than that of the last two years. The expected slowdown of the United States' economy and the fall in oil prices represent external disturbances which could create increased inflationary pressures. Furthermore, the downward rigidity of inflation expectations, which are relatively stagnant at levels incompatible with the target, together with the vigorous expansion of internal demand could also make the fight against inflation more costly. The Board of Governors has thus been tightening monetary policy in recent months. During the year 2000 Banco de México repeatedly warned of the need for a fiscal adjustment under the aforementioned circumstances. Even though the federal budget and the Federal Revenues Law for 2001 are steps in the right direction, public finances still show signs of vulnerability which would have to be addressed by means of a complete fiscal reform.

In spite of less favorable external conditions, the application of restrictive monetary and fiscal policies will allow inflation to continue on its downward path and provide for an orderly adjustment of the economy to the changes that have appeared in the international environment.

II. Inflation Report: October–December 2000

II.1. Recent Developments in Inflation

The evolution of prices during the fourth quarter of 2000 allowed inflation targets to be met for the second consecutive year. The target for 2000 —an annual inflation rate below 10 percent— was attained by a comfortable margin, resulting in an 8.96 percent annual rate. However, the downward trend of overall inflation observed since February 1999 leveled off during the final quarter of 2000. It is important to note that during the October–December period:

(a) the National Consumer Price Index (INPC) annual inflation rose;

(b) annual core inflation continued to fall; and

(c) observed monthly inflation rates were higher than the corresponding private sector expectations.

The above differs from the base scenario established in the previous quarter's Inflation Report, the main difference being that overall inflation had been expected to continue along its downward trend. Among the factors which contributed to the relative stagnation of the disinflation process, the following are worth mentioning:

(a) An increase in the annual growth rate of all price sub-indices excluded from core inflation calculations. These refer to goods and services provided or regulated by the public sector (in particular gas for domestic use), education services, and agricultural and livestock products.

(b) The persistent upsurge in inflation of the National Producer Price Index, excluding oil and services, after its rebound in the third quarter. This unfavorable influence has been, to a great extent, due to the significant increase in natural gas prices and consequently in electricity for industrial use.

(c) The tapering off of the favorable effects derived from the correction in nominal contractual wage increases registered at the beginning of the year.

II.2. Behavior of Various Inflation Indicators During the Quarter

The evolution of several price indices during the October–December quarter of 2000 will be analyzed in the following pages.

II.2.1. The National Consumer Price Index

In the fourth quarter of 2000, the INPC annual inflation rate rose. Mainly as a result of seasonal effects, accumulated inflation during this period was also higher than in the previous quarter.

Annual inflation closed the year at 8.96 percent, which represented a 0.11 percentage point increase over the level observed at the end of the previous quarter (Chart 1). This compares unfavorably with the declines registered by the indicator in the first three quarters of the year, which were as follows: 2.21, 0.70 and 0.56 percentage points, respectively.

The monthly growth rates of the INPC for October, November and December were greater than those anticipated by private sector analysts at the end of the previous quarter[1] (Table 1). This differs from the variable's performance in the three previous quarters in that, with the exception of August, observed inflation had been below analysts' expectations for every month during the period.

[1] These projections were reported in the July-September 2000 Inflation Report, Table 9, p. 60.

Chart 1 **National Consumer Price Index (INPC)**

Annual Percentage Change

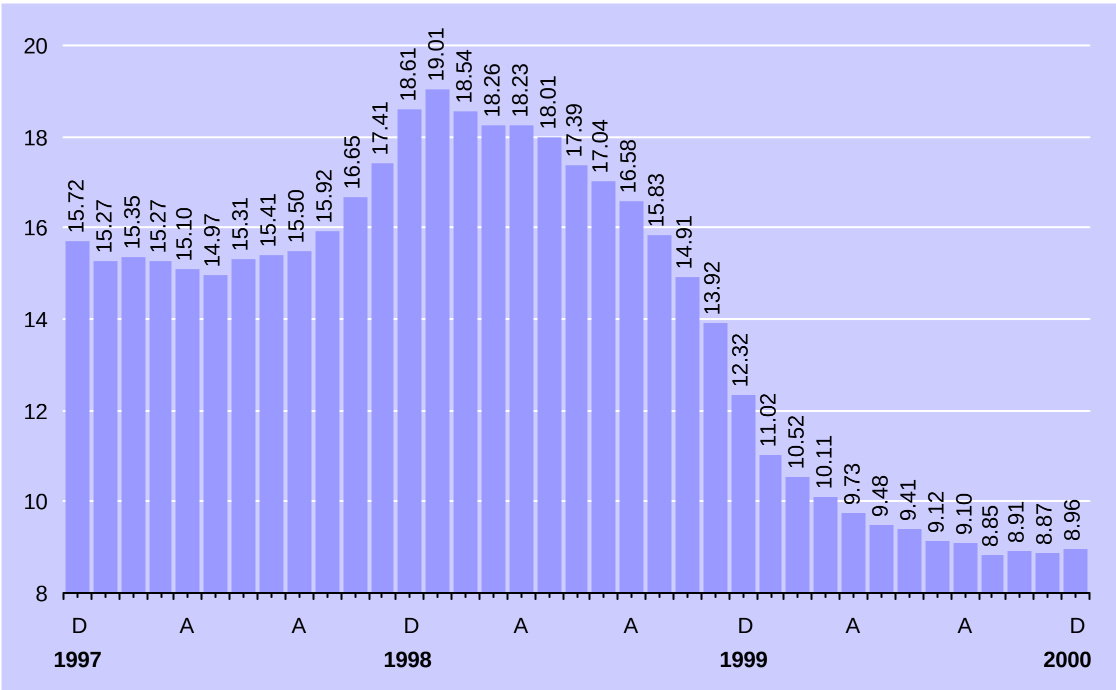


Table 1 **Observed and Expected Inflation during the October–December Quarter**

Percentage

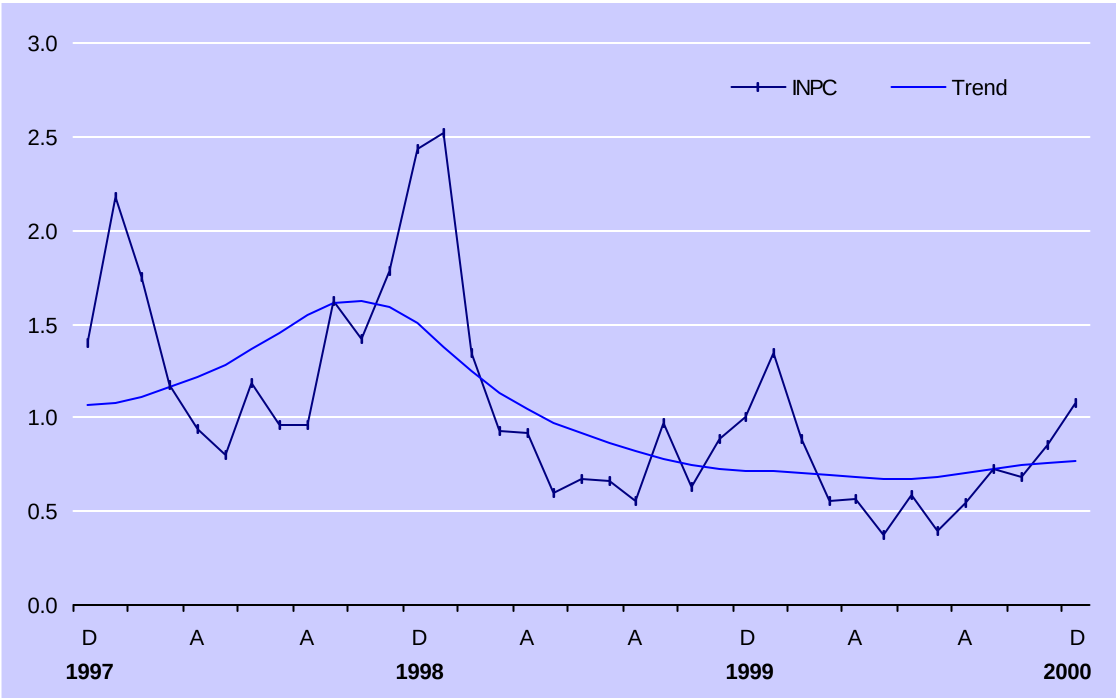
	2000		1999	
	Monthly Inflation		Monthly Inflation	
	Observed	Expected 1/	Observed	Expected 1/
October	0.69	0.60	0.63	0.82
November	0.86	0.77	0.89	1.04
December	1.08	1.05	1.00	1.53

1/ Expected Inflation at the end of the previous quarter according to the Survey of the Expectations of Private Sector Economic Specialists carried out by Banco de México.

Monthly inflation for October, November and December was 0.69, 0.86 and 1.08 percent, respectively. These monthly rates were higher than those corresponding to the preceding quarter, mostly due to the influence of seasonal phenomena. Inflation for the months of October and December was also higher than the rates posted for the same months in 1999, while November registered only a slight reduction from that seen in the same month of the previous year. Therefore, it is not surprising that the trend[2] of the aforementioned variable showed a slight rebound (Chart 2).

Chart 2 **National Consumer Price Index**

Monthly Percentage Change



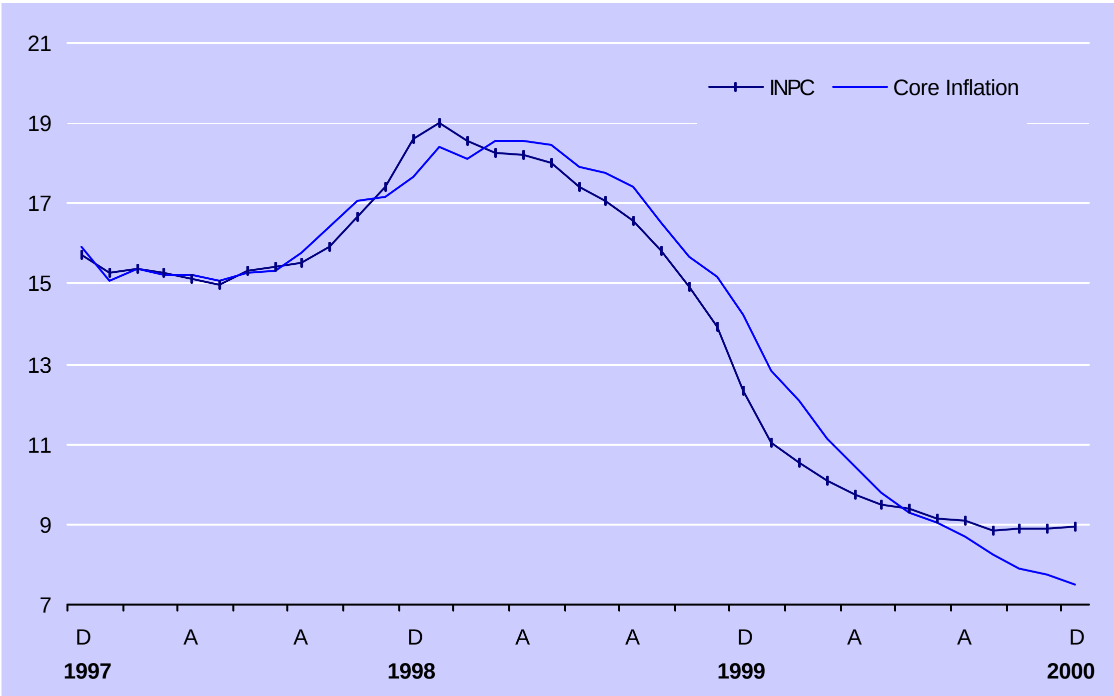
II.2.2. Core Inflation

In the fourth quarter of 2000, just as in the third quarter, annual core inflation was lower than overall inflation. In December, the gap between INPC annual inflation and that of the core index was 1.44 percentage points, the widest disparity observed during the last seven months. In contrast to what occurred to INPC inflation, core inflation continued to fall (Chart 3). Thus, at year-end 2000, the annual growth rate of the core price index was 7.52 percent, while in September it had been 8.26 percent. This 0.74 percentage point reduction was lower than the 1.03 percentage point decline registered in the previous quarter.

[2] As calculated by the X12 ARIMA statistical process. This method softens the original series by using moving averages.

Chart 3 **National Consumer Price Index and Core Price Index**

Annual Percentage Change



The evolution of the core price index over the quarter suggests that annual growth in the prices for education services, goods and services provided or regulated by the public sector, and agricultural and livestock products have not interrupted the overall disinflation process (Table 2). However, should pressures on such prices continue, the disinflation process could be jeopardized. In this regard, a first sign worth mentioning is the slight slowdown in the growth rate of core prices observed in the last months of 2000.

December was the seventh consecutive month in which annual core inflation was less than INPC growth. This indicates that the influence of the transitory factors that had contributed to the abatement of annual inflation in the first few months of the year were no longer present in the second semester. At year-end 2000 all the price sub-indices excluded from core inflation calculations showed higher annual growth rates than that for the INPC.

Table 2 **Price Indices: INPC, Core Inflation, Agricultural and Livestock Products, Education, and Goods and Services Provided or Regulated by the Public Sector**

Percentage Change

	Annual Changes			Quarterly Changes		
	Dec 2000/ Dec 1999	Sep 2000/ Sep 1999	Dec 1999/ Dec 1998	Dec 2000/ Sep 2000	Sep 2000/ Jun 2000	Dec 1999/ Sep 1999
INPC	8.96	8.85	12.32	2.65	1.68	2.55
Core Inflation	7.52	8.26	14.24	1.60	1.14	2.31
Goods	6.68	7.64	14.13	1.42	0.95	2.33
Services	8.77	9.19	14.40	1.87	1.41	2.27
Agricultural and Livestock Products	10.07	5.42	0.25	5.31	0.77	0.86
Education	15.16	15.08	18.10	0.09	12.20	0.02
Goods and Services Provided or Regulated by the Public Sector	12.58	12.41	13.36	5.31	2.51	5.15

Throughout the October-December period of 2000, annual core inflation for goods and services continued to fall. However, the deceleration for services leveled off[3] (Chart 4).Therefore, while the annual increase of the core price sub-index for goods moved from 7.64 percent at the end of the previous quarter to 6.68 percent in December, annual inflation of the core price sub-index for services declined only from 9.19 percent to 8.77 percent over the same period.

In line with the seasonal behavior observed in other years, the core inflation accumulated in the fourth quarter, for both goods and services, was higher than in the preceding quarter. This was due to the fact that many prices are updated during this period of the year. Thus, the quarterly changes of these indices was 1.42 and 1.87 percent, respectively. It is also worth mentioning that the monthly growth of the trend series for both indices was steady when compared to data from the preceding quarter (Chart 5).

[3] Since goods are generally traded internationally, their prices are very sensitive to fluctuations in the exchange rate. On the other hand, services are fundamentally non-tradable, therefore their prices respond primarily to inflation and wage expectations.

Chart 4 **Core Price Indices for Goods and Services**

Annual Percentage Change

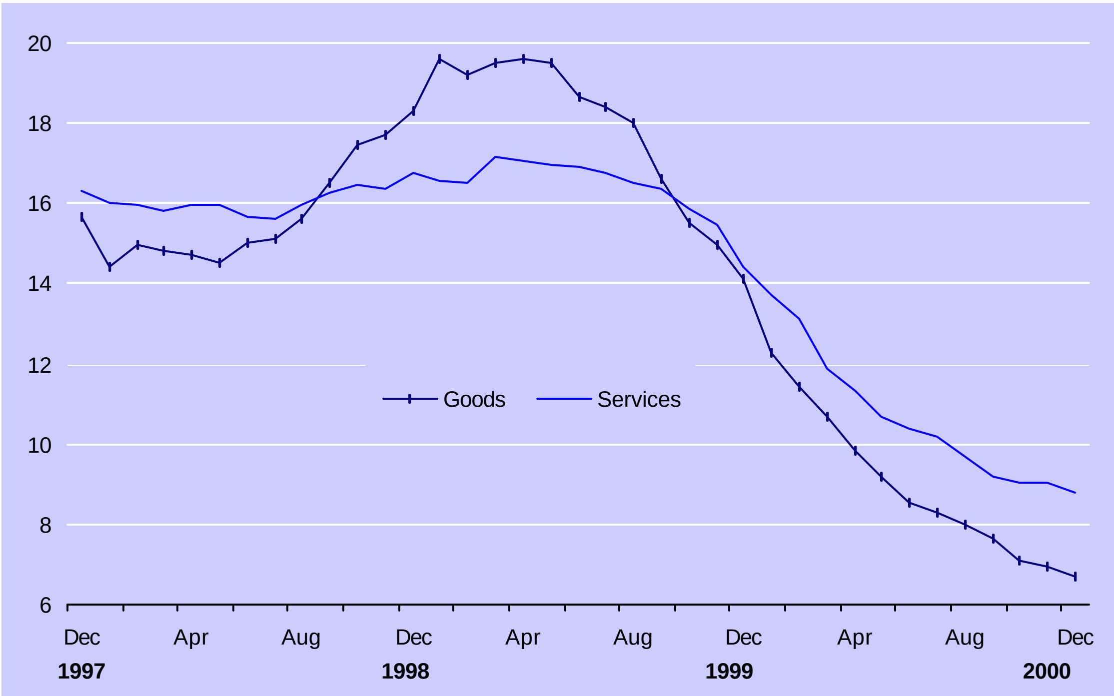
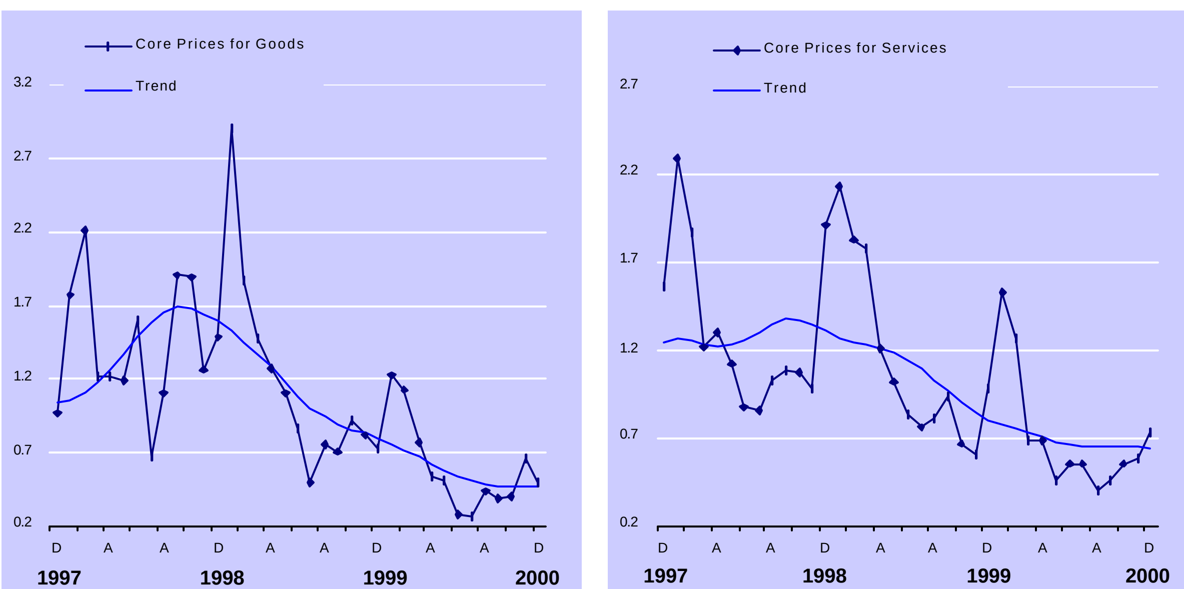


Chart 5 **Core Price Indices for Goods and Services**

Monthly Percentage Change

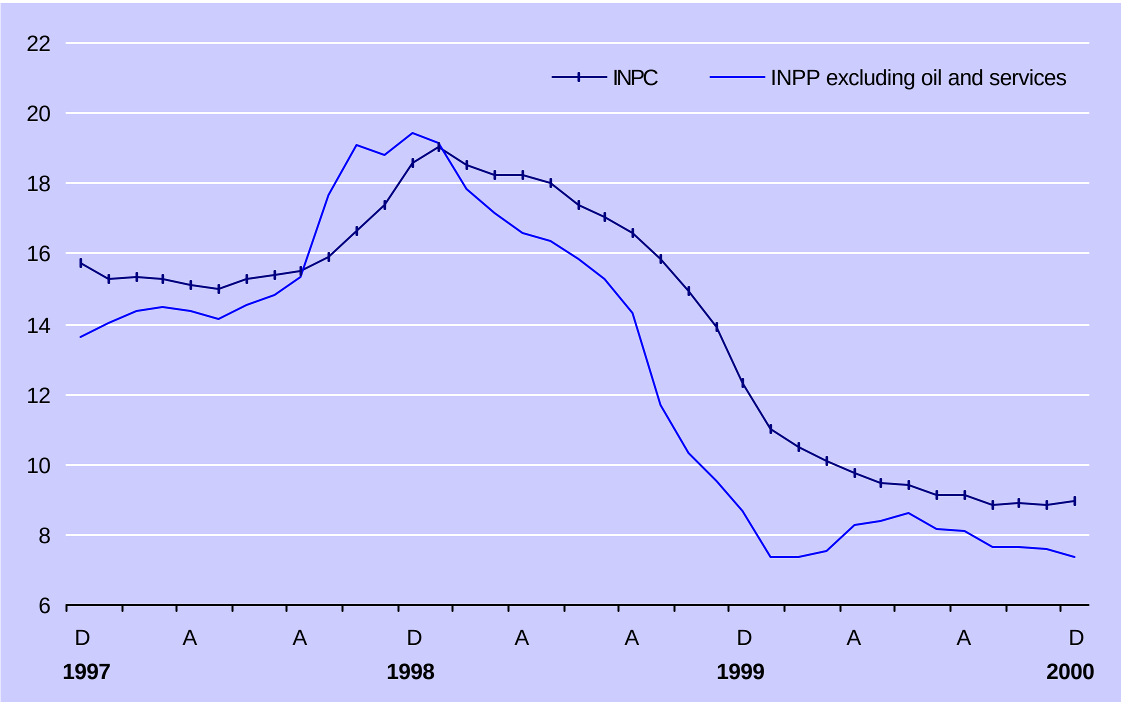


II.2.3. National Producer Price Index (INPP)

In the quarter covered by this Report, annual INPP inflation, excluding oil and services, was slightly lower than the rate posted at the end of the previous quarter. Thus, its annual growth rate was 7.38 percent in December, while that for September had been 7.68 percent (Chart 6). The stagnation of INPP inflation can be explained mainly by the 11.6 and 20.9 percent increases in the prices of natural gas and electricity for industrial use observed in the fourth quarter.

Chart 6 **National Consumer Price Index (INPC) and National Producer Price Index (INPP) excluding Oil and Services**

Annual percentage change



II.2.4. Summary

At the end of the fourth quarter of 2000, annual INPC inflation was below 10 percent, thereby comfortably fulfilling the target for the year. However, the fact that the annual overall inflation rate slightly increased during the quarter is a cause for concern. Although this phenomenon can be partly explained by transitory factors, it serves as a warning of the risk that inflation expectations might be contaminated by the downward rigidity of INPC inflation, which has been significantly influenced by the behavior of prices in specific sectors.

II.3. Main Determinants of Inflation

II.3.1. The International Environment and the Exchange Rate

During the October-December quarter of 2000, the behavior of the external variables that influence the Mexican economy was less favorable than that experienced in the previous quarter. Throughout October, the uncertainty generated by Argentina's financial problems affected Mexico's financial variables and thereby the behavior of the exchange rate. However, the repercussions of this external shock were transitory, as stability returned to national markets in November..

On the other hand, the high prices of oil that prevailed during the first eleven months of the year did not seem to have had a significant effect on the behavior of core inflation in the industrialized nations that import this energy source. Accordingly, in October and November said prices did not create additional pressure on international financial markets. Nevertheless, their favorable effect on Mexico's external accounts obviously continued throughout those months, as they were an additional source of revenue for the country. In December oil prices fell significantly. Nonetheless, the balance of oil price fluctuations was positive. Finally, signs of a greater than expected slowdown of the United States' economy were observed in the fourth quarter. However, this was not reflected in the behavior of Mexico's external accounts, which contributed to the relative stability of the exchange rate.

