

# Inflation Report

---

July – September 2001



BANCO DE MEXICO

OCTOBER, 2001

---



*BOARD OF GOVERNORS*

**Governor**

GUILLERMO ORTIZ MARTÍNEZ

**Deputy Governors**

EVERARDO ELIZONDO ALMAGUER

GUILLERMO GÜEMEZ GARCÍA

JESÚS MARCOS YACAMÁN

JOSÉ JULIÁN SIDAQUI DIB



### ***FOREWARNING***

*Banco de México has always given the utmost importance to the publication of information that aids decision-making and allows the public to assess the execution of its policies. This text is provided for the readers' convenience only, and discrepancies may 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 October 23<sup>rd</sup>, 2001. Some figures are preliminary and subject to change.*



## TABLE OF CONTENTS

<b>I. Introduction</b>	<b>1</b>
<b>II. Recent Developments in Inflation</b>	<b>3</b>
II.1. Inflation Indicators	4
II.1.1. Consumer Price Index and Core Price Index	4
II.1.2. Monthly Inflation of the Consumer Price Index and Core Price Index	6
II.1.3. Producer Price Index	9
II.1.4. Transitory Factors that Affected Inflation	10
II.2. Main Determinants of Inflation	13
II.2.1. International Environment	13
II.2.2. Compensations, Wages and Employment	23
II.2.3. Aggregate Supply and Demand	32
II.2.4. Balance of Payments, Capital Flows and Exchange Rate	37
II.2.5. Prices Regulated or Provided by the Public Sector	39
II.2.6. Summary	40
<b>III. Monetary Policy during the Third Quarter of 2001</b>	<b>42</b>
III.1. Monetary Policy Actions	42
III.2. Monetary and Credit Aggregates	47
III.2.1. Monetary Base, Net Domestic Credit and Net International Assets	47
III.2.2. Monetary Aggregates M1 and M4	48
III.2.3. Financing to the Private Sector	50
<b>IV. Private Sector Outlook</b>	<b>52</b>
IV.1. Private Sector Outlook for 2001 and 2002	52
IV.1.1. Forecasts for the Main Determinants of Inflation	52
IV.1.2. Private Sector Inflation Expectations	56
<b>V. Balance of Risks and Conclusions</b>	<b>57</b>





## I. Introduction

---

Overall inflation during the third quarter of this year was compatible with the goal of attaining an annual rate of inflation below 6.5 percent by December 2001. The most noteworthy achievements in this period include the continuing reduction of core inflation sustained by the favorable behavior of core inflation for goods. Notwithstanding, the downward rigidity of contractual wage rises has resulted in the stagnation of annual core inflation for services at around 7.5 percent.

Even before the tragic events of September 11<sup>th</sup>, forecasts pointed to a more marked deceleration of the world economy than had been originally expected and weaker growth was anticipated in Mexico for both 2001 and 2002 as a result.

The terrorist attacks have undoubtedly had an adverse effect on consumer and business confidence, economic activity and the financial markets in the United States and the rest of the world. In particular, the short-term outlook for the United States' economy has worsened and it will be hard pressed to recover the economic growth levels reached during the 1996-2000 period in the medium-term.

In light of the close relationship between the Mexican economy and that of the United States, the unfavorable performance of exports, output and employment can be expected to continue further and even intensify.

Although considerable progress has been made in the disinflation process, the rate at which prices rise in Mexico still remains high and constitutes an obstacle to sustained and harmonious economic growth. Consequently, the Board of Governors of Banco de México ratifies the commitment to attain a rate of inflation below 4.5 percent by the end of next year and a target of 3 percent for 2003.

The efforts to reduce inflation in 2002 will be carried out in the context of a more uncertain international environment than has been observed over the last two years. Furthermore, the relative downward rigidity of inflation expectations for 2002 and 2003, which are currently not in line with goals, make the Central Bank's mission more difficult.

As a result of the complex international environment and due to the continuing high level of contractual wage rises, there is practically no margin available for easing the monetary policy stance. Likewise, the structural weakness of public finances does not allow for an expansive fiscal policy. In this context it is essential to make significant progress in pending structural reforms in order to reduce the Mexican economy's vulnerability to internal and external shocks. Under these conditions, Mexico would be able to make an orderly exit from the economic cycle's present phase and return to high sustainable rates of growth and job creation, in addition to raising investor and consumer confidence, together with low and stable inflation and solvent public sector finances.

## II. Recent Developments in Inflation

---

Price behavior during the third quarter of 2001 was comfortably in line with the attainment of the target set for the year. The annual inflation of both the Consumer Price Index (CPI) and the Core Price Index continued to decrease. The following are among the most outstanding results obtained during the period under analysis:

- (a) although CPI annual inflation underwent fluctuations throughout the quarter, it ended the period at 6.14 percent, 0.43 percentage points below the level recorded in June;
- (b) annual core inflation continued to decline;
- (c) the fall in annual core inflation for goods was more pronounced;
- (d) annual core inflation for services remained practically unchanged, similar to the level observed in the previous quarter; and
- (e) the behavior of annual inflation for goods and services excluded from core inflation calculations, was highly volatile.

Two important conclusions can be reached from the foregoing related to the current disinflation process:

- (a) In an environment of moderate inflation, the volatility of prices for goods and services excluded from the calculation of core inflation has a relatively greater influence on CPI inflation than during periods of high inflation. Therefore, under the present circumstances the behavior of the core price index is an even more precise indicator of inflation trends. The above leads to the deduction that during the third quarter medium-term inflationary pressures eased.
- (b) The stability demonstrated by annual core inflation for services during the period indicates that the recorded rises in unit labor costs have hampered the overall disinflation process.

## II.1. Inflation Indicators

The evolution of various price indexes from July to September 2001 will be analyzed below.