II.3.2. Oil Prices

In the fourth quarter of 2000, international oil prices fluctuated, having nevertheless remained in average at the same level observed throughout the year as a whole. Since their historic maximum reached in the first half of September, oil prices fell significantly once the market had absorbed the effects of the increase in supply by OPEC member countries and the release of strategic reserves by the United States. In mid October, crude oil prices rose as a result of the uncertainty caused by renewed hostilities between Israelis and Palestinians. However, by the end of the month they had returned to their average level. On the eve of the OPEC meeting of November 13th, and in response to Iraq's threat to cut its exports, international prices rose again. Notwithstanding, the UN decision in favor of reestablishing Iraqi exports, along with the high reserves of industrialized nations and the change in growth projections for the United States' economy, led to a significant fall in oil prices during December.

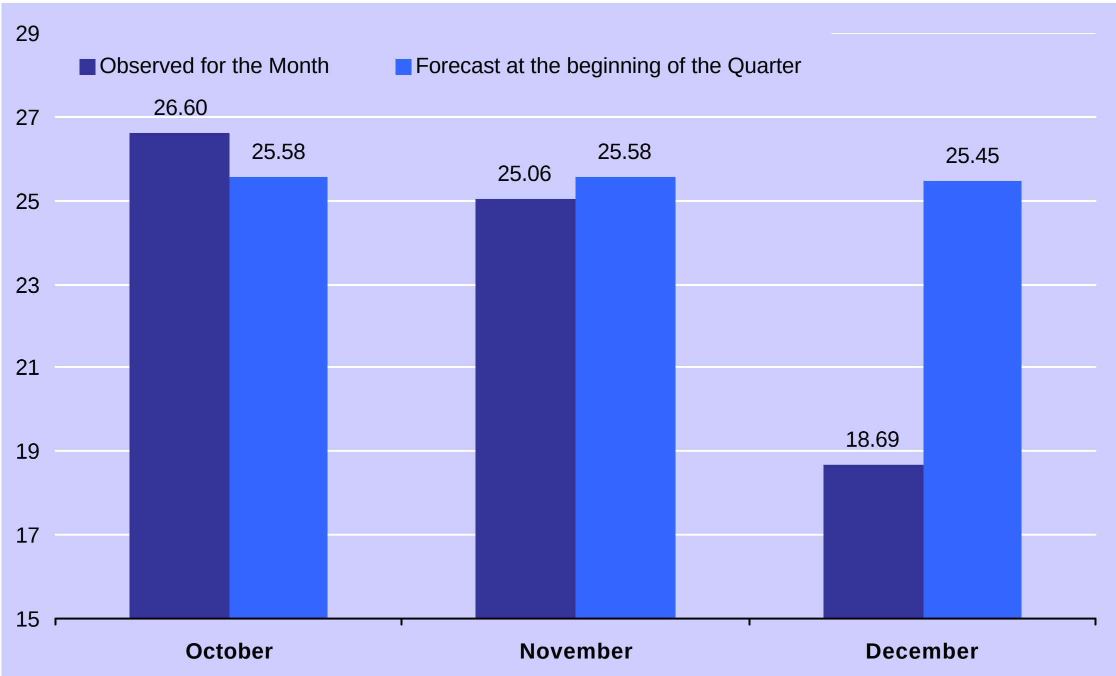
The behavior of international oil prices made the price of the Mexican crude oil export mix highly volatile. In October its monthly average was higher than the price implicit in the corresponding futures prices prevailing at the beginning of the quarter. However, the fall of international oil prices in November and December caused the price of Mexico's export mix to be surpassed by the aforementioned futures prices (Chart 7).

High international oil prices in the months of October and November of 2000 led to increases in energy prices in industrialized nations that import this fuel. Even though this contributed to an annual inflation higher than the 2 percent target in the euro zone, there were no indications that the behavior of annual core inflation was affected either in Europe or in the United States. Thus a situation similar to that occurred in September, when the rise of oil prices changed inflation expectations and caused volatility in international capital markets, was avoided. Therefore, international oil price fluctuations in these months did not induce restrictive reactions by the central banks of industrialized nations, and this in turn had a favorable influence on capital flows to emerging economies[4].

[4] Both the European Central Bank and the United States Federal Reserve maintained their short term interest rate targets unchanged throughout the October-December quarter.

Chart 7 **Price of Mexico's Crude Oil Export Mix in 2000**

Dollars per barrel



Source: Observed price, Pemex. The forecasted price is based on WTI´s futures prices and the difference between the said futures prices and that of Mexico's export mix.

II.3.3. Developments in the United States' Economy

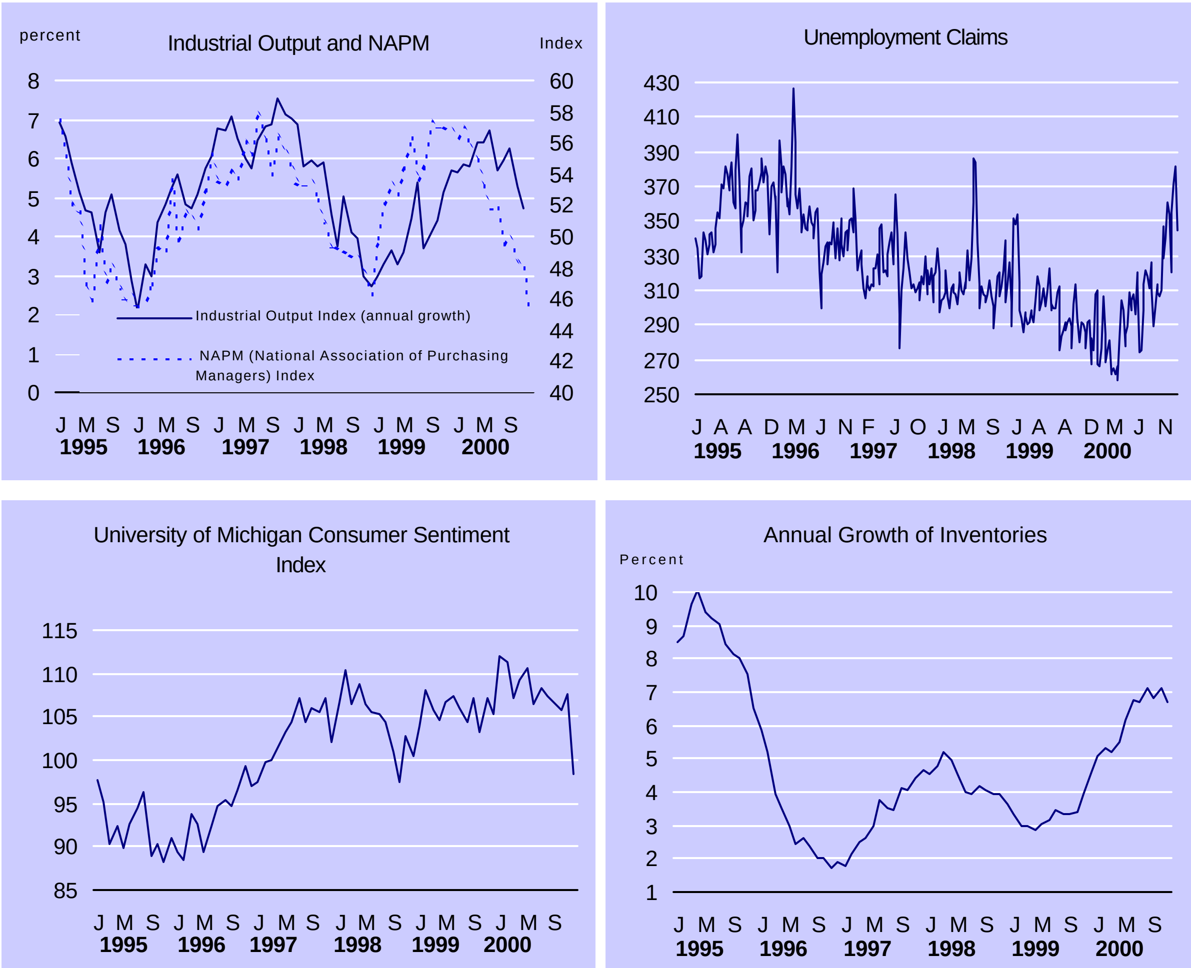
The United States' economy slowed down during the third and fourth quarters of 2000. Its real annual growth in the third quarter was 2.2 percent, considerably less than the rates of 4.8 and 5.6 percent posted during the first and second quarters of the same year. At the time this Report went to press, analysts were agreeing that fourth quarter growth and that for the year 2000 as a whole would be 2.3 and 5.1 percent, respectively.

During October-December of 2000 there was a sharp change in projections about the future behavior of economic activity in the United States. As mentioned above, growth fell significantly in the third quarter and, even though this can be partly explained by a one time contraction in government expenditure, both private investment and consumption registered lower growth levels than those reported in the previous two quarters. Moreover, some manufacturing sector indicators released in October pointed to a slowdown in industrial activity in line with that observed during the third quarter. Other indicators were still showing a gradual deceleration, thus suggesting that growth would decline towards a level sustainable in the medium term[5]. It was finally in November that the National Association of Purchasing Managers Index (NAPM) —an advanced indicator of industrial production— clearly showed the possibility of a much slower than expected expansion for the industrial sector. During the same month, more than 350,000 unemployment claims were filed, the highest level in two years. Likewise, consumer confidence remained depressed and inventory growth indicated a possible contraction in future output.(Chart 8).

The likelihood that this slowdown could turn into an overall weakening of economic activity in the United States led during the last two months to successive corrections to growth estimates for the first quarter of 2001, while projections for the year 2000 as a whole remain unaltered. Analysts currently expect the economy to barely grow in the first quarter of 2001, and estimate a rate around 1.8 percent for the year as a whole.

[5] Information released in October indicated that industrial output grew at an annual rate of 2.8 percent in the third quarter, considerably less than the 8.2 percent posted for the previous quarter. This information preceded the announcement of GDP growth for the third quarter, which showed a higher than expected deceleration. However, personal income and spending indicators reported higher than expected increases. The 1.1 percent rise in personal income registered in September was the highest monthly increase observed since October 1999. At the same time, the savings indicator for August was revised downward, reaching its lowest rate since 1959. Finally, orders for consumer durables grew at an annual rate of 1.8 percent in September, double the rate expected by analysts.

Chart 8 **Economic Indicators for the United States**

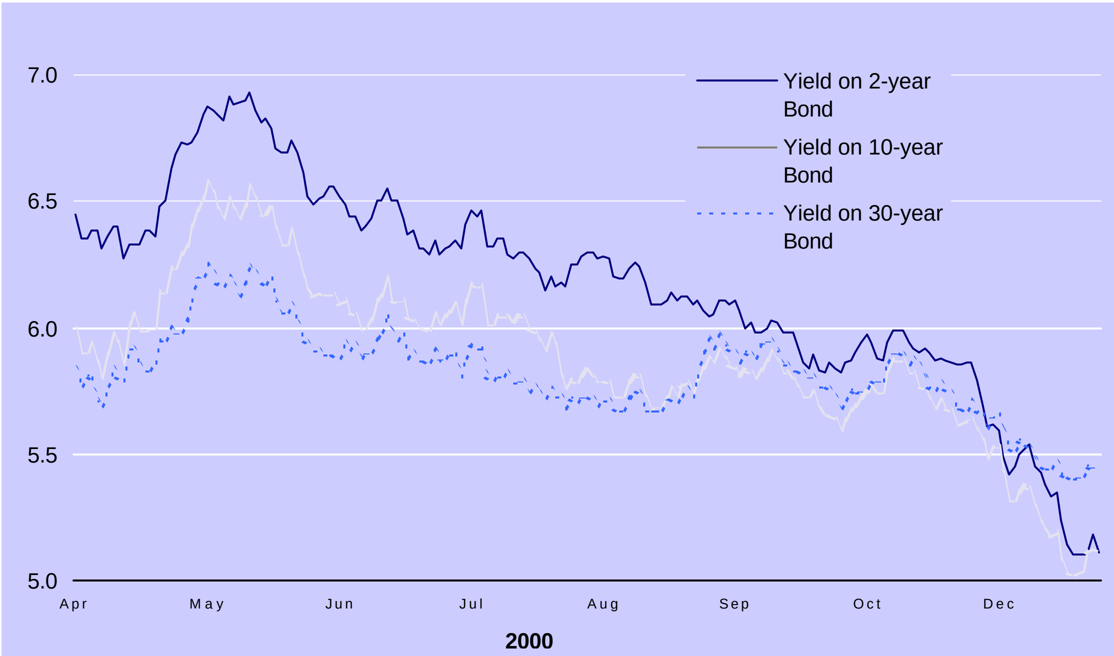


Source: National Association of Purchasing Managers, Bureau of the Census, Federal Reserve Board, Survey Research Center of the University of Michigan and Bloomberg.

Evidence of a larger-than-expected economic downturn in the United States has weakened expectations of future inflationary pressures in that country. As a result, the Federal Reserve maintained its federal funds rate target during the fourth quarter and lowered it 50 basis points on January 3rd, 2001. This change in inflation expectations has also been reflected in lower short, medium and long term interest rates in the United States (Chart 9). However, this did not prevent signs of volatility in international capital markets. Lower growth estimates, together with lower corporate profits, have increased investors' risk aversion. Likewise, they have led to a reduction in funds available for high risk projects and to a substantial fall in the United States' stock markets. The latter factor contributed to a contraction in capital flows to emerging economies.

Chart 9 **Yields on 2, 10 and 30 year United States Treasury Bonds**

Percent



II.3.4. Developments in the Rest of the World's Economies

Economic performance in the rest of the world during October-December of 2000 was generally favorable. The euro zone showed signs that it had reached the peak of its expansion cycle. For the year 2000, 3.5 percent growth is expected, which is higher than the previous year's 2.9 percent and the 2.4 percent anticipated for 2001. Taking into account the imminent deceleration, the European Central Bank has maintained its short term interest rate target unmodified since the beginning of October in spite of persistent inflationary pressures caused by high energy prices and the weakness of the euro. In November the aforementioned bank intervened to support the euro, a measure which together with news of a downturn in the United States economy contributed to the recovery of the currency in the second half of the quarter.

Japan's recovery during the first three quarters of the year was weakened in the fourth by external factors. Even though this recovery has been driven by the industrial sector, the response of domestic consumer spending is still incipient. This scenario raises the possibility that the Japanese economy might fall into a new period of stagnation. In the recently industrialized nations of Asia, where export figures exert an important influence, the outlook has deteriorated considerably as expectations of lower growth in the United States' economy have become widespread.

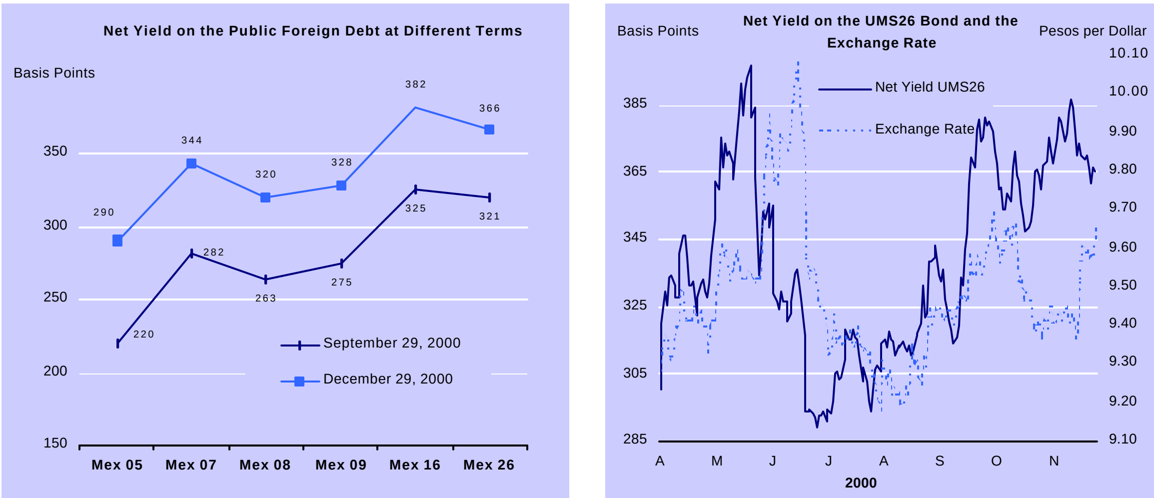
Finally, regarding Latin America, growth recovery in some countries and the greater than expected expansion in Brazil and Mexico led the region's economy to perform satisfactorily during the quarter. However, recent financial volatility together with the downturn in the United States' economy have adversely affected the prospects for future expansion. Furthermore, the economic and political situation in Argentina has caused greater uncertainty regarding the country's capacity to refinance its external debt obligations in the near future. Given the economic links between Argentina and Brazil, this uncertainty was reflected in higher net yields on the bonds placed on international markets by both countries.

II.3.5. The Impact of the International Environment on the Domestic Economy

The economic problems suffered by Argentina had a negative impact on the behavior of Mexico's financial variables during October. This became evident when the Mexican UMS26 bond yield rose 42 basis points and the exchange rate depreciated by 1.3 percent. However, the contagious effects of Argentina's situation proved to be transitory and the aforementioned variations in the UMS26 bond yield and the exchange rate were reversed.

From October onwards, the spread paid by high risk corporate bond yields has widened in international financial markets. This was due to increased risk aversion in developed countries, which has risen further as more information about the greater than expected downturn in the United States' economy has become available. This has also had a slightly adverse effect on capital flows to emerging economies. Finally, in November Standard & Poor's announced an improvement in its forecasts for the Mexican economy, suggesting that it might soon confer investment grade to the country's external public debt. This announcement caused a reduction of 23 basis points in the UMS26 bond net yield. Yet, the overall effect of the aforementioned phenomena on the bond was negative, since its net yield rose 45.1 basis points during the quarter.(Chart 10).[6]

Chart 10 **Country Risk Indicators and the Exchange Rate**



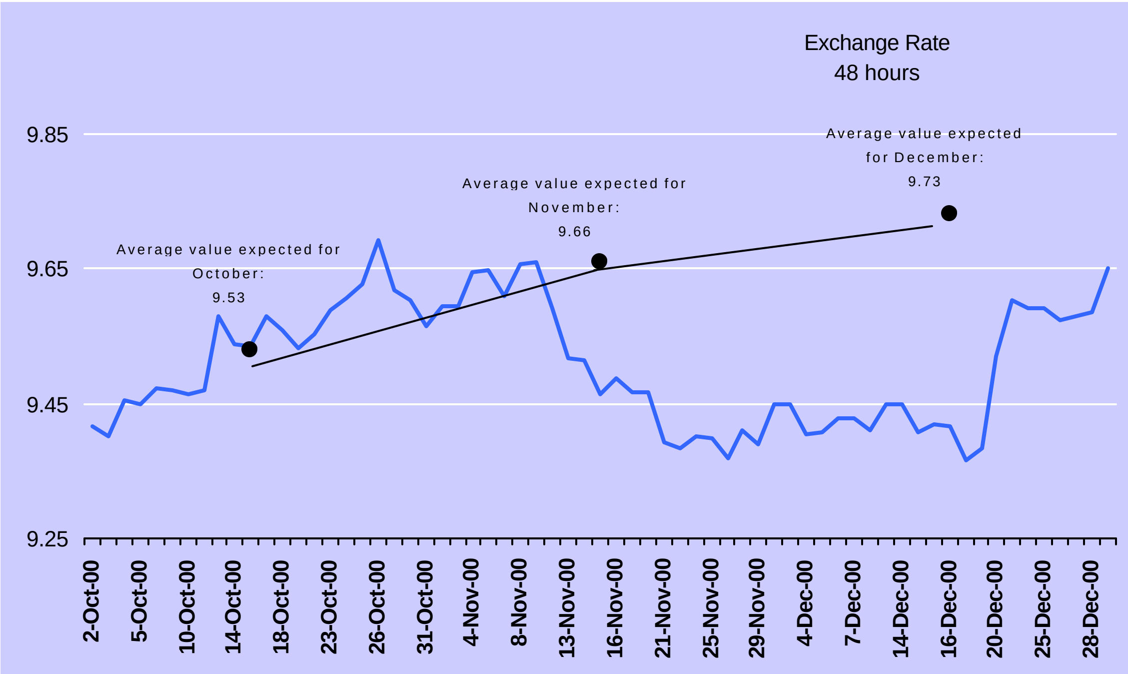
Sources: Bloomberg and Banco de México.
Note: The net yield of the UMS26 bond is the spread over the yield of a U.S. government bond with a similar maturity.

Over the last quarter of 2000 the exchange rate remained at an average level of around 9.50 pesos per dollar. In October the uncertainty caused by the situation in Argentina negatively influenced the exchange rate, which depreciated in this period, having remained for most of the month at a level higher than the one private sector analysts had expected (Chart 11). In November, however, the exchange rate appreciated reaching a level below analysts' expectations and its average for the year as a whole. Finally, in December the significant decline in oil prices — and their impact on Mexico's expected fiscal and external accounts, caused the exchange rate to depreciate again. As a result, it reached a level slightly above the annual average, yet lower than the level forecasted at the beginning of the quarter.

[6] The deterioration in the country risk perception was accompanied by a smaller increase in gross yields due to the significant fall in long term interest rates in the United States.

Chart 11 **Observed and Expected Exchange Rate in October-December 2000**

Pesos per dollar



II.3.6. Compensations, Wages and Employment

Wages and employment are two of the main factors that influence the behavior of inflation. An analysis of the evolution of these variables during the quarter covered by this document is presented in the following lines.

II.3.6.1. Compensations

In October 2000 nominal compensations per worker, in the sectors for which information is available, rose at annual rates between 13.5 and 18.2 percent. With the exception of the construction industry —for which available information covers until August only— real compensation per worker in the various sectors grew more than 4 percent (Table 3).

Table 3 **Compensations per Worker**

Annual percentage change

	Nominal Change							Real Change						
	2000							2000						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
Manufacturing Industry	16.6	16.1	16.8	14.9	21.4	15.1	15.0	6.3	6.0	6.8	5.3	11.3	5.7	5.6
In-bond Industry	12.2	20.5	17.7	16.9	21.7	14.5	17.1	2.3	10.1	7.5	7.1	11.5	5.2	7.5
Construction Industry	5.3	4.6	3.6	5.7	12.5	n.d.	n.d.	-4.0	-4.4	-5.3	-3.2	3.1	n.d.	n.d.
Wholesale Commerce	18.3	17.3	19.6	12.7	18.5	17.6	13.5	7.8	7.2	9.3	3.3	8.7	8.0	4.3
Retail Commerce	16.3	15.2	19.9	14.1	20.5	15.4	18.2	6.0	5.2	9.5	4.6	10.4	6.1	8.6

In the third quarter of the year unit labor costs rose in most production sectors. It is important to point out that unit labor costs in the in-bond industry posted positive growth rates in every month of the year for which information is available (Table 4).

When productivity gains are not large enough to offset increases in real wages, the latter lead to rising unit labor costs. Negative growth rates for output per worker in the in-bond and construction industries were observed during the third quarter of 2000. In contrast to this, output per worker in the manufacturing industry posted average growth rates higher than 4.5 percent over the same period.

Table 4 **Unit Labor Costs and Output per Worker**

Annual percentage change

	Unit Labor Costs							Output per Worker						
	2000							2000						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
Manufacturing Industry	4.3	-1.4	1.8	0.7	3.9	0.6	-2.2	1.9	7.5	4.9	4.5	7.1	5.1	8.0
In-bond Industry	0.8	7.1	7.6	7.6	5.1	5.0	5.4	1.5	2.8	-0.1	-0.4	6.1	0.1	2.0
Construction Industry	12.2	6.2	-6.2	0.6	-3.2	n.d.	n.d.	-14.4	-10.0	0.9	-3.8	6.5	n.d.	n.d.
Wolesale Commerce	9.0	-1.9	5.1	1.5	3.0	4.9	-0.4	-1.1	9.3	4.0	1.7	5.5	2.9	4.7
Retail Commerce	-2.2	-4.1	7.8	-1.2	0.9	-1.1	3.2	8.4	9.7	1.6	5.9	9.4	7.2	5.2

SOURCE: Prepared with information from INEGI.