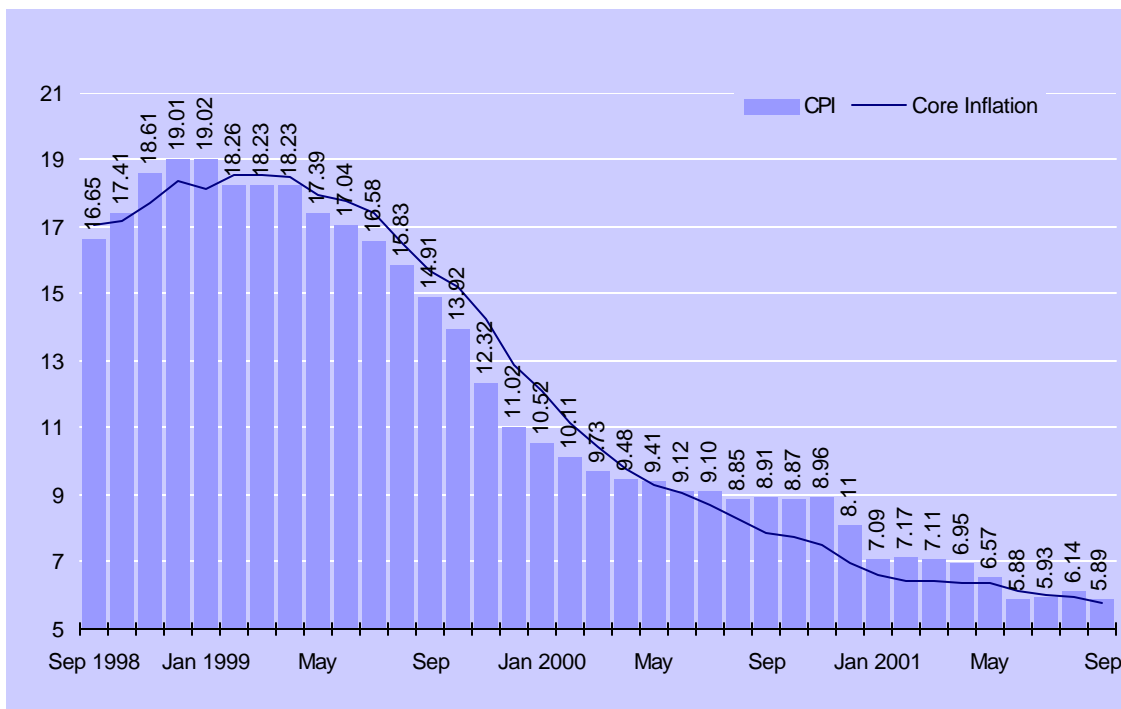
### II.1.1. Consumer Price Index and Core Price Index

At the end of the third quarter of 2001, annual CPI inflation was 6.14 percent, 0.43 percentage points below the figure for the previous quarter. Nevertheless, the decline of overall inflation during this period did not go uninterrupted. Although it decreased significantly in July, this was partially reversed in August and September (Chart 1).

Chart 1

#### Consumer Price Index and Core Price Index

Annual percentage change



In contrast to the above, annual core inflation fell continuously during the quarter. Thus, at the end of September 2001, the annual growth rate of the core price index was 5.93 percent, while it had been 6.36 percent in June (Chart 1). Although annual core inflation was below overall inflation at the close of the quarter, in the first two months of the period in question the opposite was observed as a result of fluctuations in the annual growth rate of the CPI. The latter reflected the volatility of prices

for goods and services excluded from core inflation calculations. During the period covered by this Report, the annual inflation of the price sub-index for goods and services provided or regulated by the public sector fell 3.81 percentage points, while the annual inflation of the price sub-index for agricultural and livestock products rose 4.28 percentage points (Table 1). Therefore in a more stable environment, pronounced variations in the prices of certain goods and services have a more significant impact on the average represented by the CPI. The aforementioned corroborates the fact that core inflation, which excludes the most volatile prices from its calculations, is a more reliable indicator of medium-term price growth trends.

**Table 1 Price Indexes: CPI, Core Prices, Agricultural and Livestock Products, Education, and Goods and Services Provided or Regulated by the Public Sector**

Percentage Change

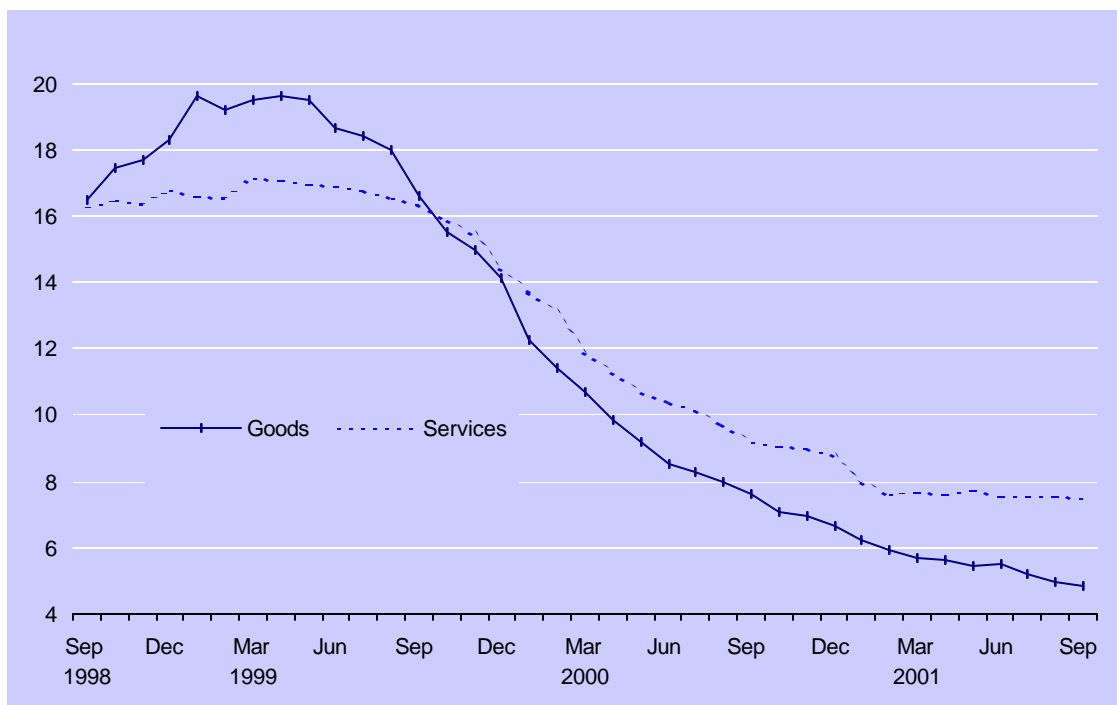
	Annual Changes			Quarterly Changes		
	Sep 2001/	Jun 2001/	Sep 2000/	Sep 2001/	Jun 2001/	Sep 2000/
	Sep 2000	Jun 2000	Sep 1999	Jun 2001	Mar 2001	Jun 2000
CPI	6.14	6.57	8.85	1.27	0.97	1.68
Core Inflation	5.93	6.36	8.26	0.73	1.28	1.14
Goods	4.85	5.52	7.64	0.31	1.03	0.95
Services	7.52	7.58	9.19	1.35	1.63	1.41
Agricultural and Livestock Products	6.63	2.35	5.42	4.99	2.96	0.77
Education	14.06	14.49	15.08	11.78	0.59	12.20
Goods and Services Provided or Regulated by the Public Sector	5.06	8.87	12.41	-1.07	-1.27	2.51