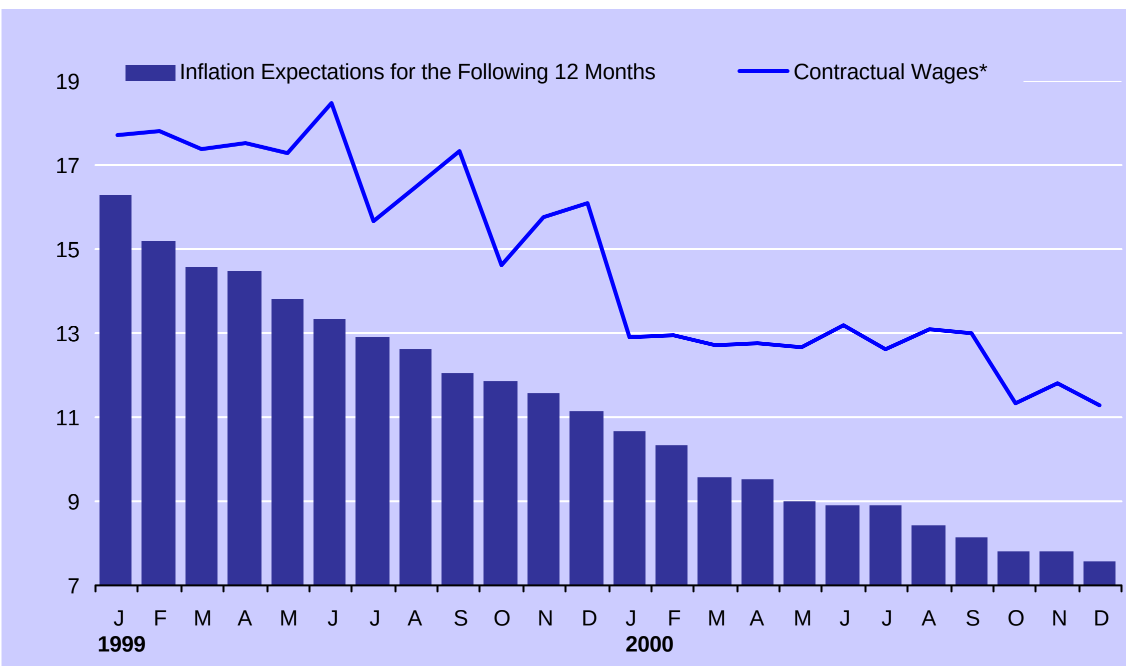
Since 1999, wage negotiations have been based on inflation expectations which have ultimately surpassed observed inflation. For this reason, nominal wage increases have led to higher than expected rises in real earnings. Up to now, the latter increases have been offset by important gains in labor productivity. Nevertheless, it is very likely that the deceleration of the Mexican economy in 2001 will be accompanied by lower growth in productivity. Thus, should the observed trend in real wages continue, unit labor costs will rise, which could eventually lead to inflationary pressures.

II.3.6.2. Contractual Wages

In October-December of 2000 the nominal growth rate of contractual wages declined from an average level of 12.8 percent in the third quarter to 11.4 percent in the fourth. However, due to the fact that in the fourth quarter expected average inflation for the following twelve months was 7.72 percent, the expected growth in real wages is still high in relation to sustainable gains in productivity.

Chart 12 **Contractual Wages and Inflation Expectations for the Following 12 Months**

Annual percentage change



SOURCE: Survey of the Expectations of Private Sector Economic Specialists,, Banco de México and Ministry of Labor and Social Security.
* Information for December 2000 is preliminary.

Upon examining contractual wage growth by sector, in the sectors that produce manufactured goods (mainly goods traded internationally), the rate of wage increases changed only slightly, posting rates of 12.8 percent in the third quarter and 12.6 percent in the fourth. Notwithstanding, in other sectors the average increase fell 1.6 percentage points over the same period, from 12.8 to 11.2 percent (Table 5).

The downward rigidity shown by nominal contractual wage growth during 2000, as well as the increases observed at year-end, are certainly a cause for concern. The *ex-ante* real increase in contractual wages is very likely above sustainable gains in labor productivity. In fact, the real changes in wages above productivity growth are already resulting in higher unit labor costs in some sectors.[7]

Table 5

Contractual Wages by Sector

Annual percentage change

	2000								
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec*
Manufacturing	13.9	13.8	13.9	12.5	13.8	13.1	12.7	13.3	11.1
Other Sectors	12.3	12.1	12.5	13.8	12.1	12.9	11.2	11.4	11.5

SOURCE: Prepared by Banco de México using information provided by the Ministry of Labor and Social Security.
*Preliminary Information.

II.3.6.3. Employment

In the fourth quarter of 2000 the number of workers (temporary and permanent urban employees) affiliated to the IMSS (Mexican Social Security Institute, *Instituto Mexicano del Seguro Social*) rose by 4.9 percent when compared to the same period in the preceding year (Chart 13a). Therefore, for the year as a whole the number of affiliated workers increased by 529,348, while the open unemployment rate for December was 1.9 percent. Although very low unemployment rates were posted in October and November, the trend series for both open unemployment and underemployment[8] remained relatively stable in the second half of the year (Chart 13b and Chart 13c).

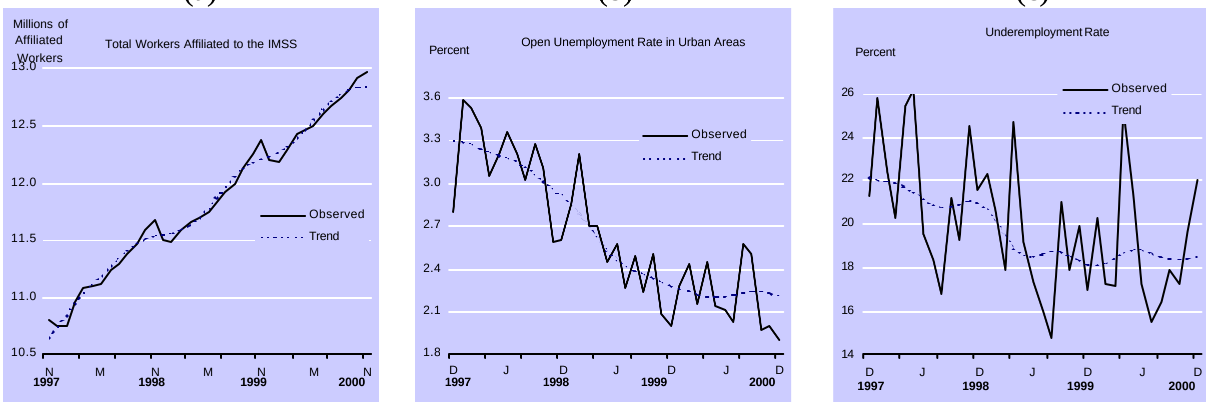
7 According to Banco de México's Survey of the Expectations of Private Sector Economic Specialists, nominal contractual wage increases have been higher than those expected by private sector analysts over the last three consecutive quarters.

8 This rate measures the proportion of the economically active population that is either unemployed or employed for less that 35 hours per week.

Chart 13 **Employment and Unemployment Indicators.**

Trend Series

(a) (b) (c)



SOURCE: IMSS and INEGI.

II.3.7. Aggregate Supply and Demand

Information published by INEGI on aggregate supply and demand indicates that during the third quarter of 2000 the evolution of the main components of both variables continued to be vigorous. However, seasonally adjusted figures show a marked deceleration in domestic supply while domestic demand remained robust.

In the third quarter aggregate demand grew at an annual rate of 11.4 percent, slightly above the rate registered in the second quarter. Except for public sector investment, the annual growth rates of all the components of aggregate demand rose. It is worth pointing out that private consumption was the only component of aggregate demand whose growth rate increased steadily throughout the first three quarters of the year. Consumption responded to higher employment rates and real wages, as total real compensations paid by the manufacturing industry registered an annual growth rate of 6.15 percent in September. The consumption of durable goods is the component of total consumption which has posted the highest increase. The momentum of this component has been influenced by the following: stock replacement of this type of goods, the fall in their relative prices associated with the appreciation of the real exchange rate, and the expansion of non–bank credit granted to the private sector.

In turn, the annual growth of investment was due to the recovery of private investment during the third quarter, which more than offset the fall in the annual growth rate of public investment.

Unlike domestic demand, the real annual growth rate of GDP experienced a slight reduction. As a result, imports of goods and services posted an increasing growth rate that was higher than that for total exports.

Table 6 **Aggregate Supply and Demand in 1999 and 2000**

Real annual percentage change

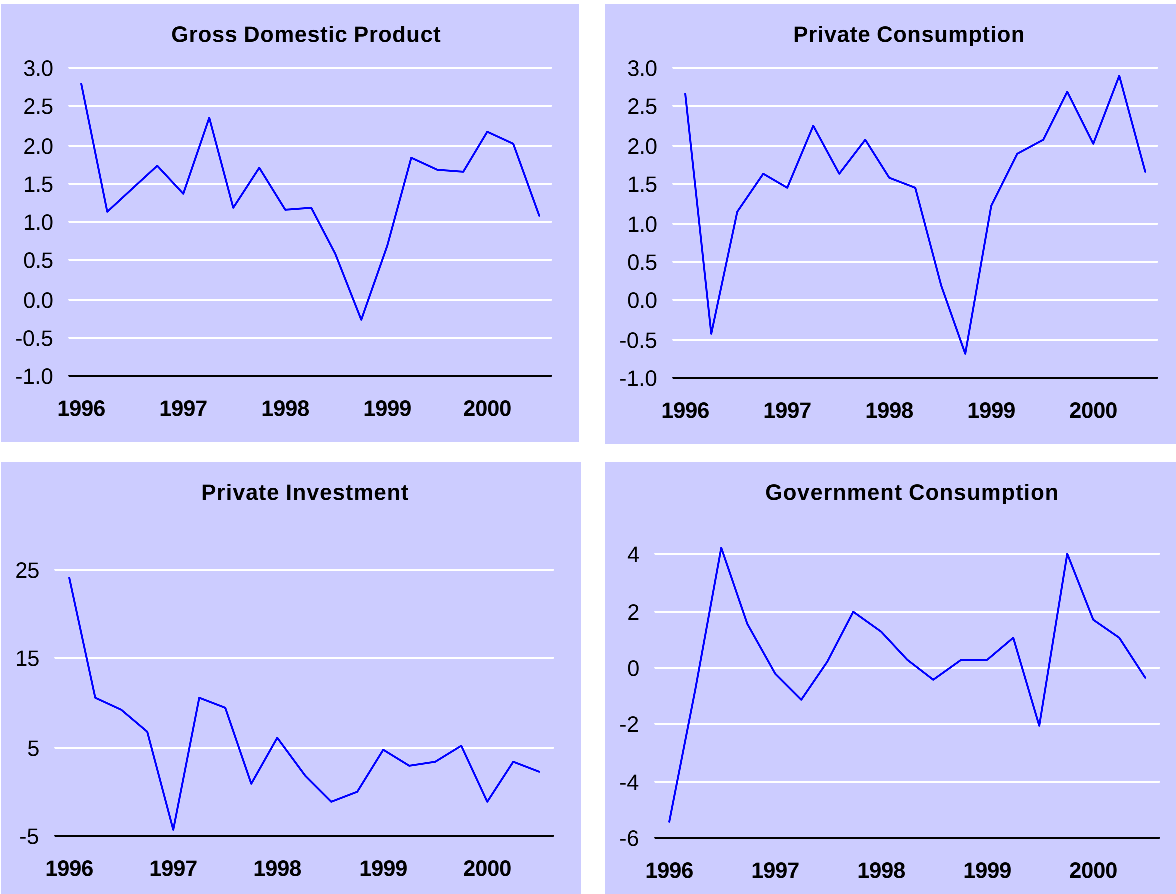
	1999			2000			
	III Q	IV Q	Annual	I Q	II Q	III Q	Annual/e
Aggregate Supply	7.2	8.3	5.8	11.9	11.2	11.4	11.0
GDP	4.3	5.2	3.7	7.9	7.6	7.0	7.1
Imports	16.6	17.9	12.8	25.6	22.5	24.0	22.8
Aggregate Demand	7.2	8.3	5.8	11.9	11.2	11.4	11.0
Total Consumption	3.4	6.7	3.9	8.7	9.0	9.8	9.1
Private	4.0	7.6	4.3	9.2	9.7	10.2	9.7
Public	-1.3	1.4	1.0	5.0	4.9	6.0	5.0
Total Investment	5.2	8.1	5.8	11.6	10.5	11.1	10.7
Private	9.3	13.2	9.0	12.8	9.5	11.1	11.0
Public	-22.9	-12.5	-15.3	-2.0	23.6	11.3	7.8
Exports	18.8	14.6	13.9	17.0	15.9	17.2	16.4

e/ Estimated.

In order to evaluate whether the economy is slowing down it is necessary to analyze the evolution of seasonally adjusted quarterly growth rates for the components of aggregate supply and demand. In this way it is possible to confirm the deceleration of GDP growth during the third quarter and that the growth rate of the main components of domestic spending decreased only slightly, and still remains at very high levels (Chart 14).

Chart 14 **GDP, Private Consumption, Private Investment and Government Expenditure: Seasonally Adjusted Series**

Quarterly percentage change



The information stated above indicates that domestic spending continues to grow at higher rates than those reported for output.

Upon publication of this Report, indicators of aggregate supply and demand in the fourth quarter are relatively scarce and of preliminary nature. Therefore, conclusions derived from them are subject to a certain degree of uncertainty. Nevertheless, the above information suggests that the deceleration in output intensified in the fourth quarter, whether measured by its annual growth rate or by its seasonally adjusted quarterly rates. There are no indications that domestic demand declined significantly during the same quarter. As a result, the gap between domestic demand and output growth widened.

Regarding the behavior of private demand, available figures indicate that private sector consumption and investment continued to expand significantly during the fourth quarter, although less so than in the preceding quarter. The following facts support this evaluation:

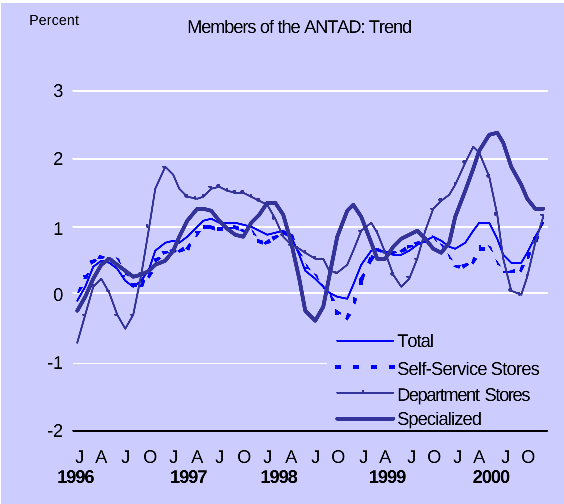
(a) Regarding the evolution of private consumption, the monthly growth of the trend series for total sales, reported by the National Association of Self Service and Department Stores (*Asociación Nacional de Tiendas de Autoservicio y Departamentales*, ANTAD), rebounded in the last three months of the year (Chart 15). However, the annual rate declined only from 10.7 percent in the third quarter to 9.7 percent in the fourth. A similar picture can be drawn from the figures for wholesale and retail sales of commercial establishments reported by INEGI. According to the latter, the annual growth of wholesale and retail sales changed from 5.1 and 12.4 percent in the third quarter to 4 and 9.3 percent, respectively, in the October-November period. Finally, figures on imported consumer goods also suggest that domestic consumption has remained strong (Chart 16).

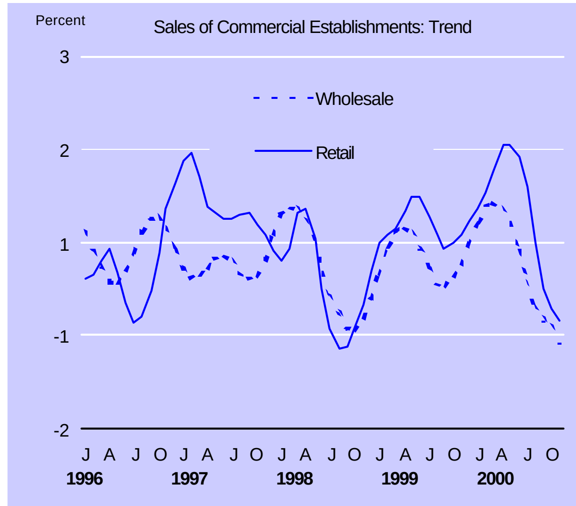
(b) The annual growth rate of gross fixed investment was 9.6 percent in October. If it had remained at a similar level for the rest of the fourth quarter, the seasonally adjusted quarterly growth rate for this aggregate would have risen.

Based on the above information, Banco de México estimates that in the fourth quarter the annual growth rates of private consumption, total investment and aggregate demand exceeded 9 percent.

Chart 15 **Commercial Sector Sales Index**

Monthly percentage change

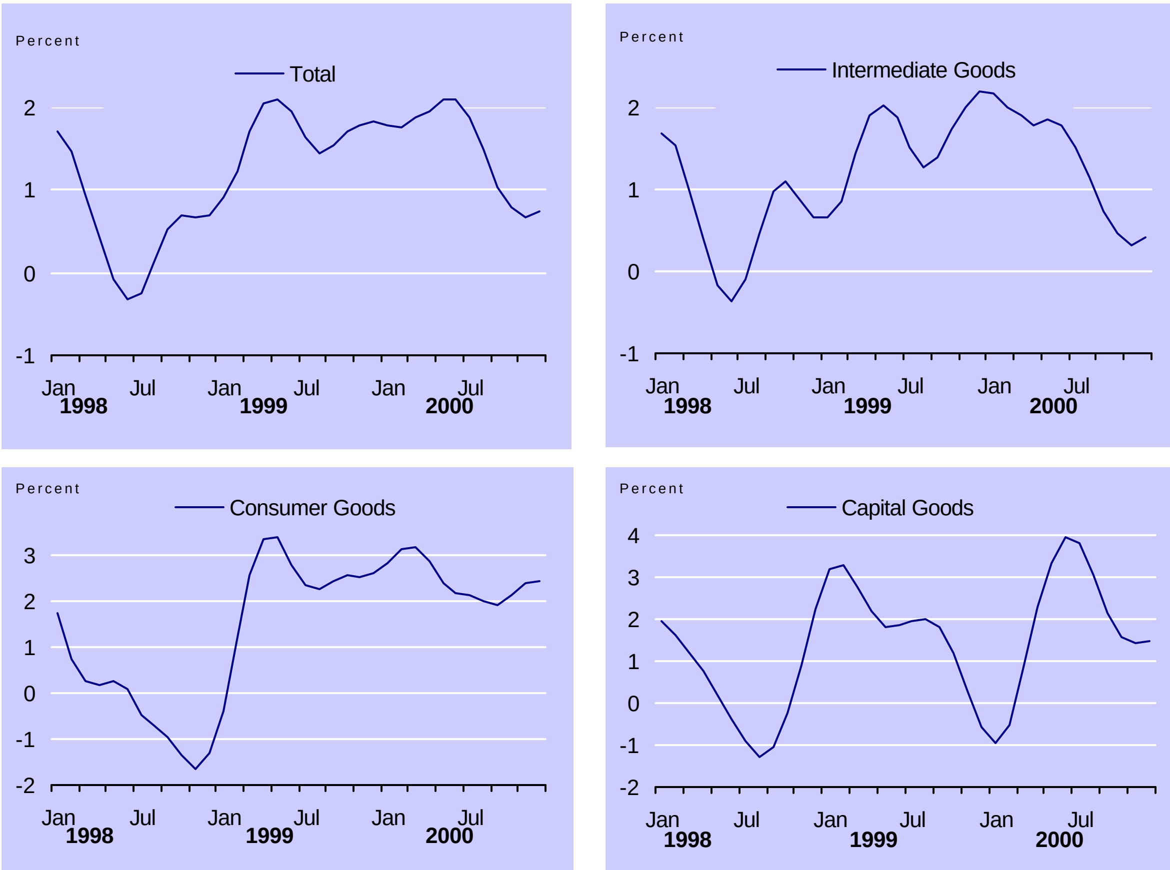




SOURCE: ANTAD and INEGI for commercial establishment figures.

Chart 16 **Merchandise Imports: Trend Series**

Monthly percentage change



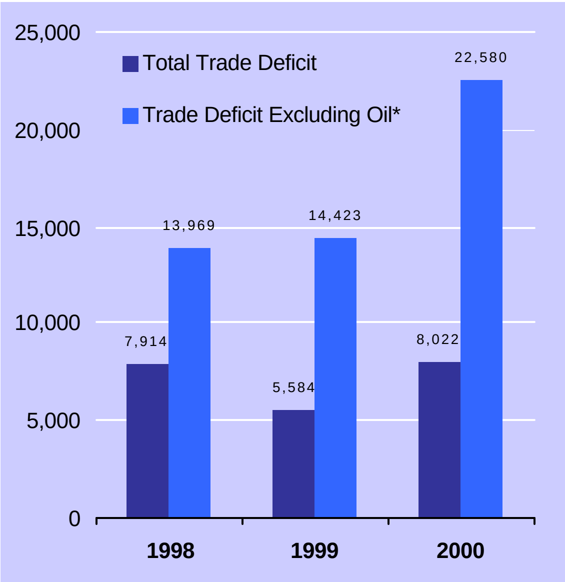
Global Indicator of Economic Activity (*Indicador Global de la Actividad Económica*, IGAE) figures for October, as well as those on industrial output for November, suggest that output declined considerably in the fourth quarter of 2000. The IGAE posted an annual increase of 6.5 percent in October 2000, compared to 7.9, 7.6 and 7 percent registered by GDP in the first, second and third quarters of the same year. The IGAE reported a seasonally adjusted monthly increase of only 0.2 percent in October. As for industrial output, in November it registered a 4.6 percent annual growth rate, the lowest figure in the first eleven months of the year. Using seasonally adjusted figures, its level declined compared to October, after having fallen already in the preceding month. Based on this information, Banco de México estimates that the annual growth rate of GDP during the fourth quarter was approximately 5.9 percent and 7.1 percent for the year as a whole.

The widening of the trade deficit confirmed the assumption that during the last quarter of 2000 domestic demand continued to expand at a higher rate than output. The accumulated trade deficit for the year was 8.022 billion dollars, 43.7 percent higher than that observed in 1999. This deterioration is even greater when crude oil exports, as well as imports of gasoline, butane and propane gas, are excluded from the external accounts. Thus, the non-oil trade deficit in 2000 was 56.6 percent larger than in the previous year. Analysis of the trend series for the total monthly trade deficit shows that it continued to widen during the quarter (Chart 17).

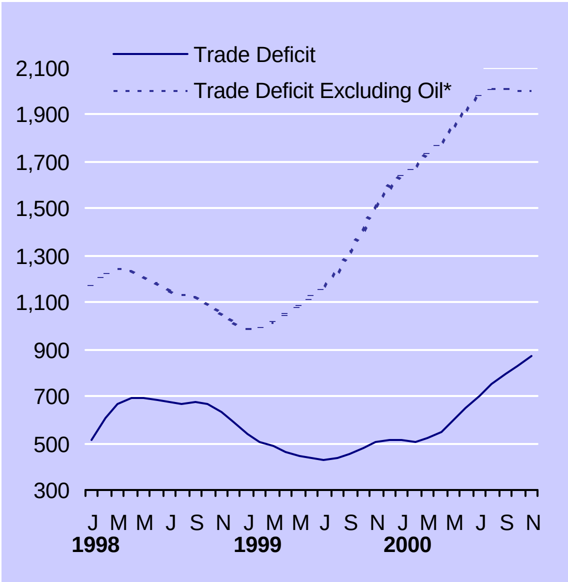
Chart 17 **Trade Deficit, Total and Excluding Oil**

Millions of dollars

January–December



Trend



* Excluding imports of gasoline, butane gas and propane gas.