In this quarter, annual core inflation for goods performed differently than that for services. The first of these two indicators fell at a faster rate than it had done during the previous quarter, reaching a level of 4.85 percent at the end of September compared with 5.52 percent at the end of June. In contrast, annual core inflation for services remained practically unchanged at 7.52 percent at the end of September, slightly below the level of 7.58 percent observed in June (Chart 2).

The progress made in the reduction of core inflation for goods during 2001 is mainly the result of exchange rate stability. On the other hand, the downward rigidity of core inflation for services is attributable to the fact that real wage rises have exceeded productivity gains. The latter has led to higher unit labor

costs that in turn have had a greater impact on the prices for services<sup>1</sup>.

**Chart 2** **Core Price Indexes for Goods and Services**  
Annual percentage change



### II.1.2. Monthly Inflation of the Consumer Price Index and Core Price Index

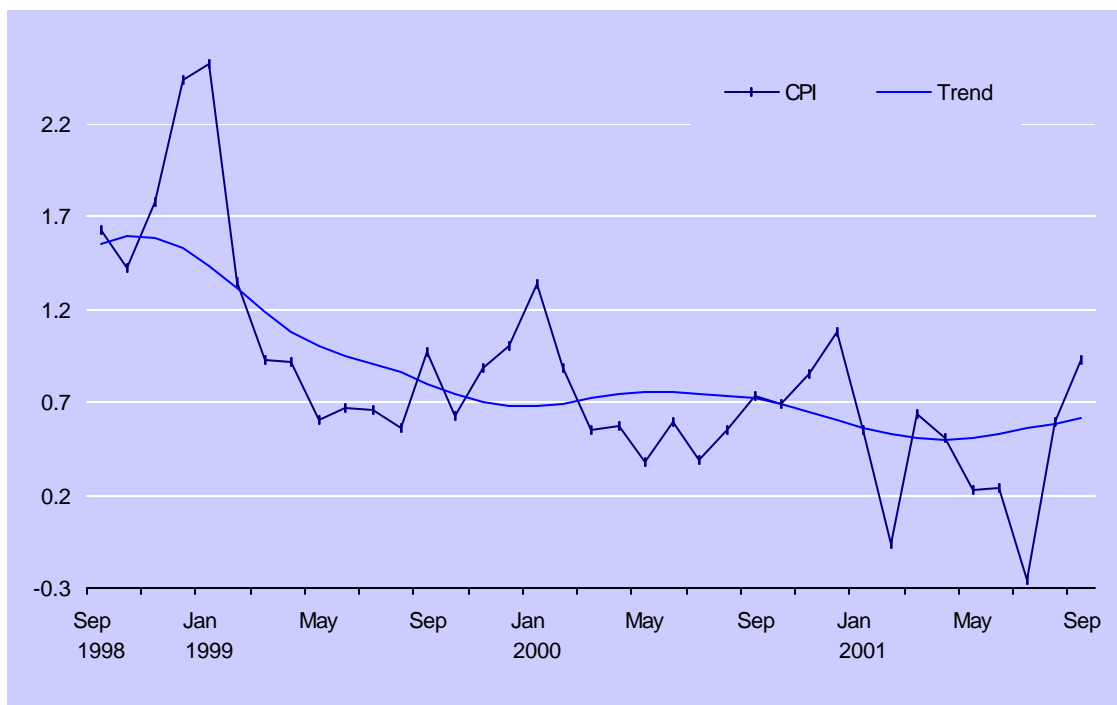
In July, monthly inflation was negative, experiencing the most pronounced fall in one month since CPI calculations began in 1968<sup>2</sup>. The aforementioned can be explained by two factors: i) the monthly disinflation experienced by the prices of goods, and ii) the 1.5 percentage point reduction shown by the price sub-index for goods and services provided or regulated by the public sector as a result of a 13.1 percent fall in the price of domestic gas. In August and September, monthly inflation as measured by the CPI rebounded, both as a consequence of the high increases in prices for agricultural and livestock products and the increase in tuition at the start of the school year. The effect of these increases and the

<sup>1</sup> Diverse studies carried out by Banco de México indicate that wages are more important in determining core inflation for services than for goods. An example of this can be found in the following publication: "Price Level Determinants and Dynamic Inflation in Mexico", Daniel Garcés, Banco de México Research Document No. 9907.

<sup>2</sup> Before 1968 inflation calculations were based on the Mexico City Wholesale Price Index.

stability of core inflation caused the statistical trend measure<sup>3</sup> to rise (Chart 3).

**Chart 3**  
**Consumer Price Index**  
Monthly percentage change



Private sector analysts' projections for CPI inflation at the start of the third quarter of 2001 were higher than the obtained result. This was a consequence of a considerable overestimation of inflation for July and an underestimation for August and September (Table 2). It is worth mentioning that these forecasting errors were, to a great extent, brought about by the volatility of prices for goods and services excluded from core inflation calculations. Another less relevant factor was a core inflation forecast error.

<sup>3</sup> As calculated by the X12 ARIMA statistical process. This method softens the original series by using moving averages.

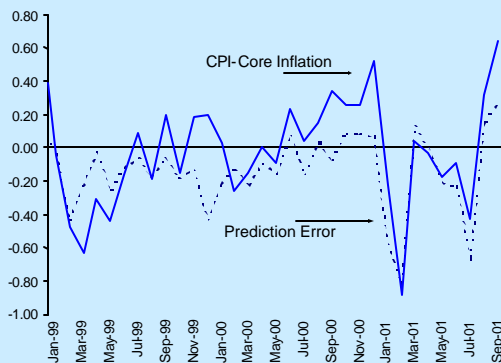
### Revisions to the Private Sector's Forecasts for Inflation

Medium term inflation forecasts have recently been characterized by drastic revisions in response to unexpected movements in the monthly inflation of the CPI. Sudden adjustments generate uncertainty, which in turn has negative repercussions on interest rates, wage negotiations and, in general, on all fixed-term price contracts (for example, school fees, housing rent, etc). Expectations have probably overreacted to unexpected movements in overall inflation caused by the volatility of the price sub-indexes that are excluded from core inflation calculations.

The forecast for monthly CPI inflation used in this analysis is the average of the predictions Banco de México collects from a number of private sector economic specialists. This is published every month in the Survey of the Expectations of Private Sector Economic Specialists. The difference between observed monthly CPI inflation and the forecast made the previous month is defined as the prediction error. Thus the prediction error in September is calculated as the spread between the monthly inflation registered in that month and August's inflation expectations for September.

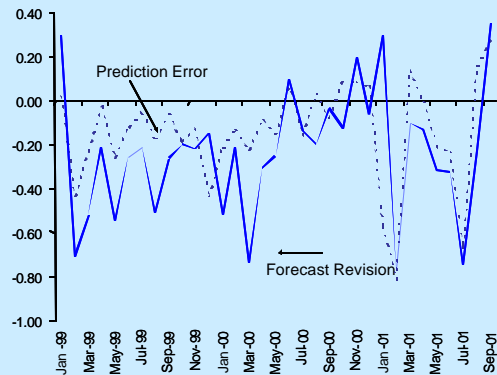
The prediction error for monthly CPI inflation is closely related to variations in the prices of goods and services that are excluded from core inflation calculations (Chart 1). This is due to the fact that, the prices of this excluded group of goods and services are by definition the most volatile. As a consequence, it is difficult to predict their evolution.

CHART 1  
PREDICTION ERROR AND THE DIFFERENCE BETWEEN MONTHLY CPI AND CORE INFLATION ANNUAL PERCENTAGE



Errors in forecasts for monthly CPI inflation have led to significant and more than proportional changes in accumulated inflation expectations at the end of the year (Chart 2). According to Banco de México's estimates, a prediction error for monthly CPI inflation of 1 percentage point causes a revision of forecasts for inflation at the end of the year of up to 1.25 percentage points.

CHART 2  
PREDICTION ERROR AND CPI INFLATION FORECAST REVISIONS FOR THE END OF THE YEAR ANNUAL PERCENTAGE



The considerable modifications that have been registered in forecasts for overall inflation expectations at year-end are probably the result of two causes: the unexpected disturbances (positive or negative) affecting the price sub-indexes excluded from core inflation calculations are considered permanent, as well as reoccurring. Notwithstanding, evidence indicates that extreme variations in the price sub-indexes for agricultural and livestock products and for goods and services provided or regulated by the public sector tend to be partially reversed in the medium term.

In short, forecasts for overall inflation in the medium term have overreacted to disturbances in the price sub-indexes that are excluded from core inflation calculations. This practice can be expected to be phased out as a better understanding of the price formation process in the context of low inflation is acquired. This should reduce the pernicious effects produced by sudden changes in inflation expectations. The latter emphasizes the importance of the core prices sub-index as an indicator for the growth trend of prices in the medium term.



**Table 2** **Expected and Observed Monthly Inflation**

Percentage

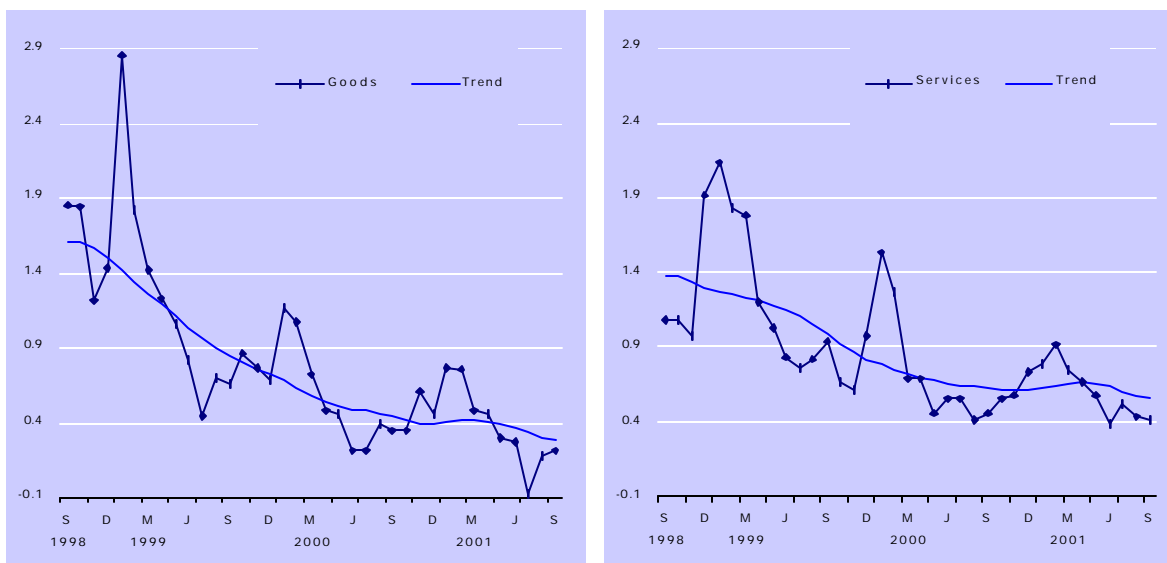
	2001		2000	
	Observed	Expected 1/	Observed	Expected 1/
July	-0.26	0.41	0.39	0.55
August	0.59	0.48	0.55	0.54
September	0.93	0.78	0.73	0.83

1/ Inflation expected in June, according to the Survey of the Expectations of Private Sector Economic Specialists carried out by Banco de México.

Neither the trend series for the monthly core inflation of services nor the annual inflation of this sub-index registered important changes during the period under analysis (Chart 4). In contrast, the decline in the trend series for the monthly inflation of goods became more pronounced. It is worth pointing out that this result was to a great extent influenced by the unusual fall of core inflation for goods in July.