The larger trade deficit led to an estimated 29.3 percent increase in the current account deficit at year-end 2000. However, this has not generated exchange rate pressures due to the significant inflows of long term capital. It is worth mentioning in particular that, at the end of the third quarter, foreign direct investment (FDI) amounted to 9.781 billion dollars and non-bank private sector indebtedness totaled 6.075 billion dollars, while portfolio investment was only 1.072 billion during this period. By the end of the third quarter, the accumulated FDI had financed more than 80 percent of the current account deficit accumulated to that date.

In the domestic realm, the high growth rate of aggregate demand could be cited among the causes of the slower declining pace of core inflation for services as well as the downward rigidity shown by contractual wage increases.

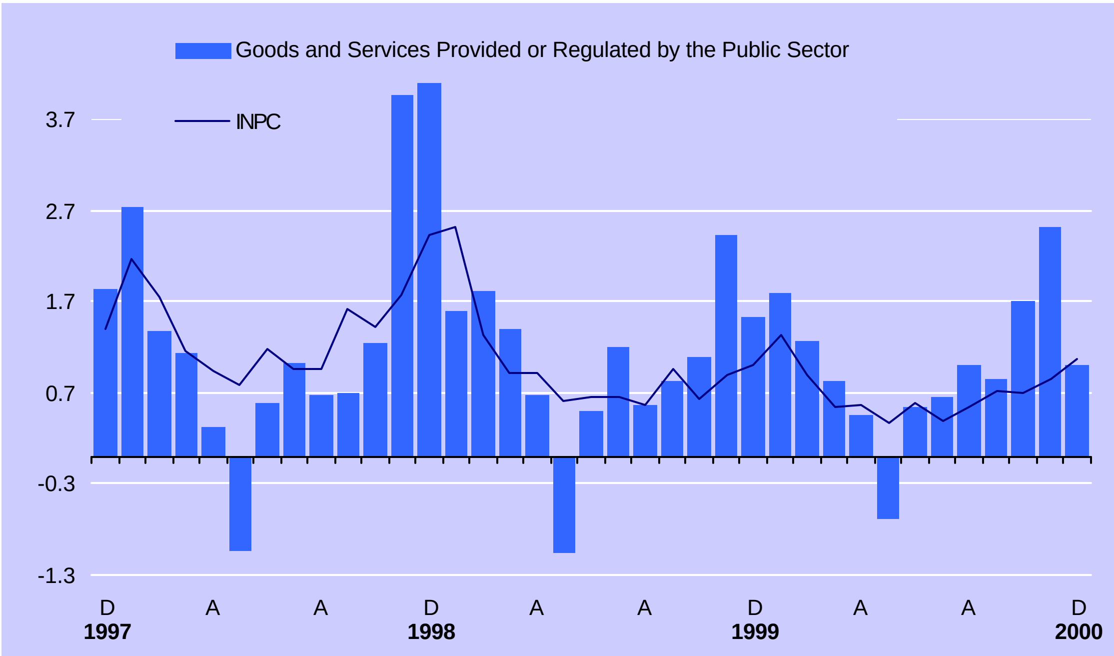
II.3.8. Prices of Goods and Services Provided or Regulated by the Public Sector

In October, November and December, the monthly changes in the sub-index of prices for goods and services provided or regulated by the public sector were 1.71, 2.51 and 1 percent, respectively. Meanwhile, the INPC growth rates for the same months were 0.69, 0.86 and 1.08 percent (Chart 18). The increases in said sub-index were the result of price rises in the following goods and services: gasoline, domestic gas, electricity for domestic use, local telephone services and inter-city bus fares. The prices for these goods and services rose at the respective rates of 2.31, 11.64, 20.93, 5.78 and 5.99 percent during the quarter. The price of gas for domestic use deserves special mention, since it had posted an accumulated increase of 24.01 percent in the second quarter, and the figure for the year as a whole was 42.96 percent.

In the period covered by this document the annual increase in the sub-index of prices for goods and services provided or regulated by the public sector was well above that registered for the INPC. Consequently, the evolution of theses prices represented an important source of inflationary pressure in 2000, having contributed 2.22 percentage points to the INPC's annual growth rate. Furthermore, the downward inflexibility shown by the annualized growth rates of this sub-index is a cause for concern, especially as it could contaminate the formation of inflation expectations.

Chart 18 **Price Index for Goods and Services Provided or Regulated by the Public Sector and the INPC**

Monthly percentage change



II.3.9. Public Finances

In the first nine months of 2000 the public sector posted an 11,127 million peso surplus, which contrasts with the 3,909 million peso deficit reported in the same period of 1999. Furthermore, the public sector's primary surplus amounted to 162,223 million pesos, 13 percent higher in real terms than that of the previous year. This was due to a 15.6 percent real expansion in public revenues, derived from the 27.7 percent increase in oil revenues and a 10 percent growth in non-oil revenues.

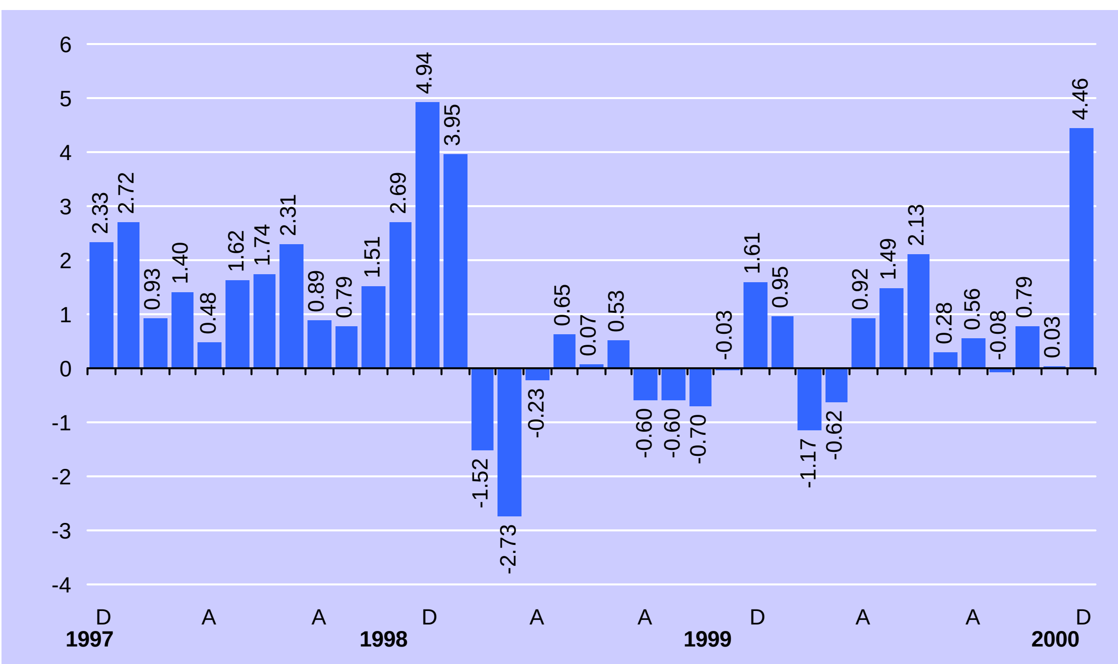
The favorable evolution of public revenues was accompanied by a significant rise in outlays. In the period from January to September, public expenditure rose 13.6 percent in real terms when compared to the level reported for the same interval of the previous year. Increases were registered in practically all areas of public expenditure: 13.1 percent in current programmable spending,; 12.5 percent in capital expenditure, and 14.6 percent in non-programmable outlays. This suggests that at year-end 2000 public expenditure surpassed the originally programmed figures. It is thus estimated that expenditure with a direct impact on aggregate demand rose by 19.4 percent in real terms during the first nine months of the year —higher than the 10.7 percent growth registered by revenue collected by the public sector from resident consumers and firms.

II.3.10. Transitory Factors that Affected Inflation

At the end of the fourth quarter of 2000, annual inflation for prices of agricultural and livestock products was 10.07 percent, therefore, higher than that for the INPC. The growth accumulated by this prices sub-index in the fourth quarter was also significantly higher than that for the INPC. Prices of onions, limes, tomatoes and both poblano and serrano chili peppers rose substantially in October and December. In November, however, the monthly inflation of agricultural and livestock products was less than the INPC (Chart 19). It is worth pointing out that the increase registered in tomato prices in October was totally reversed in November. This evolution of monthly inflation for the agricultural and livestock price sub-index is a clear example of the high volatility of the prices of this type of goods.

Chart 19 **Price Index of Agricultural and Livestock Products**

Monthly percentage change



II.4. Monetary Policy during the Fourth Quarter of 2000

In the following section the reasons which led Banco de México to modify its monetary policy stance during the October-December quarter will be analyzed.

As the evolution of inflation was already in line with the established target for 2000, in the fourth quarter monetary policy measures focused on creating the conditions necessary to attain the inflation target for 2001: a rate no higher than 6.5 percent by year-end. Since monetary policy measures have a delayed impact on price growth, the monetary authority must take action in advance. Thus, when elements that could lead to price behavior incompatible with the target are identified, the monetary authority must react to induce the necessary adjustment of those elements and prevent the materialization of the identified inflationary pressures.

Following is an evaluation of the impact that the adopted monetary policy measures have had on inflation expectations as well as on nominal and real interest rates. The trajectory of the monetary base and other monetary aggregates will also be analyzed. The study of the latter variables complements the appraisal of inflationary pressures and of monetary policy implementation.

II.4.1. Monetary Policy Actions

Banco de México reinforced its restrictive monetary policy stance twice during the fourth quarter of 2000. The first occasion was on October 17th when the "short" ("*corto*") was widened from 280 to 310 million pesos, and the second one on November 10th when it was increased to 350 million pesos. The "short" was maintained at the latter level for the remainder of the quarter. These measures were undertaken in order to create conditions suitable to attaining an inflation rate of less than 6.5 percent in 2001.

In the final quarter of 2000 some of the domestic and external risk factors, identified in previous Inflation Reports, intensified. This has translated into inflation expectations which are incompatible with the targets for 2001 and for the medium term. It was therefore considered necessary to preemptively tighten the monetary policy stance, given the lagged effect of monetary policy actions on price behavior.

On both occasions, the widening of the "short" was agreed in response to domestic as much as external factors. On the domestic side, the development of various economic indicators showed that while domestic demand seemed to decelerate it nevertheless maintained a growth rate incompatible with the sustained reduction of inflationary pressures. The following are among the indicators taken into consideration because of their particular relevance at the time these adjustments to the "short" were made:

(a) In the first half of the year, the annual growth of aggregate demand was almost 4 percentage points higher than real GDP growth.

(b) The general public's inflation expectations for 2001 still remained at a level well above the target. This affected all kinds of economic contracts, including those for wages.

(c) In September, the ANTAD reported a 13.3 percent real annual increase in total sales, while the same figure for August had been only 5.5 percent. For the third quarter as a whole this indicator grew more than 10 percent in annual terms.

(d) In August the IGAE posted an annual change of 8.1 percent, a considerably higher increase than the 6.5 percent registered in July. On the basis of this information, real GDP growth could then be assumed to reach around 7 percent in the third quarter, a higher figure than that anticipated by the private sector and one which, to a great extent, was driven by private consumption.

(e) In the January-September period total merchandise imports rose at an annual rate of 24.1 percent, while imports of consumer goods increased by 7 percent. These results led to a widening of the total and non-oil trade deficits accumulated in the first 9 months of the year, which rose by 42.3 and 75 percent, respectively.

(f) In October, observed inflation was higher than market forecasts, and the annual inflation rate for that month was higher than in September. Even though some of the factors that caused this situation were not repetitive, the incidence of other factors —such as the sustained upward trend of education prices— suggested the presence of strong demand pressures.

The figures that were published later on confirmed the appearance of the aforementioned risk factors. For example, over the October-December period annual inflation increased slightly.

In turn, the external factors which led to the tightening of the monetary policy stance were:

(a) clear signs of a downturn in the United States' economy for the year 2001;

(b) increased risk aversion by international capital market investors; and

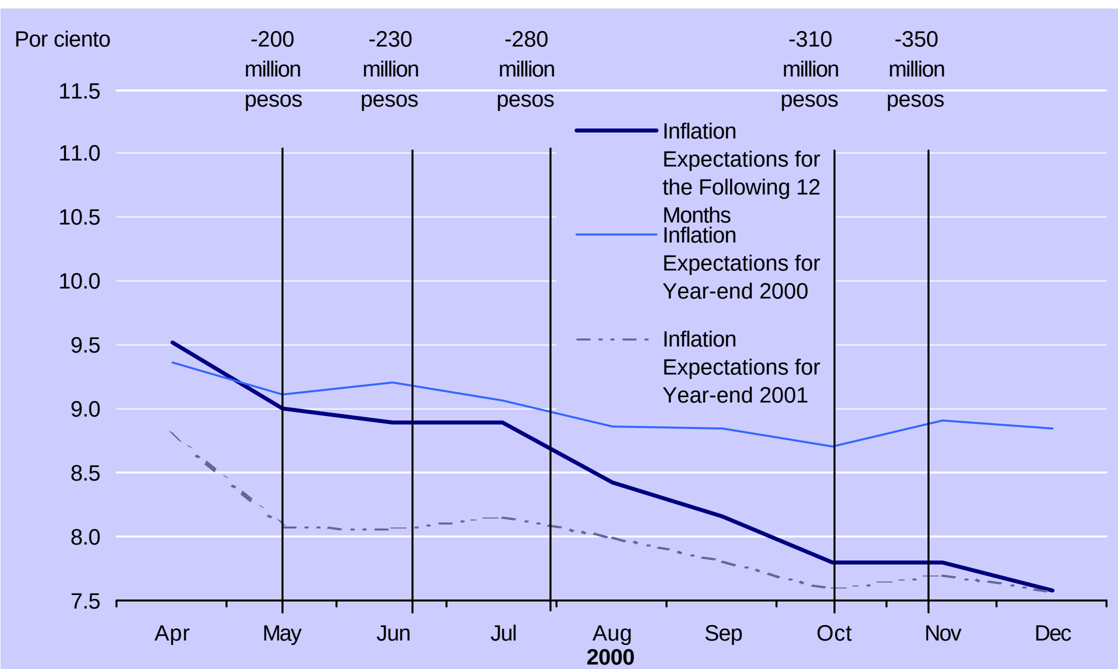
(c) episodes of financial turbulence that took place during the period in certain Latin American countries.

Since the two modifications made to the "short", evidence of a downturn in the United States' economy has become increasingly unambiguous, even leading analysts to anticipate a change in direction of the Federal Reserve's monetary policy stance in 2001. This was confirmed when this central bank decided to lower the federal funds rate 50 basis points on January 3rd. Nevertheless, risk aversion has not decreased continually from its peak in September. The turbulence seen in other Latin American countries has been partially contained by the approval of support programs granted by international financial institutions. The aforementioned facts confirm that the international environment during 2001 will be less favorable to the abatement of inflation.

The above information suggests that the diagnosis of the risk factors upon which the widening of the "short" were founded was correct. These policy adjustments were in line with the objective of bringing the growth rate of prices back on its downward trend. In addition, a larger trade balance, both non-oil and total, also underlines the importance of a coordinated implementation of fiscal and monetary policies in order to curb the possibility of increased vulnerability in the external accounts. The need for fiscal adjustment has become even more evident in light of the advantages of synchronizing the deceleration of the Mexican economy with that of the United States. To this end, the public finance program provides for a reduction in the public deficit from approximately 1 percent of GDP in 2000 to 0.65 percent in 2001. This reduction implies a more moderate contribution of public expenditure to aggregate demand growth. Nevertheless, especially in the context of high interest rates, it would be desirable to see the fiscal stance buttressed by a fiscal reform being passed some time during the current year.

The behavior of inflation expectations is an important factor when evaluating the results of monetary policy and for identifying inflationary pressures. Two noteworthy elements in this respect are that private sector analysts had raised their inflation forecasts for 2000, and the rigidity of their inflation expectations for October and November (Chart 20). These expectations can be explained by the slight increase in inflation observed in October together with analysts' perception that some of the previously mentioned risk factors were likely to materialize. The transitory nature of those factors which negatively affected the evolution of inflation in the last quarter of the year explain the initial rise and subsequent stability of inflation expectations for the end of 2000. The interpretation that these were indeed transitory phenomena and the timely application of monetary policy measures allowed a slight fall in inflation expectations for 2000 to take place during December.

Chart 20 **Inflation Expectations and Accumulated Balances Objective ("Short")**



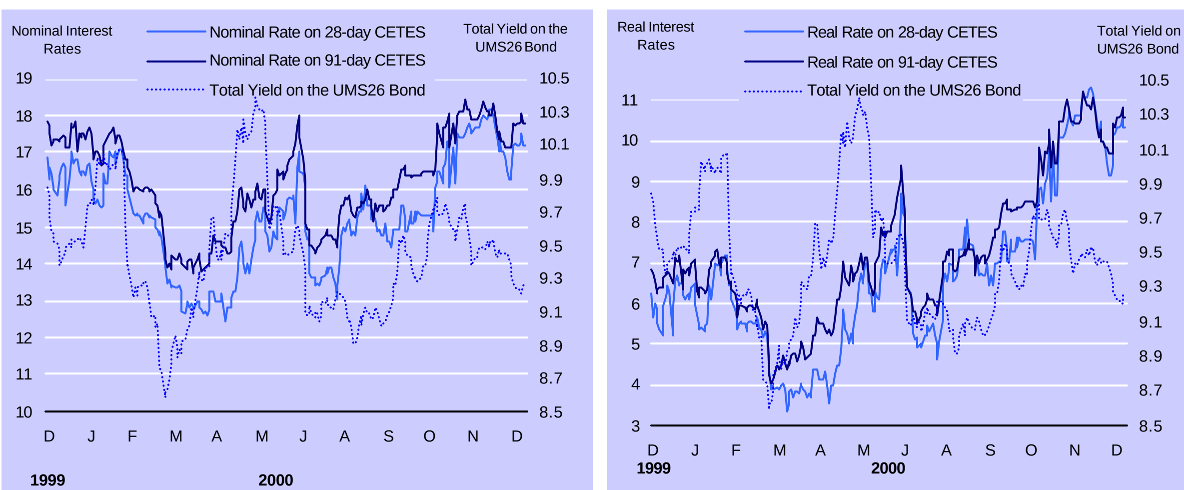
SOURCE: Banco de México's Survey of the Expectations of Private Sector Economic Specialists.

The evolution of nominal and real interest rates during the quarter covered by this Report was characterized by an overall upward trend (Chart 21). As a reaction to the widening of the "short" on October 17th, between the close of the day preceding the implementation of this measure and the close of the day after it, interest rates on 28 and 91 day Cetes rose by 132 and 110 basis points, respectively. In the case of the widening of the "short" on November 10th, the immediate increase in interest rates was less pronounced. Therefore, this measure limited the effects on domestic rates of the significant reduction in external interest rates that took place during the same week. In sum, over the week ending on November 10th, total yields on the Mexican UMS26 bond fell by 37 basis points, while rates on 28-day Cetes rose by up to 30 basis points and the rate on 91-day Cetes fell 55 basis points.

Variations in external interest rates and country risk perceptions do influence the behavior of domestic interest rates. However, the relationship between these variables can be modified by monetary policy. In particular, restrictive monetary policy measures have caused the spread between domestic and external interest rates to widen (Chart 21).

Chart 21 **Nominal Interest Rates, Real Interest Rates and Country Risk**

Percent



To conclude, over the quarter analyzed in this Report the increases in the "short" had an upward effect on domestic interest rates. In October this was complementary to the increase in external rates, and in November it limited the possible fall in domestic rates associated with lower external rates. In this manner, the increases of the "short" caused a considerable and growing spread between domestic and external rates. This was intended to lessen the impact of the risk elements which had begun to materialize and to create the conditions necessary to attain the inflation target for 2001 as well as those for 2002-2003.

II.4.2. The Evolution of Monetary Aggregates

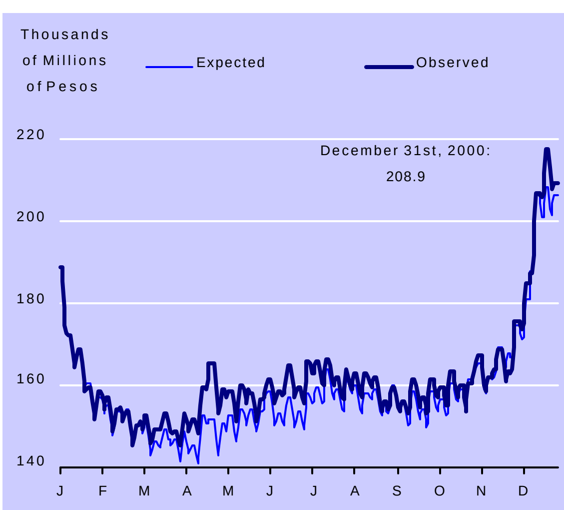
As set out in the Monetary Policy Program for 2000 as well as in previous Inflation Reports, the short term relationship between the growth of monetary aggregates and prices becomes more uncertain as inflation declines. Thus, in the last few years Banco de México has resorted to the analysis of monetary aggregates only as a reference supplementary to the assessment of other variables that influence inflation.

II.4.2.1. Monetary Base, Net Domestic Credit and Net International Assets

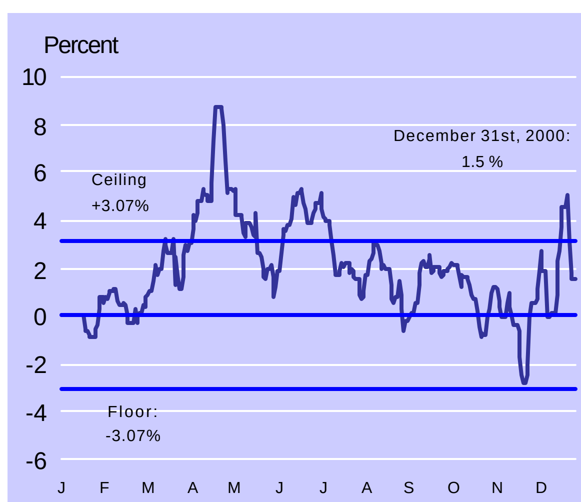
At year-end the monetary base stock was 208.9 thousand million pesos, an amount very similar to the 205.6 thousand million peso forecast incorporated in the Monetary Program (Chart 22a). This former figure represents a 1.5 percent deviation from the anticipated trajectory. Therefore, said deviation remained within the confidence interval specified for the monetary base forecast for December 31st 2000 (+/- 3.07 percent). During the fourth quarter, the most important deviation of the monetary base from the announced path was between December 19th and 26th. This was due to a higher than expected seasonal increase in the demand for base money that reverted substantially in the last week of the year (Chart 22b).

Chart 22 **Monetary Base**

a) Observed and Expected Path in 2000
Daily Stock



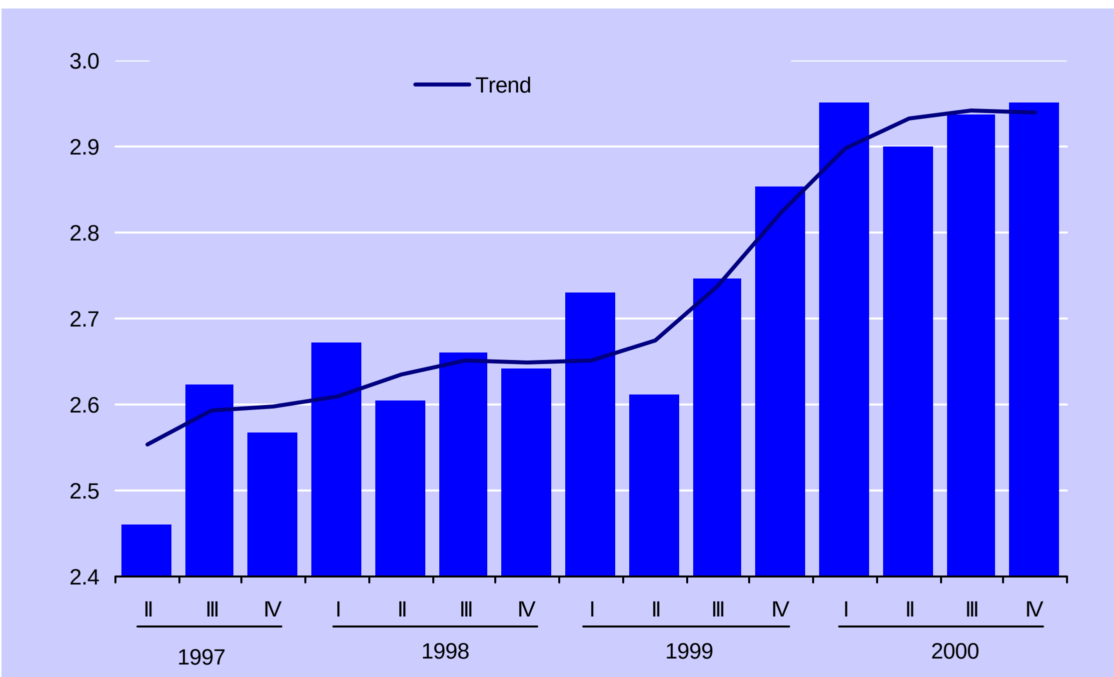
b) Deviation from the forecast included in the Monetary Program for 2000



The forecast for the daily path of the demand for base money contained in the Monetary Program for 2000 was compatible with economic growth of 4.5 percent, annual inflation of less than 10 percent and a remonetization coefficient[9] of 4.9 percent. Even though these assumptions did not materialize, in the year 2000 the higher demand for base money stemming from greater than expected real GDP growth was offset by the impact of lower inflation. This is supported by the fact that the remonetization for the year was very similar to that implicit in the monetary base path anticipated in the Monetary Program (4.9 percent)[10]. In addition, the trend of the ratio of the quarterly average monetary base stock to GDP has remained relatively stable over the last three quarters, which suggests that during the second quarter of 2000 the remonetization weakened (Chart 23).

Chart 23 **Quarterly Average of the Monetary Base Stock**

Percentage of GDP*



* Estimated for the fourth quarter of 2000.

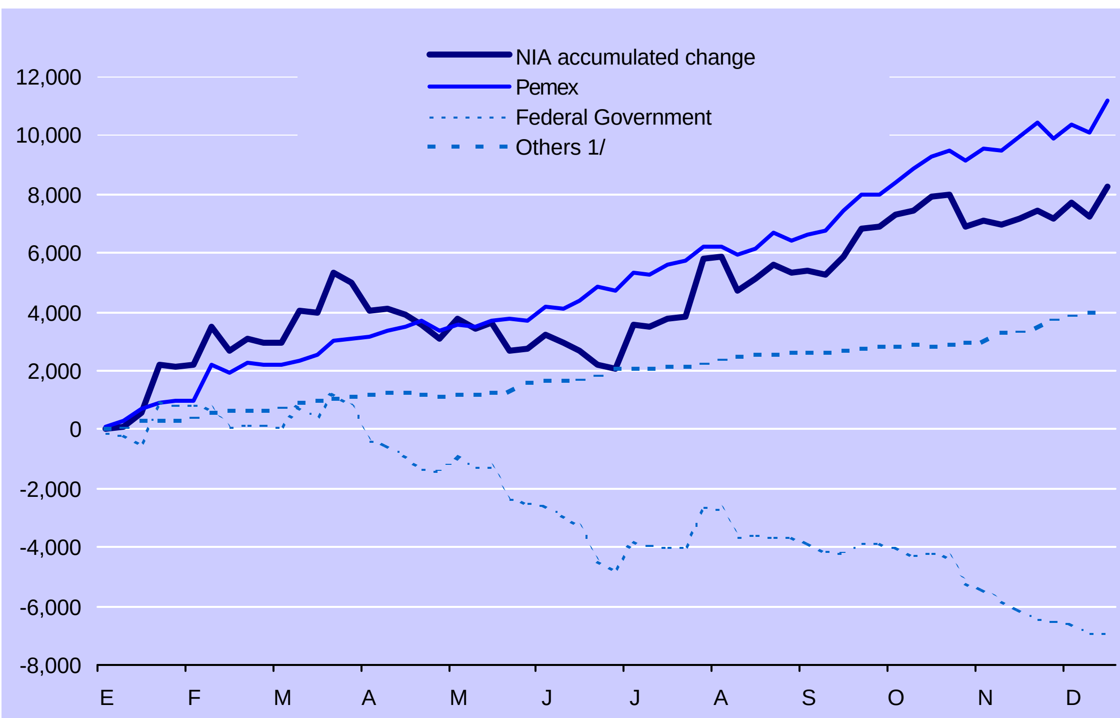
[9] Remonetization refers to the growth of the monetary base above inflation and real GDP growth (the reported remonetization does not take into account the effect on the monetary base of the Y2K problem, which accounted for around 18 thousand million pesos; refer to the Appendix of the Monetary Policy Program for 2000, Banco de México).

[10] Estimated figure based on the real GDP growth expected for 2000 (7.1 percent).

The monetary program commitments were comfortably achieved in the year 2000 as net international assets did not decline and the limits on the variation of net domestic credit were met[11]. Thus at year-end, net domestic credit contracted 57,152 million pesos, while the ceiling established in the monetary program for 2000 allowed for an increase of up to 17,144 million pesos. This behavior was fundamentally a response to the buildup of net international assets of 8.249 billion dollars over the year. Banco de México accumulates international assets from two sources: currency exchange operations carried out vis-à-vis the Federal Government and Pemex, and the auctioning of options to sell dollars to the Central Bank. In 2000, Pemex sold large amounts of dollars to the Central Institution, resulting from the increase in oil revenues, while the Federal Government purchased foreign currency from Banco de México in order to service external debt (Chart 24).

Chart 24 **Changes in Net International Assets (NIA) in 2000**

Accumulated flows in millions of dollars



1/ Includes operations carried out vis-à-vis credit institutions as a result of both the mechanism for the auction of options to sell dollars to the Central Bank and the automatic sale of dollars, as well as the interest earned on international assets.

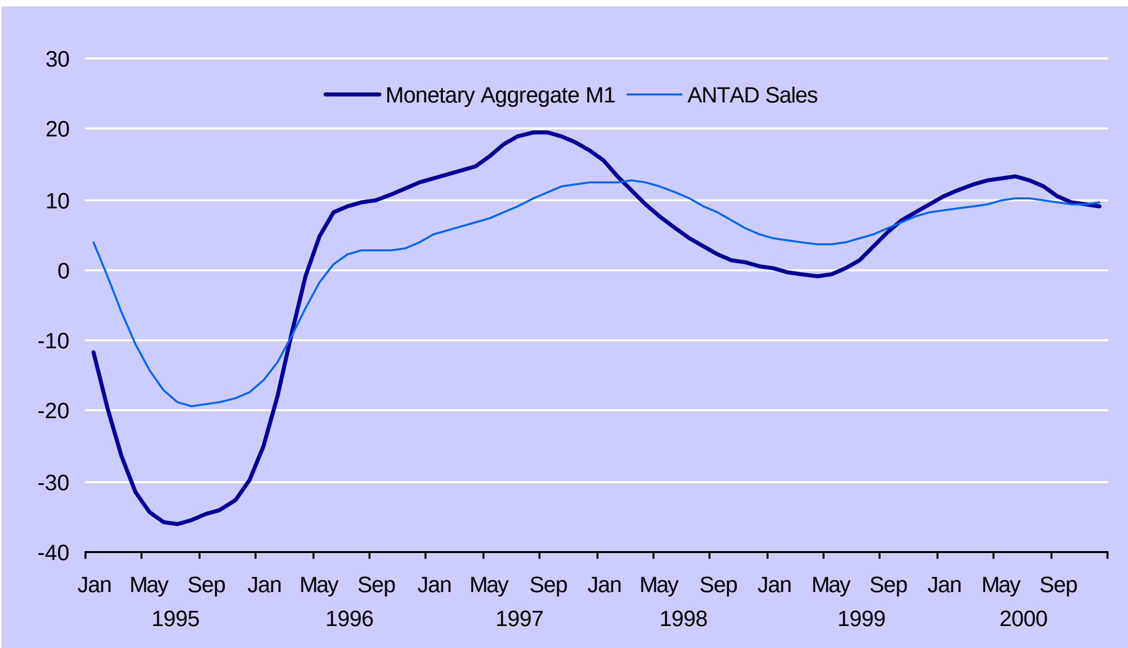
[11] The figure for net domestic credit is obtained by subtracting the accumulated flows of net international assets —valued in pesos at each operation's exchange rate— from the monetary base accumulated flows.

II.4.2.2. Evolution of Monetary Aggregates M1 and M4[12]

The narrow monetary aggregate (M1) is made up of checking accounts and bills and coins held by the public[13]. This aggregate represents the public's demand for liquidity which in turn reflects, to a great extent, the needs of economic agents to carry out various transactions. Thus, M1 is closely related to consumption (Chart 25).

Chart 25 **Trend of the Monetary Aggregate M1 and ANTAD Sales**

Real annual percentage change



It is worth pointing out that over the second half of the year 2000 the growth of M1 fell from a real annual rate of 13.5 percent in the second quarter to 8 percent in the fourth (Table 7). However, since December 1999 the narrow monetary aggregate has been expanding at

[12] From this Report onwards the aggregates M1 and M4 will be used instead of M1a and M4a. This is because banking statistics now allow the former to be calculated in a more timely fashion.

[13] The balance of bills and coins held by the public is calculated by subtracting the amount held by banks from total bills and coins in circulation.

higher rates than the broad monetary aggregate (M4), thereby reflecting the public's preference for more liquid financial assets.

In the fourth quarter M4 rose at a real annual average rate of 5.8 percent. This implies a lower growth rate than that for GDP and below the rate posted by the same monetary aggregate in the first quarter of the year.

In addition, the asymmetric behavior of the main components of M4 is another noteworthy feature of 2000. On the one hand, bank deposits have fallen significantly registering an annual decline of 12 percent in real terms during the final quarter of the year. On the other hand, holdings of public and private securities grew at annual rates above 30 percent in real terms (Table 7). This is mainly due to the fact that commercial banks are not obtaining resources through their own instruments and have increased their intermediation through repurchase agreement operations involving government securities. Thus, from December 1999 to November 2000 the aforementioned operations increased by 73 percent in real terms.

Table 7 **Monetary Aggregates** [1/]

Real annual percentage change

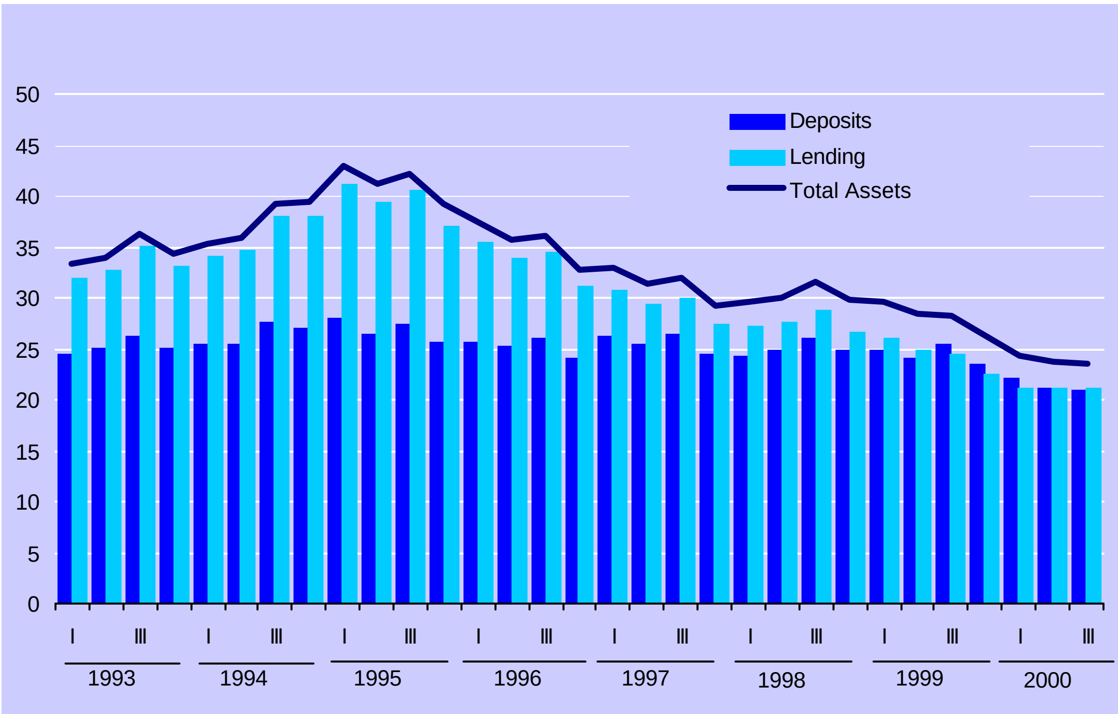
	2000			
	I	II	III	IV
M 1	**11.17**	**13.54**	**12.25**	**8.02**
Bills and Coins held by the Public	15.19	20.49	16.21	8.66
Checking Accounts [2/]	9.44	10.66	10.64	7.73
M 4	**7.86**	**8.07**	**6.91**	**5.82**
Bank Deposits	-3.76	-4.22	-9.64	-12.00
Public Securities [3/ 4/]	42.24	34.25	41.59	40.98
Private Securities [4/]	-0.01	16.98	33.01	31.15
Retirement Funds (excluding Siefores) [5/]	14.32	15.44	17.23	17.23

1/ Average quarterly stocks.
2/ Including current account deposits.
3/ Including securities issued by the Federal Government, BPAS and BREMS.
4/ Including securities held by Siefores (Specialized Retirement Funds).
5/ Including housing funds.

The development of other components of banking system's balance sheet must be taken into consideration when analyzing the contraction of commercial bank deposits. In particular, the decline in the savings obtained from the public reflects the drop in banks' lending. Since the 1995 banking crisis, lending by commercial banks has been contracting. This led firstly to a reduction in bank liabilities different from deposits, mainly foreign liabilities (Chart 26). Nevertheless, since the first quarter of 2000 the continued reduction in lending has been accompanied by lower bank deposits.

Chart 26 **Commercial Bank Deposits and Lending**

Percentage of GDP



II.4.2.3. Evolution of Lending to the Private Sector

As mentioned in the previous section, total bank financing has continued to fall. In December of 2000, financing granted by commercial banks to the non-bank private sector registered a real annual decline of 14 percent. It is worth pointing out that the decrease of total financing is partly in response to the contraction of the past due loan portfolio as many of these loans have been written off against provisions. . Yet, this does not explain the evolution of credits granted in the margin by the banking system. In this respect two indicators suggest a recovery of bank financing: a) even though its stock is relatively small, consumer credit granted through credit cards continues to increase at ever higher rates (Chart 27), and b) current loans[14] are growing at real positive rates

[14] Refers to the banks' own portfolio, which excludes loans related to the IPAB-Fobaproa notes and the Cetes-UDIS.

(Chart 28a), which partially reflects the granting of new credit. Upon breaking down new loans by currency, credit granted in Mexican pesos has shown a recovery, by growing at a real annual rate of 14.9 percent during October-November of 2000 (Chart 28b).

Chart 27 **Consumer Credit granted by Commercial Banks through Credit Cards**

Outstanding nominal stock and real annual change

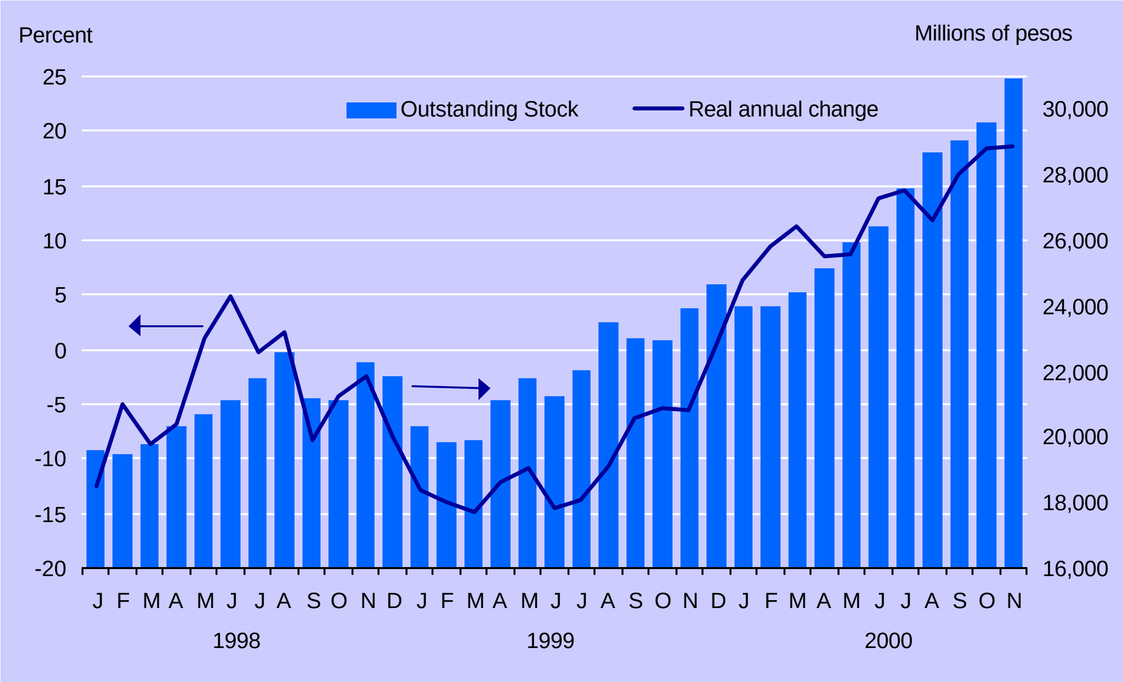
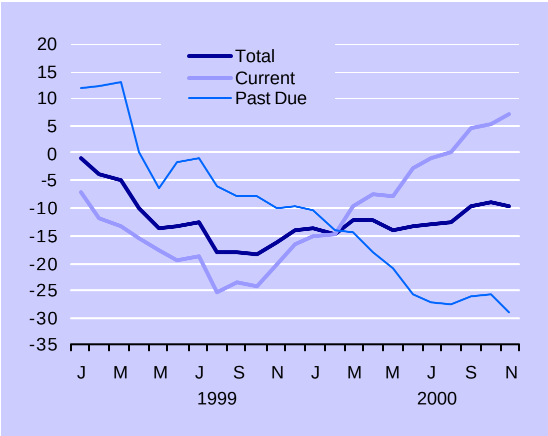


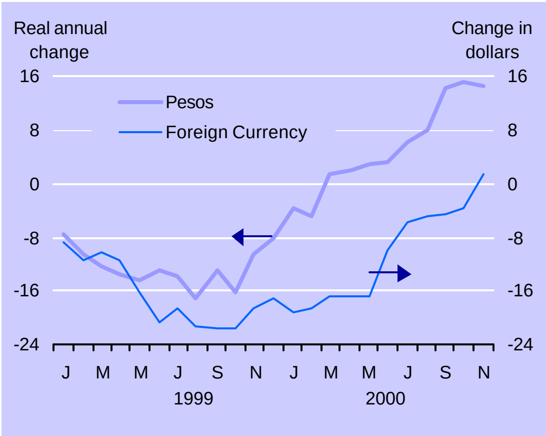
Chart 28 **Credit granted by Commercial Banks to the Private Sector**

a) Total Credit, Current and Past Due Loans

Real annual percentage change



b) Current Loans in Pesos and in Foreign Currency



Notwithstanding indications of an improvement in bank lending, the importance of alternative sources of financing has increased. Regarding the latter, it is important to mention the following:

(a) Domestic private security issues have risen by 24.7 percent in real annual terms, thereby reaching a total of 105.4 thousand million pesos by year-end 2000. The most vigorous component of this stock has been commercial paper, the placements of which rose in real terms at an annual rate of 61.4 percent.

(b) The results of the third quarter Credit Market Evaluation Survey (*Encuesta de Evaluación Coyuntural del Mercado Crediticio*) prepared by Banco de México were as follows: supplier credit continues to be the source of financing that firms use the most (50.3 percent of responses), especially in the cases of small and non-exporting firms (60.2 and 55.3 percent, respectively); commercial banks were mentioned as a source of financing in only 22.7 percent of responses.

(c) Financing granted by the main non-bank sources[15] accelerated over the year, from a real annual growth rate of 5.6 percent in the fourth quarter of 1999 to 13.5 percent in the third quarter of 2000. Regarding the components of this type of financing, at the end of the third quarter of the year non-bank consumer credit represented 42.1 percent of total consumer credit and registered a real annual growth rate of 36.5 percent; in turn, non-bank financing granted to firms or individuals with a business activity grew 12.3 percent in real annual terms; while non-bank mortgage credit —provided mainly by SOFOLES and savings and loan associations— rose by 30.1 percent in real terms.

The above figures confirm the growing importance of non-bank credit sources, which have partially filled the void left by the banking sector. Yet, the availability of financing from commercial banks is of utmost importance for the economy, especially for small, medium and

[15] Includes credit granted by suppliers of 169 companies quoted on the Mexican stock market (BMV), non-bank credit card issuers, Savings and loans associations, SOFOLES, insurance companies, leasing companies, factoring companies, placements of commercial paper, credit unions, credit contracted by non-financial firms with foreign banks, and external debt.

non-exporting companies which have acutely suffered the lack of bank credit in the last few years.

III. General Overview of the Economy in 2000 and Private Sector Outlook for 2001

The performance of the Mexican economy during 2000 was substantially better than had been expected at the beginning of that year. This was due to a very favorable international environment and to the implementation of prudent macroeconomic policies. In contrast with the year 2000, it is expected that the international environment will deteriorate in 2001 and that this, in turn, will affect the evolution of the domestic economy. Notwithstanding, the robustness of the economy along with preventive monetary and fiscal measures will provide for an orderly adjustment process. This section presents a brief evaluation of the evolution of the domestic economy in 2000, as well as private sector expectations regarding the development of the main economic variables in 2001.

III.1. Outstanding Aspects of the Domestic Economy's Development and of the Implementation of Monetary Policy in 2000

The net impact of the international environment on the Mexican economy during 2000 was positive. Among the favorable factors, it is important to mention the following:

(a) higher than expected economic growth in the United States;

(b) a significant increase in international oil prices; and

(c) an improvement in the conditions of access to international capital markets.

Yet, the last few months of 2000 saw the appearance of unfavorable external events, among which the following are noteworthy:

(a) the fall of international oil prices; and

(b) confirmation of a downturn in the United States' economy.

As previously mentioned in Chapter II, the deterioration of the international environment at year-end did not significantly affect the development of the domestic economy. Thus, the positive impact of the United States' expansion, the high price of oil and the favorable behavior of capital flows contributed to economic growth and a stable exchange rate. In turn, the exchange rate stability helped the disinflation process.

In 2000 the growth rate of the Mexican economy was higher than expected. The inflation rate was also in line with objectives and was much less than what private sector analysts had forecasted at the beginning of the year. These positive results coincided with a favorable labor market, which registered rises in both employment and in real wages. Regarding the external accounts, the trade and current account deficits were higher than those observed in 1999. This can be attributed to the fact that the expansion of aggregate demand and a strong peso vis-à-vis the United States' dollar more than offset the favorable effects of high oil prices and the growth of non-oil exports. A substantial part of the current account deficit was financed with long term foreign investment flows.

The annual increase of consumer prices at year-end 2000 was 8.96 percent, the lowest rate in the last six years. In this way, the corresponding target was comfortably attained for the second consecutive year. Overall inflation fell by 3.36 percentage points over the year. This fall and the attainment of the target can mainly be explained by the following: a) the implementation of monetary policy in line with inflation targets; b) exchange rate stability; and c) improved inflation expectations.