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

Monthly percentage change



### II.1.3. Producer Price Index

As in the case of the CPI, annual Producer Price Index (PPI) inflation also underwent fluctuations in the third quarter of 2001, rising slightly at the end of the period. In September, the

annual increase of the PPI excluding crude oil and services was 4.67 percent, whilst in June it had been 4.46 percent. The greatest decrease during the quarter was in July, the month in which the domestic demand component of the PPI experienced a downturn, reflecting the substantial reduction in the price of liquid gas. This advance was reversed in August and September mainly as a result of the depreciation of the exchange rate, although during the latter month the increase in liquid gas prices also weighed heavily. Movements in the exchange rate have an important impact on the prices of goods that make up this index, due to the fact that they are usually traded internationally.

Statistical evidence suggests that changes in the domestic demand sub-index of the PPI excluding oil and services precede those in the core sub-index for goods. Thus, the recent evolution of this indicator is a warning of the unfavorable influence that the core sub-index for goods could have on the disinflation process.

#### **II.1.4. Transitory Factors that Affected Inflation**

The monthly rate of increase of the education prices' sub-index in September 2001 was 10.46 percent. This was a reflection of increases in tuition that occur at the start of each school year<sup>4</sup>. This figure represents a 10.55 percent rise compared with the same month last year. As a result, at the end of the quarter covered by this Report, the annual rate of increase of the education prices sub-index was 14.06 percent. This means that there was no significant reduction in this sub-index with regard to the preceding quarter, unlike in the third quarter of the previous year (Chart 5).

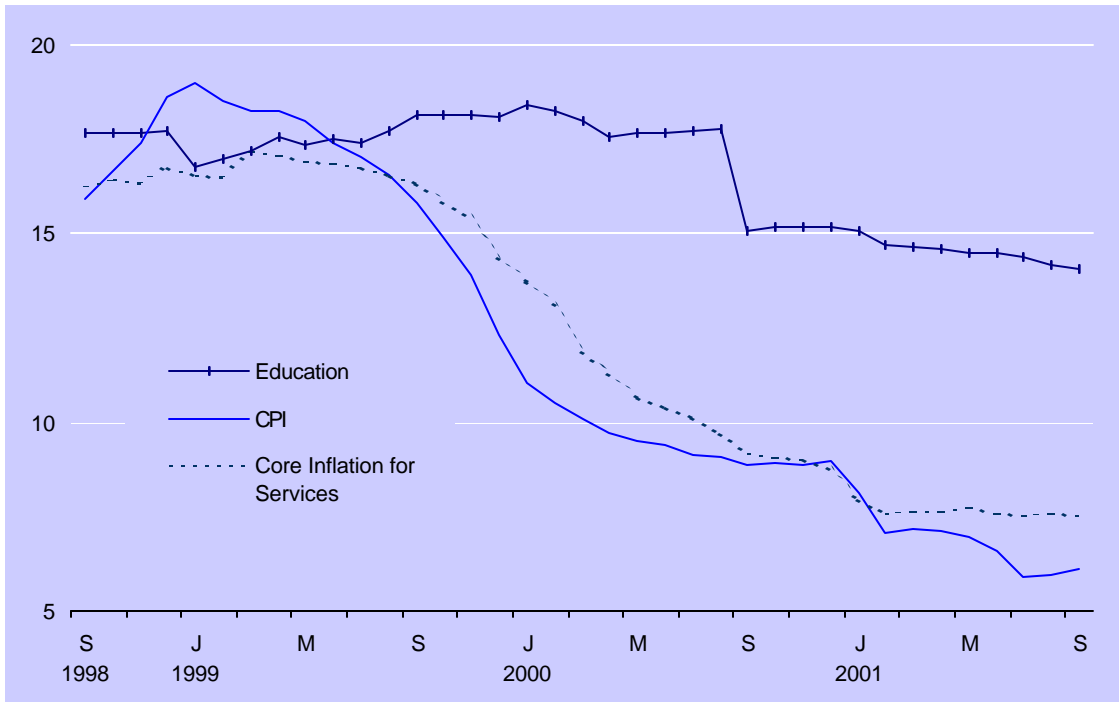
Due to the fact that education is a non-tradable good, tuition would be expected to have responded to the evolution of inflation expectations and wages. Thus, the downward rigidity shown by the annual rate of increase in tuition, despite the continual downward adjustments of inflation expectations, is further evidence of the adverse effect that high wage rises have had on inflation. This effect has been more pronounced in the education sector than in the rest of the economy, which can be clearly seen by making a comparison between the evolution of the education prices sub-index and the core index for services and by taking into account the fact that upward revisions of prices in the education

---

<sup>4</sup> The education sub-index is highly seasonal. Its most pronounced level occurs in September (there is usually a small increase in August due to the start of classes in some high schools and universities). The increases in tuition which had the greatest effect on inflation during the quarter were those for primary and secondary schools. In contrast, increases in fees for "short" degree courses and for languages were more moderate.

sector have been higher than those observed for the rest of the service sector.

**Chart 5 Education Prices Sub-index and the CPI**  
Annual percentage change



In the July-September period, the agricultural and livestock products price sub-index posted an accumulated increase of 4.99 percent, its highest during the year. The products whose prices went up the most during the quarter were as follows: oranges (60.99 percent), beans (19.35 percent) and tomatoes (15.52 percent).

**Determinants of the Education Prices Sub-Index's Inflation**

During the last five years tuition has increased by a higher proportion than most other prices in the economy. From September 1997 to September 2001, school fees rose 17.6 percentage points more than the CPI. Moreover, in the same period, tuition rose 14.9 percentage points more than the prices sub-index for services. Some of the possible reasons for this will be analyzed in this box.

As a result of the 1995 crisis, the relative price of education (education prices sub-index divided by the CPI) decreased. From September 1994 to September 1997 the aforementioned concept fell 22.7 percent. However, in September 1994 the relative price of tuition reached its highest level for the last twenty years, probably exceeding its long-term level of equilibrium, which means that it is not necessarily a good reference. At present, the relative price of education is close to its historical maximum (Chart 1).