Core inflation performed better than overall inflation: it fell faster and ended the year at a lower level than the INPC. Thus, the phenomena which made an important contribution to lowering overall inflation in 1999 did not have the same effect in 2000. This was due to the fact that the inflation of agricultural and livestock products was higher than in the previous year and than overall inflation. Furthermore, the annual inflation rate for goods and services provided or regulated by the public sector, as well as that registered by the education services price sub-index, were higher than that of the INPC. The greatest contribution to the disinflation process was made by the merchandise sector, although inflation for the service sector also fell considerably. Towards the end of the year there was a relative stagnation in the descent of overall inflation, while the declining rate of core inflation decelerated.

The monetary authority tightened its restrictive monetary policy on six occasions. The prime purpose of theses actions was to attain the inflation target for 2000 and, with increasing emphasis, to ensure a medium term trajectory in line with the inflation targets of less than 6.5 percent in 2001 and 3 percent in 2003. From March onwards the private sector's inflation expectations for 2000 were below the 10 percent target for the year.

The impact of a tighter monetary policy stance on domestic interest rates became more evident after the increase of the "short" on May 16th. With this in mind, a comparison of external and domestic interest rates during the period is advisable. After the aforementioned tightening of the "short", both real and nominal domestic interest rates rose or remained steady even when external interest rates fell. The result of this was that the spread between them widened (Chart 21). This in turn led to nominal domestic interest rate levels slightly above those observed at the beginning of 2000. Real rates, on the other hand, ended the year substantially higher, in the context of external rates slightly lower than those prevalent at the beginning of the period. This suggests that changes in the monetary policy stance have led to a partial disassociation between domestic and external rates.

Given the considerable lag with which monetary policy actions affect the evolution of the economy and of prices, the rise of domestic interest rates is yet to cause a clear deceleration of domestic spending. Recent figures confirm that the latter variable continues to grow vigorously.

Meanwhile, and after a significant reduction in January, nominal wage increases remained relatively constant for most of the year, showing the same inertia as in previous years. Because of this inertia, it will be of utmost importance that as from January 2001 wage revisions are in line with the 6.5 percent inflation target proposed for the year, and with sustainable increases in labor productivity[16].

Due to the above as well as to the previously mentioned external factors, the year 2000 ended with a tighter monetary policy stance. The adjustments to the "short" agreed during the year were intended to lessen the impact of the factors previously enumerated on price growth.

[16] The evolution of aggregate demand, consumption, the trade deficit and wages at year-end 2000 are discussed in previous sections of this document.

III.2. Private Sector Outlook for 2001

III.2.1. Forecasts for the Main Determinants of Inflation

Since the publication of the last Inflation Report, forecasts by most analysts regarding the main external variables influencing the evolution of the Mexican economy have deteriorated considerably:

(a) The expected annual growth of the United States' economy in the fourth quarter of 2000 was revised slightly downwards to 2.3 percent and expectations for the year were adjusted from 5.2 percent, in September, to 5.1 percent at present[17]. However, the forecast for 2001 fell substantially, from 3.7 percent, in September, to 1.8 percent to date. Private sector analysts expect the United States' economy not to grow in the first quarter and forecast rates of 1.1, 2.9 and 3.6 percent for the second, third and fourth quarters of the year, respectively.

(b) The average price of the Mexican crude oil mix for export in 2001 expected by private sector analysts fell from 20.85 dollars per barrel in September to 19 dollars per barrel in January. Considering the futures prices of WTI oil on January 25th and its spread over the price of the Mexican crude oil mix in December 2000, the average price of the Mexican crude oil mix for 2001 is expected to be 18.52 dollars per barrel.

The exchange rate forecasts for year-end 2001 —taken from a survey of private sector analysts conducted by Banco de México on January 23rd, 2001— were revised slightly upwards. According to the survey, in late January the private sector analysts forecasted an exchange rate of 10.60 pesos per dollar for year-end 2001. The survey also showed that the expected exchange rate for February, March and April were 9.92, 10.01 and 10.06 pesos per dollar respectively.

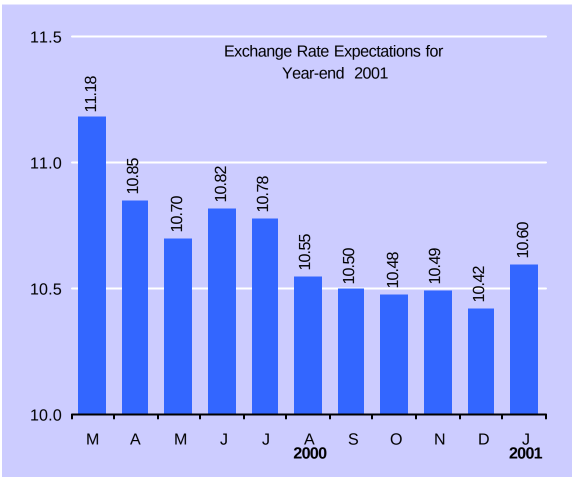
During December 2000, the futures prices for the peso were strongly affected by changes in the United States' economic growth outlook for 2001 and by the fall in oil prices. This caused a major upward adjustment in the spot exchange rate and the peso futures (Graph 29). These factors intensified in the early days of 2001. Thus, in the third

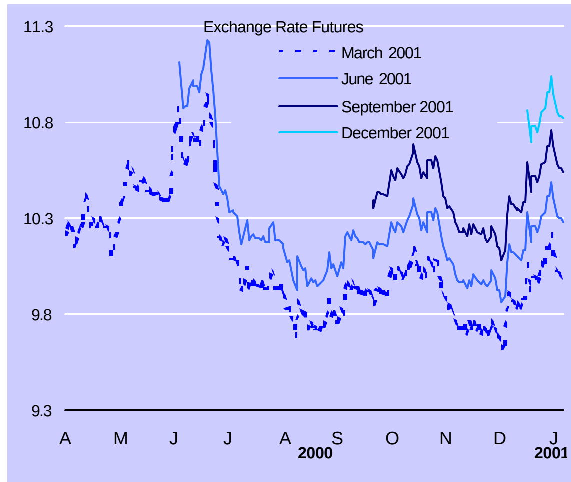
[17] Average of forecasts by Goldman Sachs, JP Morgan, Morgan Stanley and Deutsche Bank, January 2001.

week of January, the futures price of peso for December 2001 was 10.82 pesos per dollar.

Chart 29 **Futures Prices for the Peso and Exchange Rate Expectations for Year-end 2001**

Pesos per dollar





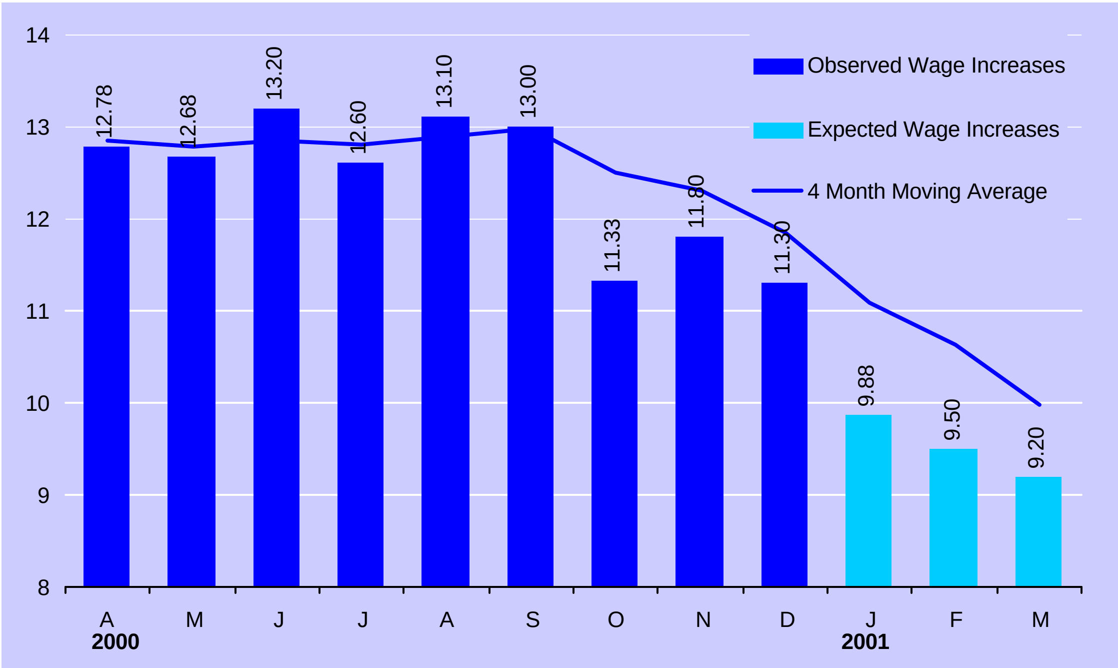
SOURCE: Bloomberg and Survey of the Expectations of Private Sector Economic Specialists, Banco de México.

Another variable which influences inflation substantially is wages. Analysts consulted in Banco de México's survey expected wage increases to be 9.9, 9.5 and 9.2 percent in January, February and March 2001 respectively (Chart 30). This indicates that a major downward correction is expected in the growth rate of nominal wages.

A third factor that affects inflation considerably, and thereby inflation expectations, is adjustments to the prices of goods and services provided or regulated by the public sector. Regarding the expected evolution of these prices, it is important to mention that in agreement with the General Criteria For Economic Policy (*Criterios Generales de Política Económica*), prices and tariffs set by public sector agencies and firms will be adjusted in line with the inflation target for 2001. In addition, the prices of public goods and services that are used as inputs will be determined on the basis of their international references.

Chart 30 **Contractual Wage Increases**

Percent



SOURCE: Ministry of Labor and Social Security. For January 2001, information was taken from Banco de México's Survey of the Expectations of Private Sector Economic Specialists conducted in December 2000. Forecasts for February and March were taken from the aforementioned Survey conducted in January 2001.

GDP growth projections for 2000 have been revised upwards from 6.71 percent in the survey taken in September, to 7.17 percent in December. Furthermore, analysts consulted by Banco de México expected consumption and investment to rise 7.2 percent and 10.4 percent respectively by year-end. Regarding the external sector, they forecasted a 17.313 billion dollar current account deficit. Finally, analysts estimated that foreign direct investment would total 13.012 billion dollars and that the fiscal deficit for 2000 would be equivalent to 0.85 percent of the GDP.

Business climate and market confidence indicators analyzed in the most recent survey carried out by Banco de México showed more moderate optimism than what had been reported over the last few months.

According to those who took part in the survey, the main factors that could hinder economic activity over the next few months are as follows: the weakness of foreign markets and the world economy (each one with 28 percent of responses); the high cost of domestic financing (14 percent of responses); and oil export prices (10 percent of responses).

Surveyed analysts revised their expected real GDP growth for 2001 from 4.56 percent in September 2000, to 3.83 percent in January. At the same time, they forecasted trade and current account deficits of 12.445 and 22.708 billion dollars. Furthermore, those surveyed expected an 11.6 percent increase in non-oil exports and a 14.6 percent reduction of oil exports. In turn, imports are expected to rise 11.8 percent. Finally, analysts expect a foreign direct investment flow of 13.047 billion dollars for the year.

Regarding fiscal deficit forecasts for 2001, the January survey indicated that it would be equivalent to 0.69 percent of GDP.

III.2.2. Private Sector Inflation Expectations

The monthly inflation rate forecasts for January, February and March have remained almost constant. These forecasts imply that annual inflation will fall from 8.96 percent in December 2000, to 8.55 percent in March 2001 (Table 8).

Table 8

Monthly and Annual Inflation Expectations

Percent

	Monthly	Annual
January	1.11	8.71
February	0.75	8.56
March	0.54	8.55

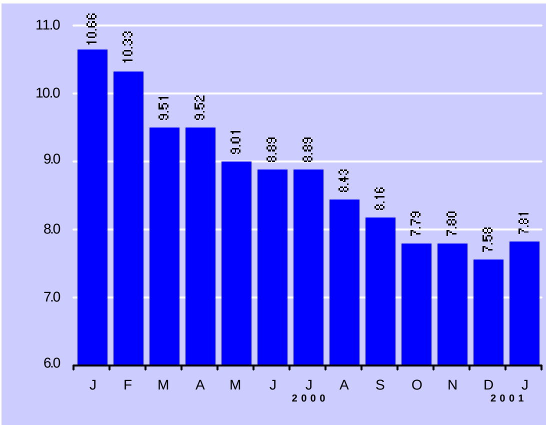
Source: Survey of the Expectations of Private Sector Economic Specialists, conducted by Banco de México.

Inflation expectations for the following 12 months have been revised downwards while those for 2001 have increased slightly. According to Banco de México's surveys, inflation expectations for 2001 went from 7.81 percent in September 2000 to 7.87 percent in January 2001. Some of those surveyed incorporated the effects of a possible fiscal reform into their forecasts. Furthermore, it is important to highlight that expected inflation for 2001 is still incompatible with the target set for this year, namely an inflation rate not to exceed 6.5 percent. Finally, expected inflation for 2002 is 6.28 percent (Chart 31).

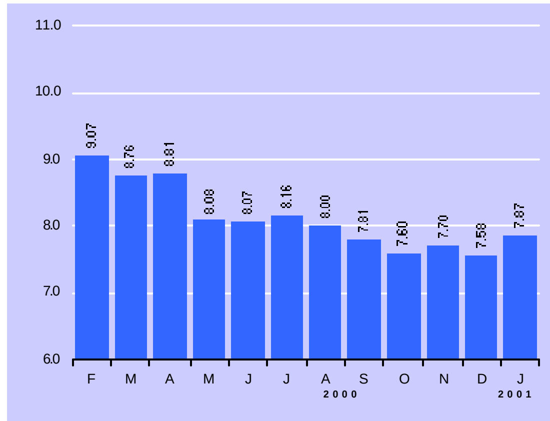
Chart 31 **Evolution of Inflation Expectations**

Annual percentage change

The following 12 months



Year-end 2001

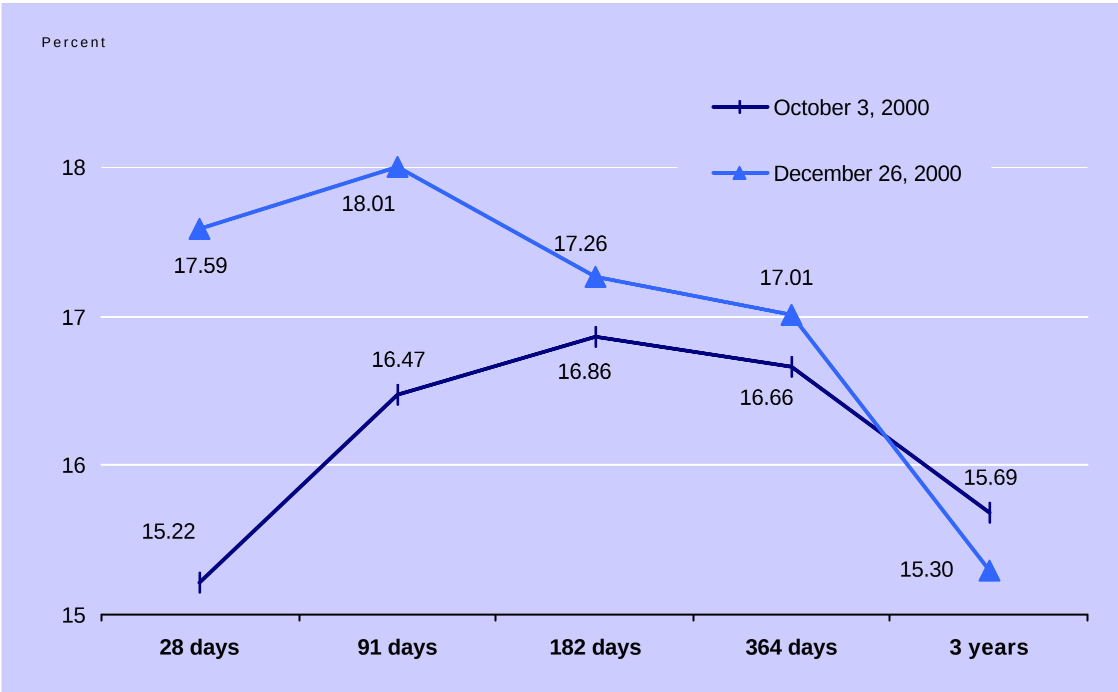


SOURCE: Survey of the Expectations of Private Sector Economic Specialists, conducted by Banco de México.

Observed changes to country risk perceptions, exchange rate volatility and the reinforced monetary restrictions have induced an increase in interest rates for all maturities of less than 12 months. However the Cetes yield curve slope is negative, which clearly reflects declining expectations for both inflation and nominal rates (Chart 32).

Chart 32 **Nominal Cetes Yield Curve: Primary Auction Rates**

Percent



* The yield for the 3-year instrument refers to that of the fixed rate coupon bond of that maturity.

IV. Monetary Program for 2001

Since the floating exchange rate regime was adopted, as a consequence of the balance of payments crisis of 1994-1995, the exchange rate ceased to function as the policy instrument that guided inflation expectations towards the targets set by the authority. In these circumstances, monetary policy took on the role as the nominal anchor of the economy.

Faced with changes to the Mexican economy over the last six years, the monetary policy framework has been modified in order to increase its effectiveness and transparency. This development has resulted in a gradual convergence towards an inflation targeting scheme. Nowadays, this scheme is used, with certain variations, by several central banks, in both developed and emerging countries. Consequently, in order to provide a detailed explanation of the current monetary policy strategy and facilitate its understanding, it is worth giving a brief account of its origins and its recent developments. With this purpose in mind, the following section presents an account of the main modifications monetary policy in Mexico has undergone over the last few years. Subsequently, the main elements of the inflation targeting scheme included in the Monetary Program for 2001 are described. Finally, since monetary policy implementation must respond to both the domestic and international environments, the macroeconomic context expected for 2001 and the main risk factors are outlined, as well as the possible monetary policy reaction to the potential materialization of such risks.

IV.1. Recent Developments in Monetary Policy Strategy: The Convergence towards Inflation Targeting

As a consequence of the devaluation of the peso and increased inflation that resulted from the financial and exchange rate crisis of 1994-1995, Banco de México's credibility was severely damaged. Owing to the need to establish a visible and strict nominal anchor, a limit on the growth of the Central Bank's net domestic credit was set as a monetary policy guide in 1995. This limit was derived from monetary base demand growth forecasts and the assumption of a nil accumulation of international reserves. It is worth clarifying that, at the time, neither this limit on net domestic credit nor the growth of the monetary base were thought of as a target that could be used as a quasi-automatic rule for monetary policy conduction. The monetary authority was well aware of the limitations thereof. Nevertheless, as a result of the credibility crisis that the Central Institution was facing at the time, it seemed convenient to adopt a very visible monetary aggregate to serve as a monetary program guide. The limitations of monetary aggregates as a reference point for the conduct of monetary policy , in addition to their advantages in the circumstances then faced by the Mexican economy, were stated in the 1995 Monetary Program as follows:[18]

> *Most central banks have stopped setting quantitative targets for the evolution of their own credit or of monetary aggregates, such as notes and coins in circulation, M1 and others. This has been in response to technological changes and adjustments in financial regulations that have come about in the last few decades, and which have negatively affected the more or less stable relationship that used to exist between some of these aggregates and nominal GDP in years past.*
>
> *Nevertheless, the current crisis of confidence in the national currency calls for the adoption of an extremely strict primary credit policy. Banco de México can do this by imposing a limit to the growth of its own domestic credit for the year.*
>
> *This procedure can efficiently encourage economic agents' inflation expectations to converge towards price projections contained in the economic program adopted by the Federal Government --projections that correspond to the provisions of the Agreement to Overcome the Economic Emergency.*

The Report also announced that, within the established limit for domestic credit growth, the Board of Governors would manage its evolution taking the following factors into consideration[19]:

[18] Report on Monetary Policy for 1995, pp. 49-50.

[19] Report on Monetary Policy for 1995, pp. 51-52.

The discrepancy between the actual inflation and inflation rates foreseen in the Agreement to Overcome the Economic Emergency. Banco de México will respond with contractionary measures should inflation appear to accelerate.

The behavior of the exchange rate and that of differentials between interest rates for different terms. Monetary policy would be restrictive should the exchange rate begin a trend of depreciation. The same would happen if the differential between nominal long and short term interest rates widens, or if the differential between the real rates on Ajustabonos for a certain term and those corresponding to Cetes for the same term get larger. This is because the behavior of such differentials is thought to reflect the public's inflation expectations.

The results of surveys on both the public's and specialists' inflation expectations.

The evolution of other factors such as producer prices and revisions to collective employment contracts.

In such terms, the Monetary Program for 1995 established a specific rule on the growth of domestic credit and on the discretional use of policy instruments in order to induce monetary conditions enabling proposed targets to be met. The first element fulfilled the basic function of establishing a strict commitment to limiting the main source of inflation: excessive domestic credit. In this way, inflation expectations were affected. The second element was the discretional management of domestic credit, within the limits established by the first element, to bring price behavior in line with the inflation target.

Furthermore, in order to have an operational scheme in which both the exchange rate and interest rates were market determined, Banco de México made two major decisions. Firstly, it established a “zero average reserve requirement” regime and, secondly, used the banks’ current account accumulated balance target as a monetary policy instrument[20]. Through the latter mechanism, Banco de México was able

[20] For a detailed description of this mechanism, refer to Banco de México’s Annual Report for 1996, Annex 4.

signal its intentions to financial markets, without predetermining interest rate or exchange rate levels.

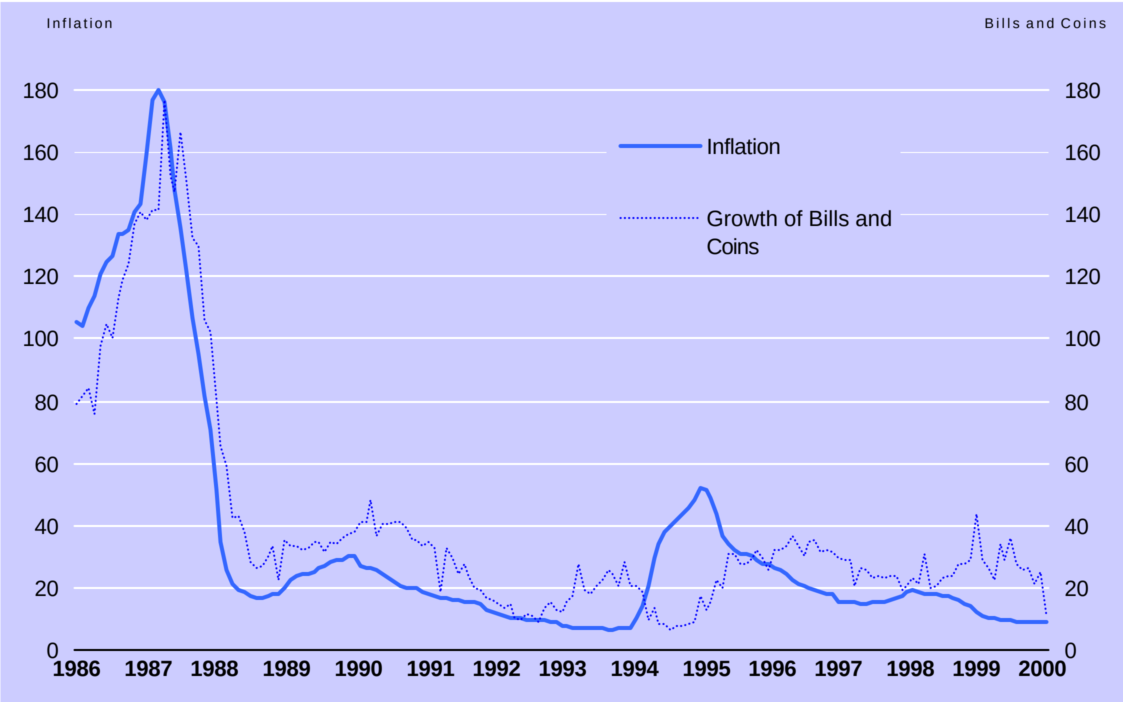
In 1997, Banco de México's Monetary Program introduced forecasts for the daily path of the demand for monetary base, in order to provide economic agents with a reference point to make monetary policy easier to follow.

Although inflation fell from 52 percent in 1995 to less than 9 percent in 2000, experience during this period confirmed that the relationship between money and prices becomes more uncertain as inflation falls. The close relationship between base money growth and inflation in the 1986-1990 period weakened starting in 1990 (Chart 33). During the 1997-2000 period, that relationship weakened further as a result of the remonetization process which has taken place in response to the consolidation of downward trend in inflation.

In addition, variations in overall inflation have preceded changes in the demand for base money (Chart 33). This proves that in the past inflationary shocks have not stemmed from expansive monetary policy; rather, the latter have accommodated inflationary effects triggered by changes in the economy's key prices. As a consequence, the trajectory of base money is not useful to gauge future price increases. This illustrates that changes in monetary base growth give inaccurate information as to the development of present and future inflation. Therefore, the effectiveness of base money growth forecasts as an instrument to influence inflation expectations and to guarantee the attainment of established targets has deteriorated.

Chart 33 **Growth of Bills and Coins in Circulation and Inflation in Mexico: 1986-2000**

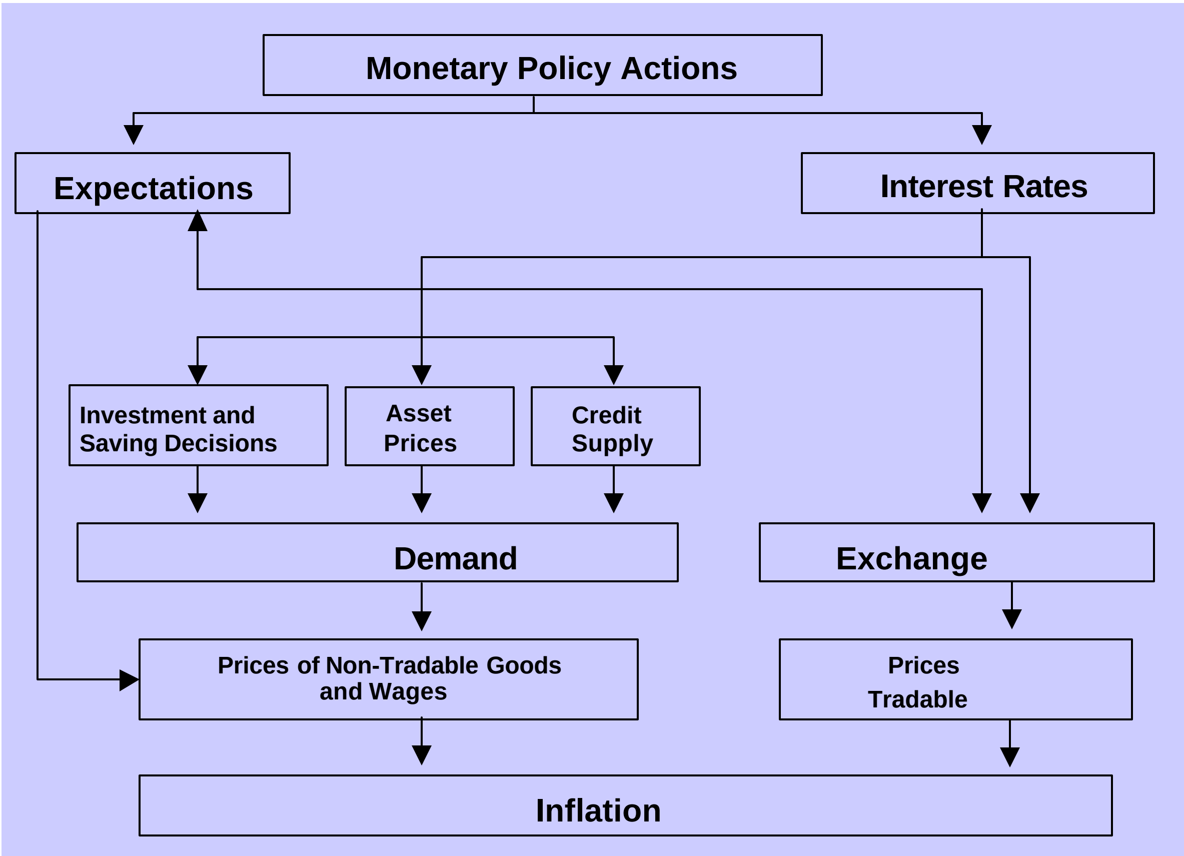
Percent



The lack of a stable relationship between narrow monetary aggregates and inflation in most developed economies has led their central banks to reduce the emphasis placed on the evolution of monetary aggregates as the basis for the analysis and evaluation of inflationary pressures.

In recent years, the credibility of Banco de México has strengthened. For this reason, the careful study of several indicators giving information on inflation has been emphasized. This procedure corresponds to the second element of the Central Bank's policy, introduced in the Monetary Program for 1995. Over recent years, monetary policy actions in Mexico have been based on exhaustive and continuous analysis of those variables that have a bearing on the behavior of inflation and that are used to make price growth forecasts. When this analysis has indicated that accumulated inflationary pressures are incompatible with the stated targets, the monetary policy stance has been tightened by means of the "short", in order to induce the monetary conditions required to re-establish compatibility between inflation forecasts and inflation targets. The following diagram (Chart 34) illustrates the channels through which monetary policy actions influence price behavior.

Chart 34 **Monetary Policy Transmission Channels**



When the "short" is widened, Banco de México induces higher short-term nominal interest rates and improved inflation expectations. As a consequence of these effects, real interest rate levels rise. The effectiveness of the "short" to modify the behavior of interest rates has been proved in various studies[21]. The increase in real interest rates and the improvement of inflation expectations, induced by an enlargement of the "short", influence price behavior, albeit with considerable lags and through various channels.

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21 For example: "The Effect of the "Short" on the Interest Rate Structure," Research paper 2000-1, Banco de México, June 2000.
"Inflation expectations, country risk and monetary policy in Mexico." Paper prepared for the seminar *Stabilization and Monetary Policy: The International Experience*, organized by Banco de México in November 2000.

Firstly, through their impact on saving and investment decisions by individuals and firms, higher real interest rates mitigate the expansion of aggregate demand. At the same time, the latter effect weakens pressures on wages and on the prices of non-tradable goods.

Secondly, higher interest rates reduce the demand for credit, and can also limit credit supply if banks reckon that higher interest rates are payable only by high-risk investment projects. Therefore, increased interest rates, together with banks' uncertainty regarding the quality of investment projects, can reduce credit availability in the economy. The latter affects investment and, in turn, aggregate demand and prices.

Thirdly, interest rate hikes make bond investments more attractive and reduce the demand for equity instruments, pushing the market value of the latter down. Companies facing a reduction in their market value also face harsher funding conditions, increasing the cost of new investment projects. This affects aggregate demand and eventually prices. Regarding consumers, higher interest rates and the subsequent fall in equity prices lead to a decline in the value of their assets, forcing consumers to perceive a reduction in their wealth. These factors contribute to a contraction of consumption and aggregate demand.

Fourthly, higher interest rates induce an appreciation (or lesser depreciation) of the exchange rate, directly affecting the price behavior of tradable goods as well as inflation expectations. Furthermore, fluctuations of the real exchange rate affect aggregate demand growth through changes in the relative prices of tradable and non-tradable goods. However, the expansionist or contractionist effects of real exchange rate movements have not proven to be conclusive, neither in theory nor in practice.

Although one of the likely effects of a more restrictive monetary policy is to induce an appreciation (or lesser depreciation) of the exchange rate, it is worth clarifying that Banco de México does not use this type of policy for this purpose. In fact, what is sought is to affect medium-term inflation trends through the other transmission channels. In addition, although restrictive monetary actions have the aforementioned effect on the exchange rate, this variable is influenced by multiple factors in a floating exchange rate regime. Therefore, restrictive monetary policy measures are ineffective to anchor the exchange rate, as some analysts have suggested in the past.

Finally, the adjustment in inflation expectations that stems from the enlargement of the "short" will finally be reflected in wage revisions, the evolution of prices and the exchange rate.

The previous description illustrates the complexity of the transmission channels of monetary policy, and the uncertainty as to the relative importance of each one of them[22].

In order to evaluate monetary policy implementation, economic agents need to know the elements that Banco de México uses to analyze inflationary pressures and prevailing monetary conditions, as well as the short and medium-term inflation targets. Thus, in 2000, Banco de México deemed necessary to improve the mechanisms of communication with the public by publishing quarterly inflation reports. Furthermore, multi-annual inflation targets were announced. These measures represent an important effort to make monetary policy implementation as transparent as possible. In this way, monetary policy in Mexico has been converging to an inflation targeting scheme.

This monetary policy scheme was used for the first time in New Zealand, in 1990. Since then, several developed and emerging economies have adopted it in response to the more widespread implementation of floating exchange rate regimes and to the problems encountered by monetary aggregate targeting strategies. Among the countries that use inflation targeting regimes are Australia, Canada, England, Sweden, Finland, Israel, Chile, the Czech Republic, Brazil, Poland and South Africa[23]. The main characteristics of this monetary regime, which is based on the implementation of discretional monetary policy measures in order to attain proposed inflation targets, are as follow:

(a) The recognition of price stability as a fundamental objective of monetary policy;

(b) The announcement of medium-term inflation targets;

(c) The existence of an autonomous monetary authority;

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[22] Although there are additional channels through which monetary policy influences the behavior of inflation, these are less relevant and can be easily consulted in specialized literature.

[23] For a description of some of these experiences, refer to "Inflation Targets as an Instrument of Monetary Policy," Research paper 9702, Banco de México, May 1997.

(d) The transparent conduction of monetary policy, supported by a communication strategy regarding the objectives, plans and decisions made by the monetary authority;

(e) The analysis of all sources of inflationary pressures, in order to evaluate future price growth trends; and

(f) The use of alternative inflation indicators, such as core inflation, in order to identify factors that have a transitory effect on inflation and to identify medium-term price growth trends.

Among the benefits obtained by countries that have adopted this scheme are the following:

(a) lowering of inflation as well as the consolidation of price stability;

(b) a reduction in the exchange rate passthrough effect on prices;

(c) a more transparent and better understood implementation of monetary policy; and

(d) a more accountable monetary authority.

IV.2. Elements of the Monetary Program

The fundamental elements of the monetary policy scheme currently in force in Mexico are presented in this section. These elements are in line with the previous description of the inflation targeting scheme.

IV.2.1. Program Objectives

Since inflation is still high in Mexico, the Board of Governors has considered that it is preferable to abate price growth gradually in order to do so permanently. This strategy has been adopted to reduce the social costs inherent to the stabilization process. Evidence from economies which have reduced inflation from rates similar to those that prevail nowadays in Mexico confirms the appropriateness of the decision made by the Central Bank.

The Board of Governors of Banco de México has therefore established, as the medium-term target, that the INPC annual growth rate should fall to 3 percent by December 2003. In order to provide short-term reference points along the way to price stability, in the July-September 2000 Inflation Report, the Board of Governors of Banco de México established that annual inflation for 2001 shall not exceed 6.5 percent.. At the same time it was announced that the inflation target for 2002, to be made public in due time during this year, should be approximately 4.5 percent. In December 2000, Congress approved the federal budget and the Federal Revenues Law for 2001, which are compatible with a public deficit equivalent to 0.65 percent of GDP. The proposed reduction in the public sector deficit will help to abate inflation.

Given the current situation, attaining the proposed targets requires a restrictive monetary policy. When the setting of prices and wages is guided by inflation expectations which are above targets, the Central Bank must restrict its monetary policy stance in order to induce, through the previously described channels, a correction of economic agents' inflation expectations, which should in time be reflected in the setting of prices and wages. As long as there is no congruency between these variables and short and long-term targets, monetary policy should maintain a restrictive stance. This is why, in the present context, in which inflation expectations in Mexico are above target, a necessary condition to attain inflation targets is a restrictive monetary policy. Likewise, if prices and wages are compatible with inflation targets, the latter could be attained with a less restrictive monetary policy and the inflation reduction process should be less costly.

Even when the monetary policy stance adopted is the appropriate one, in the short term price behavior can be influenced by fluctuations in various key prices, such as the exchange rate, wages and the prices of goods and services provided or regulated by the public sector. Should these fluctuations materialize, monetary policy actions might be unable to offset them fast enough to meet the short-term inflation target. It is precisely under such circumstances that the medium-term target will play its role as the system's nominal anchor. If this situation were to arise, the monetary authority would announce the time it would take to absorb such fluctuations and would adopt suitable measures in order to reach the medium-term target originally proposed. These measures will be geared at curbing the deterioration in inflation expectations and re-establishing the downward trend of inflation.

When the economy requires the depreciation of the real exchange rate or an increase in the prices of public goods and services, unexpected inflationary pressures arise. If under such circumstances the monetary authority intended to attain its short-term inflation target at all costs, it would have to induce a movement in the opposite direction in the rest of the prices of the economy in order to offset the inflationary impacts of the aforementioned increases. Owing to the downward inflexibility shown by almost all prices, this adjustment would be practically impossible to carry out in the short term without excessively burdensome costs. Therefore, faced with this situation, and following the practices of most central banks worldwide, Banco de México would not completely offset the direct inflationary impact of the originating shocks, and would thus accommodate a transitory deviation of inflation with respect to its short-term target. Banco de México would nevertheless restrict monetary policy to avoid long-lasting effects on inflation expectations and on inflation itself. In this way, the aforementioned shocks would only have a temporary impact on inflation. Once this impact was absorbed, price growth would return to the originally established trajectory.

When nominal wage rises are incompatible with productivity gains or with inflation targets, the social cost of the disinflation process increases markedly as firms' production costs escalate in response to the former. Faced with this situation and with the impossibility of absorbing larger costs by accepting a reduction in profits, firms attempt to pass on higher costs to consumers through price increases. Should the monetary authority accommodate the latter increases, inflation would rise and this, in turn, would reduce or cancel out the intended improvement in real wages.

Inversely, should the monetary authority react in a restrictive manner, the result would be the contraction of firms' profits, as well as their investment and job creation. In short, the economy would be submerged in a situation with low or nil growth. The disinflation target could then be achieved, but the costs of the adjustment would be high.

The previous argument clearly illustrates the need for contractual wage negotiations to be based on inflation expectations in line with announced targets. The cost of the disinflation process would then be lower and said process could go forward as envisioned.

Compliance with the fiscal program has been a contributing factor to attaining the inflation targets over the past two years. However, as has been stated on various occasions, the strength of public finances has, in part, been due to high oil revenues. This reveals the vulnerability of the macroeconomic situation and of the future downward trend of inflation if a sudden decline in crude oil prices should arise. The excessive dependency of public revenues on oil is one of the most serious deficiencies of the Mexican fiscal structure. It is therefore of the utmost importance to invigorate public finances through a fiscal reform that could reduce this dependency.

Should fiscal reform lead to upward pressure on prices, a transitory deviation from inflation targets could be expected in the short term. However, as mentioned regarding relative price changes, if preventive action by the monetary authority is successful in forestalling the generation of secondary effects, in a few months inflation would return to its originally envisaged path. Should this scenario arise, and once fiscal reform has been approved and its components have been made public, Banco de México would announce the period in which, in its opinion, the effects of these inflationary shocks would occur and, therefore, by how many months the attainment of the 2001 inflation target would be delayed. Once the possible short-term adjustment in inflation expectations has been contained, the inflation reduction process would be reinforced by the stronger fiscal position. Consequently, even though fiscal reform could have immediate effects on inflation —which could delay the fulfillment of the short-term targets— the viability of achieving the medium and long-term targets would increase.

Thus, the elements that are considered necessary to reach, first of all, the inflation target proposed for 2001 and, subsequently, the convergence towards the 3 percent inflation target set for 2003 are as follows:

(a) a restrictive monetary policy;

(b) adjustments to prices of goods and services provided or regulated by the public sector in line with inflation targets;

(c) wage increases in line with sustainable productivity gains and with the inflation target;

(d) the absence of severe external shocks —such as a deterioration in the terms of trade or in the supply of foreign capital— that could lead to a considerable adjustment in the real exchange rate; and

(e) a structurally sound fiscal stance.

In its Inflation Reports to be published throughout 2001, Banco de México will evaluate the possible consequences of one or more of the aforementioned conditions not being fulfilled. Furthermore, efforts will be made to predict the time required for the inflationary shocks to be absorbed. Obviously, this exercise would be subject to a considerable degree of uncertainty. Once the fiscal reform has been instrumented, Banco de México would disclose its estimations of the reform's direct and indirect effects on inflation. In these circumstances, it is highly probable that the Central Bank would have to restrict its monetary policy stance in order to bring overall inflation back to levels in line with medium-term targets. The nominal anchor role played by inflation targets would thus be reinforced, while inflation expectations for the medium and long term would not be permanently affected.

IV.2.2. The Conduction of Monetary Policy

Monetary policy is carried out in an environment in which both the exchange rate and interest rates are freely determined by financial markets. In this context, Banco de México, like most central banks worldwide, must above all ensure that it will not generate excess or shortage of base money supply. In order to do this, it adjusts the primary money supply on a daily basis, allowing the latter to always satisfy the demand for base money.

In accordance with this process, Banco de México intervenes in the money market on a daily basis. It does this through public auctions, offering credit or deposits, or through the direct purchase and sale of government securities or through repurchase agreements (Repos)[24]. Banco de México allows credit institutions to register negative balances (overdrafts[25]) in their current accounts at the close of daily operations, as long as at the end of a 28-day period every overdraft has been offset by deposits of the same amount.

At the end of each 28-day period, Banco de México adds the positive daily balances of the current accounts for each bank and subtracts the total of overdrafts incurred. If the previous calculation gives a net overdraft for any given credit institution, Banco de México charges

[24] This type of operation can be carried out with securities issued by the Federal Government or by the Central Bank itself .

[25] As long as they do not exceed specific limits. For more information, refer to Annex 4 of the Annual Report for 1996.

interest on this amount at a rate equivalent to twice the 28-day Cetes interest rate prevailing in the market. On the other hand, if any bank registers positive accumulated balances for a 28-day period, it would incur the opportunity cost of having maintained non-yielding resources in Banco de México, as the Central Bank does not pay interest on them. Therefore, credit institutions have an incentive to maintain a zero accumulated balance in their current accounts. The Central Bank carries out its operations in the money market in such a way that the total accumulated balances of all banks (accumulated balance of total daily balances) close the 28-day period at a predetermined amount.

In order to signal its monetary policy intentions, on a daily basis Banco de México announces the level at which it intends the accumulated balance of total daily balances to close the computation period. For example, a zero accumulated balances objective indicates the Central Bank's intentions to fully satisfy the demand for currency at market interest rates, and therefore to supply the necessary resources for the banking sector, as a whole, not to incur overdrafts or accumulate unwanted positive balances at the end of the period.

A negative accumulated balances objective —in other words, a "short"— reflects the Central Bank's intention to not supply the banking sector with all the funding requested at market interest rates. This action by the Central Bank forces some or various credit institutions to obtain part of the funds required through an overdraft in their current accounts. Disregarding the possible effects of other variables, this leads to a rise in interest rates, as financial institutions attempt to avoid paying the high rate charged on overdrafts in their current accounts at the end of the period by obtaining the required funding from the money market. This situation signals the market that Banco de México has adopted a restrictive monetary policy stance.

Even when Banco de México adopts a negative accumulated balances objective, it always supplies sufficient credit to fully satisfy the demand for bills and coins. However, in this case, part of the credit is given at above market rates, as overdrafts are incurred by one or more banks.

On occasion, the market-determined interest rate might not be in line with the attainment of inflation targets. Should this situation arise, Banco de México would restrict its monetary policy stance by establishing or widening the "short". As previously mentioned, the effectiveness of the "short" to induce higher interest rates has been proved in several studies, as well as by the recently implemented increases in the "short." During the second half of 2000 and in the fourth quarter especially, the widening of the "short" has caused sustained increases in real interest rates.

The "short" is the mechanism Banco de México uses, and will likely continue to use, in order to induce the interest rates movements necessary to attaining the proposed inflation targets. The "short" has been very efficient in distributing the effects of external shocks between the exchange rate and interest rates. This is an enormous advantage in an economy like Mexico's, which is subject to high volatility and to large exchange rate passthrough effects on prices. The "short" has also contributed significantly to the disinflation process, since nominal and real interest rates have reacted quickly to movements in the level of this instrument and to deviations of anticipated inflation rates from the target[26].

In addition, the application of the "short" —through its effects on real interest rates— has resulted in lower aggregate demand growth, by stimulating savings and raising the price of bank and non-bank credit. Since non-bank credit has become increasingly important in recent times, the effect of higher interest rates on aggregate demand has operated mainly through this channel. As bank credit continues to expand, the impact of higher real interest rates will become even more relevant as the total stock of credit in the economy increases.

IV.2.3. Analysis of Inflationary Pressures and the Communication Policy

Through the timely implementation of discretional monetary policy measures to attain inflation targets, the Central Bank influences the price formation process, as well as inflation expectations. It is desirable to use monetary policy as a preventive instrument, as this substantially reduces inflation abatement costs. Consequently, Banco de México must constantly keep track of all sources of inflationary pressures and act without delay when their presence is detected. The quicker the response,

[26] For a discussion on the advantages of the "short" and the effect of interest rates on aggregate demand, refer to "Considerations on the conduction of monetary policy and the passthrough mechanism in Mexico," paper prepared for the seminar *Stabilization and Monetary Policy: The International Experience*, organized by Banco de México in November 2000.

the clearer the signal from the Central Bank and, thus, the stronger its influence on expectations and price formation.

Banco de México continuously analyzes of the evolution of prices and inflation perspectives to support the conduction of monetary policy. This process is synthesized and its results made public through the quarterly Inflation Reports. The aforementioned Reports firstly analyze the recent evolution of overall inflation and various price sub-indices. In addition, they examine the behavior of the main determinants of inflation, amongst which the following are included:

(a) the international environment and the exchange rate;

(b) labor compensations, wages, employment and unit labor costs;

(c) aggregate supply and demand;

(d) prices of the goods and services provided or regulated by the public sector;

(e) public finances;

(f) transitory factors that affect inflation; and

(g) monetary and credit aggregates.

The process described provides a detailed explanation of inflation's past behavior and the possibility to infer the future evolution of prices.

The quarterly Inflation Reports also include a review of the outlook for each of the main determinants of inflation. In addition, the texts include an extensive discussion of the immediate risks faced by the economy —and by monetary policy targets in particular— and the likely reaction of the monetary authority should these risks materialize.

If inflationary pressures incompatible with inflation targets were detected, the Central Bank would use the "short" to tighten its monetary policy stance. These pressures usually arise in response to the following situations:

(a) when the public's inflation expectations considerably deviate from inflation targets;

(b) when aggregate demand grows persistently at higher rates than potential output;

(c) when internal and external inflation shocks occur. Monetary policy will attempt, in all cases, to neutralize the shocks' secondary effects on prices and, on occasion, will act preemptively to partially offset the direct inflationary effects of fluctuations in key prices. The objective of this approach is to moderate the effects of adjustments in relative prices on the INPC, by allowing the level of the latter to rise, but avoiding the deterioration of inflation expectations; and

(d) when it is necessary to restore orderly conditions to the exchange rate and money markets.

Monetary base growth is a useful reference to evaluate monetary policy, notwithstanding the considerations presented in previous sections of this Report. This is why the Appendix to this document includes the expected daily path of the monetary base. The projections are in line with the inflation target for the year and were based on information available in January 2001. The Appendix also includes the assumptions used to prepare the forecast.

IV.3. The Outlook for 2001 and Assessment of Risks

Over the last few weeks, one of the risk scenarios that Banco de México had repeatedly warned of in its Inflation Reports published throughout 2000 did materialize. An important change has taken place in the outlook for the main external variables that influence the behavior of the Mexican economy. Specifically:

(a) forecasts on the growth of the United States' economy in 2001 have been revised downward significantly; and

(b) crude oil prices in the spot and futures market have fallen.