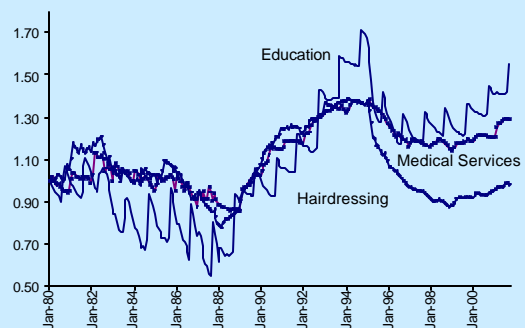
In view of the fact that education is a non-tradable good, tuition should primarily respond to inflation expectations and wages. Due to the fact that inflation expectations have diminished, the rigidity in the inflation of school fees should be mainly attributable to rises in education workers' real wages. On the other hand, vigorous aggregate demand until the start of the present year probably translated into pressures on the demand for education services. The subsequent weakening of aggregate demand was not, however, reflected by a reduction in the relative price of these services. The reason for this is that decisions about increases in tuition are usually taken months before the classes start, which is when the increases come into effect.

The strength shown by aggregate demand up until the start of 2001 and the continual rises in unit labor costs have led to increases in the relative prices of most services. However, this has been more pronounced in the case of education and the annual growth rate of the prices sub-index for education has surpassed the core prices sub-index for services over the last five years. This could be a result of various factors, among which the following are noteworthy:

1. The services that a consumer receives use both tradable and non-tradable inputs. For example, the services offered by restaurants require food (tradable) which then needs preparation and presentation (non-tradable). Thus, it is possible that in education there are more non-tradable inputs than in other types of services. This implies that increases in unit labor costs have a greater impact on operating costs in a school than in other service providers

2. The real increases that a company decides for its prices depend to a great extent on the level of competition it faces. A company with high market power has a greater ability to modify its prices in response to changes in aggregate demand or unit costs than a company with low power. It is likely that schools have greater market power than other companies that provide services due to the fact that it is very expensive for a student to move from one school to another. Thus, in the last twenty years the relative price of education has undergone more pronounced reductions and increases than the relative prices of medical services (whose market power is probably less than that of schools) and hairdressing (that has low market power) (Chart 1);

**CHART 1  
RELATIVE PRICES OF EDUCATION,  
MEDICAL SERVICES AND HAIRDRESSING  
January 1980=1**



3. The extended strike in UNAM that occurred between 1999 and 2000 could have caused pressure on the demand for middle and higher education. However, as was shown in the Inflation Report for July-September of 2000, even

if this had an upward impact on tuition, it does not explain price increases similar to those of the universities in lower grade education. It is worth mentioning that real tuition increases in short degree courses and languages have been significantly lower than in the rest of the education sector (Table 1).

TABLE 1  
RELATIVE PRICE OF THE EDUCATION PRICES SUB-INDEX'S  
COMPONENTS  
September 1988=1

	Education	Kinder Garten	Primary	Secondary	UpperSec.	University	Short Degree
Sep / 1988	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sep / 1990	1.18	1.16	1.13	1.19	1.16	1.23	1.25
Sep / 1992	1.52	1.50	1.49	1.56	1.54	1.67	1.44
Sep / 1994	1.82	1.89	1.89	1.93	1.79	1.88	1.56
Sep / 1995	1.51	1.60	1.59	1.60	1.49	1.58	1.26
Sep / 1996	1.40	1.49	1.50	1.48	1.40	1.55	1.07
Sep / 1997	1.41	1.48	1.51	1.48	1.41	1.61	1.04
Sep / 1998	1.43	1.51	1.56	1.53	1.41	1.64	1.01
Sep / 1999	1.46	1.56	1.61	1.57	1.44	1.65	1.02
Sep / 2000	1.54	1.65	1.72	1.67	1.53	1.77	1.03
Sep / 2001	1.65	1.78	1.85	1.80	1.66	1.88	1.10

In short, the real increases in school fees are mainly attributable to rises in unit labor costs and the strength of

aggregate demand up to the first quarter of 2001. Both these factors could have had a greater impact on education prices than on those of other services due to the high inputs of non-tradable goods incorporated in education and the greater market power of schools compared with the majority of other firms in the service sector.

At present, the relative price of education is very close to its highest level for the last twenty years and aggregate demand has been weakening since the second quarter of this year. It can therefore be expected that in 2002, increases in tuition will ease off substantially. If this doesn't happen it will become evident that the market power of schools represents an obstacle to the convergence of education inflation and overall inflation.

## II.2. Main Determinants of Inflation

The main factors that influence the behavior of inflation in Mexico will be analyzed in this section. Firstly, the evolution of the international environment will be examined due to its effects on Mexico's external accounts that in turn influence the determination of the exchange rate, output, aggregate demand and prices. Secondly, the behavior of wages and productivity will be examined. These are direct determinants of unit labor costs, which have had significant influence on the inflation process. Thirdly, the evolution of aggregate supply and demand will be described. The analysis of these variables allows inflationary pressures derived from excesses of aggregate demand to be identified. The latter variables also affect the behavior of the current account, which will be studied separately together with the performance of the items that make up the capital account. Finally, the behavior of prices provided or regulated by the public sector will be examined. As will be explained in the text, these prices have a direct and extremely important impact on CPI inflation.

### II.2.1. International Environment

The slowdown of the United States' economy and the terrorist attacks of September 11<sup>th</sup> dominated the Mexican economy's external environment during the period. Economic

activity in the rest of the world's economies was weak and had led to a reduction of forecasted world growth even before those events (Table 3), a trend that subsequently intensified. During the second and third quarters of 2001, growth of the world economy was practically non-existent, with a high degree of synchronization of the global economic cycle. These two circumstances had not coincided for the last thirty years. In virtue of the rarity of this situation, the present prospective analysis of the world economy is very uncertain.

**Table 3****Gross Domestic Product Growth Forecasted by the IMF**

Percentage change

	May		October	
	2001	2002	2001	2002
World	3.2	3.9	2.6	3.5
Advanced Economies	1.9	2.7	1.3	2.1
USA	1.5	2.5	1.3	2.2
Japan	0.6	1.5	-0.5	0.2
Germany	1.9	2.6	0.8	1.8
France	2.6	2.6	2.0	2.1
Italy	2.0	2.5	1.8	2.0
United Kingdom	2.6	2.8	2.0	2.4
Canada	2.3	2.4	2.0	2.2
Other	3.0	3.8	1.9	3.3
European Union	2.4	2.8	1.8	2.2
Asian NICs	3.8	5.5	1.0	4.3
Latin America	3.7	4.4	1.7	3.6

SOURCE: International Monetary Fund, World Economic Outlook, May 1<sup>o</sup> and October 1<sup>o</sup> 2001. These forecasts do not include the effect of the terrorist attacks on September 11<sup>th</sup>.

Despite the negative shock suffered by the world economy in September, no major fluctuations were observed in Mexico's financial variables. Nonetheless, country risk perceptions deteriorated, the exchange rate depreciated and interest rates increased towards the end of the quarter. Finally, during the quarter, the price of Mexico's crude oil export mix remained above the level anticipated at the beginning of the period. However, at the end of September this price fell substantially, reaching its lowest levels for the year.

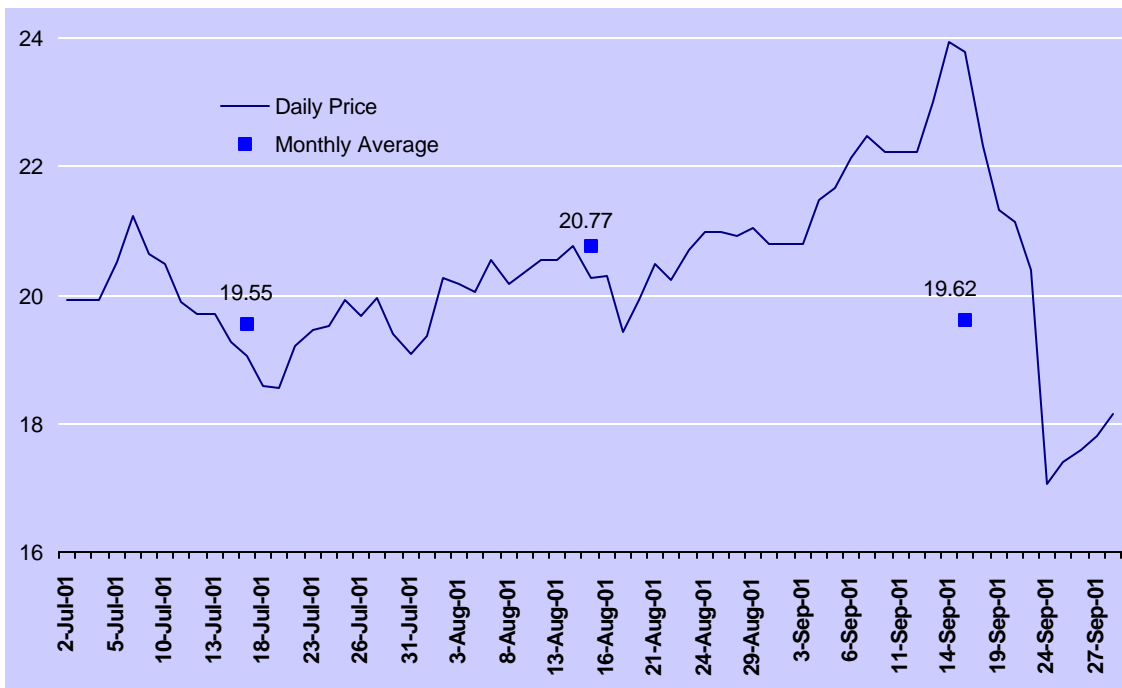
**II.2.1.1. Oil Prices**

In the third quarter of 2001, the average international price of oil<sup>5</sup> was 26.7 dollars per barrel, 1.3 dollars lower than in the April-June period. Although the global slowdown continued to

<sup>5</sup> The international oil price referred to is the West Texas Intermediate (WTI).

push this price downwards, intensified hostilities between Israel and Palestine together with the OPEC members' decision to cut production contributed to the subsequent recovery that took place during July and August. As a consequence of the nervousness associated with the terrorist attacks on September 11<sup>th</sup>, international oil prices became more volatile towards the end of September. This was due to the high degree of prevailing uncertainty regarding conditions affecting both the supply and demand of crude oil. On the supply side, the likelihood of a widening military conflict put upward pressures on prices. On the demand side, the downward revisions in forecasts for world economic growth and the fall in demand for fuel by airlines caused downward pressure. The diplomatic strategy adopted by the United States' government in response to the attacks and the absence of an immediate military reaction led the main analysts to expect that if an extremely localized armed conflict were to occur it would not generate significant interruptions to the world's oil supply. Thus, after the price escalation that occurred during the first few days following the attacks, the dominant influence has been demand and the price has temporarily stabilized at lower levels than those prevailing before this tragic event.

**Chart 6** Price of Mexico's Crude Oil Export Mix in 2001  
Dollars per barrel



SOURCE: Pemex

In the July-September quarter of 2001, the average price of Mexico's crude oil export mix was 19.98 dollars per barrel, slightly above its level of 19.84 dollars registered in the previous quarter. The price of the Mexican mix during the period was higher than the price implicit in the corresponding futures prices at the beginning of the quarter. Although this pattern has been repeated in all of the last three quarters, during September this price reflected the volatility of international prices, falling almost six dollars in the last two weeks of the month. Likewise, the spread between the Mexican mix and the WTI remained at an interval between 5 and 6 dollars per barrel.

### **II.2.1.2. Developments in the United States' Economy**

The annual growth rate of the United States' economy during the second quarter of 2001 was 0.3 percent, its lowest quarterly growth for the last eight years<sup>6</sup>. The downturn of economic activity began in the July-September quarter and worsened due to the negative impact on confidence of the terrorist attacks on September 11<sup>th</sup>. Despite the fact that this event increased the likelihood that the US economy would enter a recession in the short-term, the immediate economic policy response has generated expectations of a recovery in the second quarter of 2002.

When analyzing the evolution of the United States' economy during the July-September period, the situation prior to the terrorist attacks must first be studied in order to be able to assess the repercussions of these events. Thus, from July to the beginning of September the incipient improvement in the industrial sector was not enough to prevent the yearlong weakening suffered from being translated into a rise in the unemployment rate. Although consumer spending was sustained during July and August, the accumulated fall in employment and the persistent deterioration of the stock market were added to the weakness that the industrial sector has experienced over the last 12 months, adversely effecting consumer confidence. Due to the fact that, up until that moment, private consumption had been the motor that had prevented the economy from slipping into recession, the likelihood of a further decrease in the growth of this component of spending made it clear that the weakness of economic activity would continue in the following months. The above diagnosis was based on the following information:

---

<sup>6</sup> This figure refers to the annualized quarterly growth rate.