Recent information on these two factors clearly indicates that the expansion of the United States' economy has weakened considerably. This has led to a revision of the international environment expected for 2001 vis-à-vis the outlook presented in the July-September 2000 Inflation Report. As a consequence of this international outlook revision, forecasts of the Mexican economy's likely evolution have also been updated.

A brief description of the international environment and the probable evolution of the main Mexican macroeconomic variables in 2001 is presented in the following pages. Finally, the most important elements of risk in the base scenario are discussed.

IV.3.1. International Environment

A large group of international brokerage houses significantly adjusted their expectations regarding the future expansion of the United States' economy in December and January (Table 9).

Table 9

Evolution of U.S. Economic Growth Expectations for 2001

Percent

	2000				2001
	September	October	November	December	January
Credit Suisse	4.2	n.d.	n.d.	2.8	1.8
Deutsche Bank	4.0	3.9	3.9	2.7	1.8
Goldman Sachs	4.0	4.0	3.3	3.0	2.0
JP Morgan	3.8	3.7	3.1	3.0	1.8
Merrill Lynch	4.0	4.0	3.7	3.0	2.0
Morgan Stanley	3.6	3.7	3.0	2.5	1.1

The previously-mentioned revision was given in response to the accumulation of information —which is presented in detail in section II.3.3— that clearly shows a serious deceleration in the United States' economy. This was confirmed by an unexpected 50 basis point reduction in the Federal Funds rate implemented by the Federal Reserve on January 3rd, 2001. Due to the importance of United States' economic growth for global economic expansion, the change in outlook has led to a downward revision in the growth expected for industrial nations (Table 10).

Table 10 **Evolution of Economic Growth Expectations for 2001 of Selected Economies**

Percent

	2000				2001
	September	October	November	December	January
Canada	3.9	3.9	3.6	3.4	2.7
Japan	1.7	1.8	1.7	1.7	1.3
United Kingdom	2.7	2.7	2.7	2.7	2.4
European Monetary Union	3.3	3.1	3.1	3.0	2.4

SOURCE: Global Data Watch, JP Morgan

In turn, the expected slowdown of the global economy has had an effect on the price of crude oil. The average price of WTI oil fell 4.72 dollars per barrel between November 2000 (34.37 dollars per barrel) and January 2001 (29.65 dollars per barrel). Oil futures prices indicate that the Mexican crude oil mix will probably fall from 20.98 dollars per barrel registered in January 25th, to 20.61, 18.58, 17.26 and 16.31 dollars per barrel in March, June, September and December, respectively[27].

In response to the aforementioned events, Banco de México has modified its forecasts on the evolution of the international environment, specifically in the following areas:

(a) The expected growth rate for the United States' economy was revised downward from 3.2 percent to an interval between 1.8 and 2.4 percent, in line with the forecasts given by most international brokerage houses and the IMF. Furthermore, it is also anticipated that said economy will weaken further in the first semester but will recover significantly in the second half of the year.

(b) Based on WTI oil futures prices and considering the differential it has maintained vis-à-vis the Mexican crude oil mix, estimates for 2001 indicate that the average price of Mexican oil will be 18.52 dollars per barrel. In addition, increased volatility in the crude oil market over recent months maintains the risk of a further decline in Mexican oil prices.

[27] Forecast based on December's average differential between the WTI and the Mexican crude oil mix for export (8.75 dollars per barrel).

A factor that will probably help the Mexican economy to adjust in an orderly fashion to the downturn in the United States' economy and the fall in crude oil prices is the possible increase in net private capital flows to Latin America. Other economies will have access to these resources —and at lower cost— as the slowdown in the United States' economy is likely to be accompanied by a slight adjustment in that country's current account deficit. Nonetheless, a factor that could stop these funds from flowing into Latin America is the possible propagation to emerging market bonds of the intensified risk aversion that has been appearing in the United States with regards to high-risk bonds. However, the probability of emerging market bonds being affected by this is reduced, since the fall in the demand for high-risk bonds in the United States has been associated with the over–indebtedness of the issuers and with the possible impact of the economic deceleration in that country on the creditworthiness of these firms. Furthermore, the level of foreign direct investment in Mexico forecasted for 2001 is similar to the one observed last year, which means that an important part of the current account will be financed with long-term funds.

IV.3.2. Expected Evolution of the Main Macroeconomic Variables in 2001

The evolution of the Mexican economy will be determined by three main factors in 2001:

(a) the impact of the United States' economic slowdown and of the fall in crude oil prices on the Mexico's foreign accounts;

(b) a weaker domestic demand; and

(c) the availability and access conditions of foreign funding.

The deceleration of economic growth in the United States will certainly have a significant effect on the growth of Mexican exports. However, the extent of this impact is very difficult to calculate since commercial integration between the two counties has recently intensified and has coincided with the longest period of expansion in the economic history of the United States —therefore, there is no period of United States' economic deceleration to refer to which coincides with the extent of economic integration prevailing nowadays. Mexican exports will also be affected by lower crude oil prices.

Obviously, the lower expansion rate of exports in 2001 will affect the growth of the Mexican economy, which will probably fall below the 4.5 percent announced originally. It should be recalled that this forecast had been made based on the assumption that the United States' economy would grow at an annual rate between 3 and 3.2 percent. The effect of lower export growth rates on economic expansion will be mitigated by the corresponding slowdown of imports, which will in turn result from the contraction of the demand for imported inputs. In response to this change in the international outlook, private sector analysts have revised downward their forecast for Mexico's economic growth in 2001.

Table 11 **Expected Real Growth of the Mexican Economy for 2001**

Percent

	2000				2001
	September	October	November	December	January
Credit Suisse	4.6	4.6	4.6	4.2	3.2
Deutsche Bank	4.9	4.9	4.9	4.3	3.7
Goldman Sachs	4.8	4.8	4.5	4.0	3.6
JP Morgan	4.0	4.1	3.8	3.8	3.2
Morgan Stanley	4.5	4.2	4.2	4.2	3.3
Banamex	5.3	5.3	5.1	4.9	4.1
Bancomer	5.0	5.0	4.6	4.0	4.0
Santander	n.d.	n.d.	4.7	4.7	3.9

SOURCE: Various financial institution reports.

Banco de México's base scenario for 2001 also projects a significant deceleration in the growth of domestic demand —particularly in private and public consumption, and private investment— in response to the expected high real interest rates, the fiscal adjustment and the slowdown of economic activity and job creation.

Regarding the fiscal adjustment in 2001, although the approved reduction of the public deficit —to 0.65 percent of GDP— is undoubtedly a step in the right direction, public finances still suffer from considerable weaknesses. In particular, the 3.5 percent real growth in public programmable outlays is a cause for concern as it adds to the already high level of expenditure incurred in 2000. It is noteworthy that the Federal Government has expressed its will to make an additional effort to control and rationalize expenditures in order to achieve a deficit of 0.5 percent of GDP in 2001. However, it is advisable that fiscal prudence should also encompass off-budget operations —such as the

PIDIREGAS and the financial intermediation of development banks—that could give rise to additional pressures on public finances in the future.

As indicated by available information on industrial production and sales, the deceleration of output growth during the fourth quarter of 2000 has been faster than that of aggregate demand. Therefore, the current account deficit is expected to increase in 2001, particularly in the first semester.

The base scenario considers that the expected expansion of the current account deficit will not face financing difficulties, and that the reliability of financing sources will not be compromised since a slightly larger supply of funds will be available to emerging economies in response to the fewer resources demanded by the United States and the low interest rates prevailing in international financial markets. Nevertheless, since lower growth in Mexican exports means a more limited supply of foreign exchange, periods of exchange rate volatility cannot be ruled out during the year. If these pressures are to result in orderly movements of the exchange rate, and in order to induce the adjustment required in aggregate demand growth, real interest rates must remain high. As previously mentioned, the ideal complement to a restrictive monetary policy is increased fiscal discipline. The coordinated conduction of both policies would lead to moderate growth of aggregate demand and, possibly, to a reduction in the need for external funding. In this way, the impact of the aforementioned external factors on inflation would be limited.

The exchange rate pressures that could appear on the described scenario could complicate the reduction of inflation due to the influence of the exchange rate on the formation of expectations regarding future price increases. In this scenario, the challenge faced by monetary policy would be to allow the nominal exchange rate adjustments required for the market to reach a new level of real exchange rate equilibrium in line with a less favorable international environment, and to prevent this adjustment from causing an upward revision in inflation expectations, wage increases and in inflation of non-tradable goods. To meet this challenge, it would be necessary to ensure the adjustment of the exchange rate in an orderly manner. This requires a restrictive monetary policy stance. The monetary authority shall monitor the evolution of inflation expectations, non-tradable good prices and contractual wage negotiations, and react, if necessary, to any sign of the tainting of expectations.

Monetary policy actions would not be aimed at defending a specific exchange rate level. One of the main advantages of the floating exchange rate regime is that it provides the necessary flexibility for the real exchange rate to move towards a new equilibrium level when market players see that a change is needed in response to external or internal shocks. However, the revision of inflation expectations that could be caused by an adjustment in the exchange rate could raise the cost in terms of inflation of attaining a new real exchange rate equilibrium. Should this situation arise, actions taken by Banco de México would focus on reaching the necessary adjustment in the real exchange rate at the least cost in terms of inflation. It is worth noting that as economic agents have learned more about how the floating exchange rate regime works, the intensity and the speed at which exchange rate fluctuations are transmitted to domestic prices have weakened.

The base scenario for 2001 has also incorporated domestic factors, which could complicate the decline of inflation. The following are noteworthy:

(a) inflation expectations above the target;

(b) contractual wage revisions incompatible with the inflation target and with foreseeable gains in productivity; and

(c) high growth of private spending.

These three factors could put pressure on the prices of non-tradable goods and possibly generate a widening of the current account deficit. If this were to occur, an adjustment in the exchange rate and in the evolution of the prices of tradable goods could ensue. For these reasons, it is essential that monetary policy maintains a restrictive stance to move inflation expectations incorporated in wage revisions back in line with the inflation target as soon as possible. In addition, the restrictive stance will also induce a more moderate growth of domestic demand. The purpose of all this would be to attain an orderly economic adjustment enabling an inflation rate below 6.5 percent by December 2001.

The macroeconomic framework for 2001 suggests that the decline of inflation will face more difficult obstacles than in the recent past. In response to this new scenario, on January 14th the Board of Governors of Banco de México decided to widen the "short" from 350 to 400 million pesos. In addition, it is clear that in order to reach the targets, it will be necessary to maintain and possibly intensify the monetary restriction.

IV.3.3. Risk Assessment

The base scenario presented is subject to a high degree of uncertainty, because although available information points towards a downturn in the United States' economy, the extent of it is still difficult to estimate. The speed at which analysts have updated their forecasts over the last two months illustrates the responsiveness of markets to new information. Nowadays, this factor constitutes an important source of additional uncertainty. Therefore, the following pages describe the risks of both domestic and international nature that the Mexican economy could confront over the next 12 months. In addition, the preemptive economic policy actions that could be implemented in response to those shocks are also described.

Regarding the international environment, the main elements that could affect the evolution of the domestic economy and the decline of the inflation rate are as follows:

(a) If economic growth in the United States was lower than expected, implying a recession —officially defined as negative growth in two consecutive quarters— and if the solid recovery currently forecasted for the third and fourth quarters did not materialize;

(b) If the international price of crude oil fell below current futures prices; and

(c) If capital flows towards emerging markets were affected by increased risk aversion.

Due to certain imbalances in the United States' economy and the intensification of its downturn, the likelihood of a recession in 2001 has increased over the last few months, although it is still low. It is no easy task to forecast the sensitivity of private consumption to the economic slowdown and to the adjustment in the value of assets, which could be more severe than currently expected.

Furthermore, economic deceleration in the United States could affect the soundness of its financial system, which could have negative repercussions on capital flows towards Latin America.

Finally, the intensification of the United States' economic downturn could be accompanied by an additional fall in the price of crude oil stemming from the impact of said deceleration on world economic growth. Furthermore, a reduced demand for crude oil, as a result of lower world economic growth rates, could coincide with increases in crude oil production which would result from the additional capacity that will be available during the second half of 2001.

If any of the first two possibilities were to materialize, an adjustment in the real exchange rate would be likely as a response to the reduced availability of foreign exchange.

Should the third situation arise, changes in the supply of foreign currency would not directly affect the foreign exchange market, since PEMEX's foreign exchange surpluses are sold to Banco de México. Nevertheless, a larger than anticipated fall in the price of crude oil could cause movements in the exchange rate, if expectations regarding the viability of fiscal targets were affected or if the current account deficit rose.

In any of these situations, the most appropriate mechanism to facilitate the transition towards a new real exchange rate equilibrium level would be an adjustment in the nominal exchange rate. Under such circumstances, the monetary authority would react promptly in the presence of any indication that exchange rate movements could be causing upward revisions in medium-term inflation expectations and affecting the prices of non-tradable goods.

If any of these three unfavorable scenarios were to arise, a stronger fiscal adjustment would also be necessary. The objective of this action would be to allow the public sector to contribute to an increase in domestic savings. This increase would become one of the foundations enabling the Mexican economy to face lower foreign currency revenues from oil and non-oil exports and a reduction in foreign financing. The impact of these external shocks on real interest rates and on private sector investment would thus be limited. The decree approving the federal budget for 2001 already includes, in Article 32, the Federal Government's obligation to cut back spending in order to offset the possible public revenue losses associated to any of the unfavorable scenarios already described. In various forums, the federal treasury authorities have reiterated that they will attempt to attain a fiscal deficit below the one approved by Congress for this year.

The base scenario anticipates that the growth rate of domestic demand will weaken considerably over the next few months. This will limit the expansion of the current account deficit, and keep it at a level compatible with the foreseeable supply of long-term capital.

At the time of publication of this Report, the main domestic risk factors in the basic scenario are as follows:

(a) the growth of domestic private sector demand exceeding that of domestic output by a substantial margin. If this were to occur, the economy's dependence on short-term external financing would intensify, increasing the vulnerability of the disinflation process vis-à-vis the volatility of international capital markets;

(b) inflation expectations continuing to display the downward rigidity shown to date for a prolonged period; and

(c) contractual wage settlements not resulting in wage levels compatible with inflation targets and with sustainable gains in labor productivity.

If these domestic risk factors were to materialize, they would probably do so simultaneously. This would be due to the fact that the excessive growth of domestic demand would cause the downward rigidity of inflation expectations. In this context, macroeconomic policies shall become even more restrictive in order to correct demand growth and the deviation of inflation expectations.

V. Final Remarks

The evolution of the main macroeconomic variables in 2000 proved more favorable than expected by private and public sector analysts at the beginning of the year.

The economic expansion that began in 1996 continued in 2000. At the time of publication of this Report, real GDP is estimated to have increased more than 7 percent in 2000 —the highest growth in the last 19 years. From year-end 1999 to year-end 2000, the annual inflation rate fell from 12.32 to 8.96 percent, having attained the target with a comfortable margin for the second consecutive year. The stabilizing effort was more apparent in the 6.72 percentage point reduction in core inflation last year. This indicator, which reflects the medium-term inflation trend, showed a slower decline at the end of last year, but maintained a clear downward trajectory. Furthermore, in 2000 the Mexican economy was able to create over 529,000 formal jobs and real wages rose by more than 6 percent. The behavior of these variables confirms that lower inflation contributes to economic growth, job creation, real wage recovery and reduced economic inequality.

In 2001, the Mexican economy will have to confront at least two negative external factors: reduced crude oil prices and the slowdown of the United States' economy. These factors will significantly affect the performance of the economy through their impact on Mexico's external and fiscal accounts.

Faced with a complicated international environment in 2001, the Mexican economy has nevertheless several strengthening factors, which will allow it to adjust to the current circumstances and quickly recover the vigor that has characterized it over the last five years. Among the main elements that contribute to reducing the domestic economy's vulnerability are the following:

(a) The floating exchange rate regime and market-determined interest rates, which inhibit speculative capital flows, contain the accumulation of external account imbalances, and allow for the swift adjustment of the main financial variables when faced with domestic or external shocks.

(b) The Mexican financial system has made considerable strides in its consolidation and capitalization process, and no longer represent an important source of economic vulnerability. Furthermore, progress in the regulatory and legislative realms has laid the foundations for a prompt reactivation of bank credit.

(c) The comfortable foreign public debt amortization schedule for 2001 and high levels of international reserves shall considerably mitigate the impact of possible international capital market disruptions on domestic financial markets.

(d) The private sector's low exposure to sudden changes in credit conditions prevailing in international financial market.

(e) A moderate current account deficit, to be mainly financed by long-term capital flows.

Notwithstanding the above, and in order to attain high and sustainable economic growth rates in the future, it is necessary to make progress in the area of structural reform, especially in the energy and communications sectors.

Maintaining monetary and fiscal discipline will be crucial in consolidating and strengthening the recently gained stability. Although progress made over the last two years was based on the attainment of fiscal goals and the prudent conduction of monetary policy, they were also influenced by a favorable international climate. To preserve credibility in the implementation of macroeconomic policies, it is necessary to seek the attainment of targets proposed for 2001, even amid an adverse international environment.

The fiscal effort required to attain a deficit of 0.65 percent of GDP —as stated in the federal budget and the Federal Revenues Law for 2001, is an important step in this direction. However, as the Government has repeatedly stated, the current fiscal structure still has considerable weaknesses, among which is an excessive dependency on crude oil revenue. Therefore, in the current context the strengthening of public revenue through an integral fiscal reform can no longer be delayed.

The Board of Governors of Banco de México reiterates its commitment to using the instruments at its disposal, in a timely and effective manner, to achieve the following two targets: an inflation rate below 6.5 percent in 2001, and convergence towards 3 percent inflation by 2003.

VI. Appendix: Forecast of the Demand for Monetary Base in 2001

As mentioned in the Monetary Program for 2001, the use of monetary aggregates for the conduction of monetary policy has significantly declined over the last few years, since the relationship between these aggregates and prices has become more uncertain as inflation has fallen. Notwithstanding, as has been done since 1997 with the aim of providing information which could be of use in monetary policy evaluation, the expected daily path of the stock of monetary base for 2001 is presented below (Table 12). The said forecast is compatible with the following assumptions: GDP growth of 4 percent in real terms[28]; inflation no higher than 6.5 percent, and remonetization of 2.6 percent. It is worth pointing out that this remonetization figure is lower than the one observed at year-end 2000 (4.9 percent). The aforementioned assumptions result in a forecast for the monetary base stock of 237.4 thousand million pesos as of December 31st of this year, a figure 13.6 percent higher than that observed on the same date of 2000. The confidence interval limits, considering one standard deviation of the residuals estimated by the model, correspond to stocks of 244.5 and 230.3 thousand million pesos[29].

The independent variables used in the model to estimate the demand for monetary base are: economic activity, interest rates, the lags of the dependent variable, and a set of binary variables which try to capture seasonal effects. It is important to mention here that it is very difficult to specify *a priori* the trajectory of the monetary base for the following reasons: a) there has not been a steady relationship between inflation and the monetary base and it can change over time; b) the basic assumptions used to make monetary base forecasts (GDP growth and interest rates) may not materialize; c) the relationship between the demand for monetary base and the variables explaining its evolution can also change over time; d) technological innovations or changes in payment practices alter the demand for monetary base; and e) the occurrence of

[28] In the last few months, forecasts for the growth of the Mexican economy have become more uncertain. It was therefore decided to use conservative assumptions for GDP growth in 2001 while estimating the demand for monetary base.

[29] This corresponds to +/- 3 percent of the stock forecasted for year-end.

extraordinary events can lead to a transitory change in the demand for monetary base[30].

Table 12 **Forecast of the Daily Monetary Base Stock for 2001***

Thousands of millions of pesos

Day	Jan	Feb	Mar	Apr	May	Jun
1	208.9	188.3	182.7	181.3	183.8	188.4
2	202.8	192.4	184.6	179.2	182.2	188.4
3	196.7	192.4	184.6	176.5	183.5	188.4
4	196.1	192.4	184.6	176.5	184.5	186.0
5	196.4	192.4	181.7	178.9	184.5	182.9
6	196.4	187.7	177.9	183.4	184.5	180.9
7	196.4	183.4	175.7	183.4	180.9	181.9
8	192.8	183.9	177.0	183.4	177.6	183.3
9	189.4	184.9	178.5	185.5	177.3	183.3
10	188.1	184.9	178.5	189.9	180.5	183.3
11	191.0	184.9	178.5	194.3	183.9	180.7
12	194.3	182.9	176.1	194.3	183.9	178.6
13	194.3	182.0	174.6	194.3	183.9	179.4
14	194.3	183.5	176.2	194.3	184.1	184.1
15	192.8	186.8	179.6	194.3	183.2	187.5
16	189.6	188.9	181.8	190.5	182.6	187.5
17	187.7	188.9	181.8	185.6	184.5	187.5
18	188.4	188.9	181.8	182.5	186.2	185.0
19	188.9	185.1	179.5	182.7	186.2	181.3
20	188.9	181.0	177.3	183.0	186.2	179.3
21	188.9	178.3	177.3	183.0	182.8	180.2
22	185.7	179.4	178.1	183.0	179.1	181.1
23	180.7	181.5	178.9	179.3	177.6	181.1
24	178.7	181.5	178.9	175.3	179.7	181.1
25	180.1	181.5	178.9	174.8	182.0	178.5
26	183.3	180.3	175.3	178.8	182.0	176.3
27	183.3	179.9	172.6	183.6	182.0	177.5
28	183.3	180.4	173.2	183.6	181.2	182.1
29	182.9		177.4	183.6	180.7	186.0
30	183.2		181.3	183.8	182.6	186.0
31	184.4		181.3		186.1	

*Observed data until January 25th, 2001.

[30] For example, the uncertainty related to the Y2K problem created a temporary increase in the demand for bills and coins (refer to Monetary Program 2000, Banco de México).

Forecast of the Daily Monetary Base Stock for 2001

Thousands of millions of pesos

Day	Jul	Aug	Sep	Oct	Nov	Dec
1	186.0	184.9	183.5	183.6	189.9	200.1
2	184.7	186.7	183.5	181.2	192.3	200.1
3	183.3	188.3	181.7	180.1	192.3	198.9
4	183.1	188.3	178.7	181.5	192.3	198.4
5	184.7	188.3	177.2	183.3	189.4	199.8
6	186.4	185.3	178.1	183.3	185.6	205.1
7	186.4	181.6	179.8	183.3	183.9	210.2
8	186.4	180.2	179.8	180.7	185.2	210.2
9	183.3	181.7	179.8	177.4	187.5	210.2
10	180.8	184.0	177.7	177.0	187.5	213.1
11	181.0	184.0	176.3	181.0	187.5	217.1
12	185.1	184.0	176.9	185.8	185.8	217.1
13	189.0	183.3	181.6	185.8	186.3	225.0
14	189.0	183.1	185.5	185.8	189.3	232.1
15	189.0	183.3	185.5	185.2	193.5	232.1
16	187.4	185.4	185.5	182.8	197.1	232.1
17	184.6	187.1	183.4	181.6	197.1	231.8
18	183.1	187.1	180.2	183.7	197.1	231.4
19	184.1	187.1	178.2	185.3	195.9	232.1
20	185.7	184.0	179.1	185.3	195.9	237.5
21	185.7	180.1	180.6	185.3	192.2	243.5
22	185.7	177.7	180.6	181.9	191.5	243.5
23	182.7	179.1	180.6	178.6	192.2	243.5
24	179.3	180.5	178.0	177.2	192.2	243.4
25	178.1	180.5	176.0	180.3	192.2	243.4
26	181.2	180.5	176.7	183.7	189.6	239.0
27	185.3	177.6	181.3	183.7	188.4	236.9
28	185.3	175.2	185.3	183.7	190.3	239.5
29	185.3	175.6	185.3	183.3	195.7	239.5
30	185.8	179.9	185.3	184.8	200.1	239.5
31	185.3	183.5		187.1		237.4