- (a) The National Association of Purchasing Managers Index (NAPM), a leading indicator of industrial production, on average maintained a level of 46.2 points during the third quarter of the year. The fact that this index was below 50 points is indicative of a contraction in the manufacturing sector;
- (b) The fall in orders for durable goods stabilized. During July and August these decreased by 0.5 percent, on average, after having fallen 1.8 percent during the April-June quarter;
- (c) An increase in the unemployment rate from 4.5 percent in July to 4.9 percent in September;
- (d) A deterioration of property market indicators. During September, the Housing Market Index fell to 56 points, its lowest level since January this year; and
- (e) Falls in the leading indicators of private consumption. At the start of September, a deterioration was observed in both department store sales and in the Consumer Confidence Index calculated by the University of Michigan. On September 11<sup>th</sup> the Redbook Index for retail sales registered a decline of 0.9% vis-à-vis the figure reported in the previous week. The Consumer Confidence Index, which had remained at between 88 and 93 points during the previous quarter registered an 8-point fall in the first two weeks of September.

It can be ascertained from the above that the terrorist attacks occurred in a context wherein the prospects of a recovery of the United States' economy were clearly already deteriorating. Although it is still too early to make a reliable assessment of the impact of these events, it is likely that the main repercussions will be transmitted through the following channels:

- (a) The immediate impact of the partial paralyzation following the attacks and the negative shocks in specific sectors such as aeronautics, insurance, tourism and entertainment;
- (b) The most important medium-term consequence will be in the downward adjustment of consumer spending, an item that had sustained activity during the last few quarters;

- (c) The contraction of corporate profits and increased risk aversion could lead to a reduction in investment spending; and
- (d) Easier monetary policy and fiscal expansion could cause significant increases in GDP towards the second quarter of 2002.

The aforementioned events sharpened the fall in stock market prices that had been occurring since May this year. The Dow Jones index fell 7.9 percent between September 10<sup>th</sup> and 28<sup>th</sup>, while the accumulated decrease from May 1<sup>st</sup> to the end of September was 18.8 percent. As a consequence of this and the layoffs announced by the most hard hit companies during the last week of September, the University of Michigan Consumer Confidence Index declined 10 points, ending September at 81.8. Unemployment claims began to rise once again, reaching 535,000 in the week of September 29<sup>th</sup> and its four-week moving average was the highest since December 1991. As a result, both the deterioration of wealth and the negative impact on confidence have increased the likelihood of another downward adjustment of consumption growth.

Although, at the time of publishing this Report, there are few figures available that already include the effects of the events occurred on September 11<sup>th</sup>, forecasts for the growth of the United States' economy show a downward trend. On average, analysts' opinion is that the growth of the US economy will be -1.1 percent in the third quarter of 2001 and 0.9 percent for the year as a whole (Table 4). It is important to note that due to current circumstances, these predictions are subject to an unusually high degree of uncertainty.

**Table 4 Forecasts for the Growth of the United States' Economy in 2001**

Percentage change

	Prior to September 11th			After September 11th		
	III 01	IV 01	2001	III 01	IV 01	2001
Consensus Forecast	1.6	2.8	1.6	-0.5	-0.8	1.0
Deutsche Bank	1.5	2.5	1.6	-0.9	-2.6	1.0
Goldman Sachs	1.0	2.5	1.5	-0.5	-2.5	1.0
JP Morgan	0.0	1.5	1.3	-2.5	-1.5	0.8

Faced with the economic slowdown, the Federal Reserve in its meeting on August 21<sup>st</sup> announced a 25-basis points cut in its federal funds rate. Since the terrorist attacks the aforementioned central bank together with the world's other main central banks

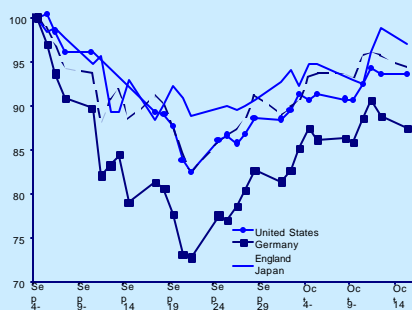
injected a considerable amount of liquidity into the markets. Loans that were authorized through the discount window

**The International Markets' Reaction to the Terrorist Attacks in the United States**

The terrorist attacks on September 11<sup>th</sup> exacerbated the adverse performance of the international financial markets that had begun in the second quarter of 2001. In turn this caused a fall in the stock markets of both developed and emerging economies. However, towards the end of the same month this fall was reversed and the losses suffered were, in most cases, completely recovered. Thus, although the stock markets of the United States, Germany, England and Japan had decreased 7.9, 7.8, 2.6 and 4.1 percent, respectively, between September 10<sup>th</sup> and 28<sup>th</sup>, on October 15<sup>th</sup> the fall totalled only 2.7 and 2.6 percent in the United States and Germany, while in England and Japan increases of 0.7 and 2.5 percent were observed (Chart 1).

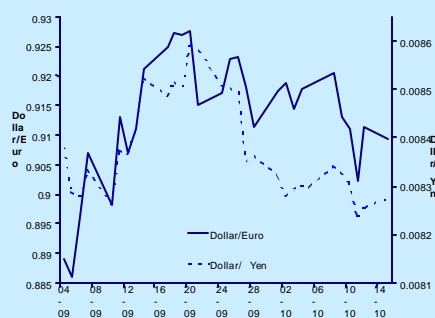
The uncertainty that took hold of the international capital markets was also seen in the rise of international oil prices, which only lasted a few days. Towards the end of September this increase was reversed and there was even a substantial drop in oil prices compared to levels before the events of September 11<sup>th</sup> (Chart 3). The fall in international oil prices is mainly explained by the deterioration of expectations for the growth of the world economy. Prices for raw materials experienced a similar evolution and the increases observed after the terrorist attacks were reversed towards the middle of October.

**Chart 1**  
Stock Markets of Industrialized Countries  
September 4<sup>th</sup> 2001 = 100

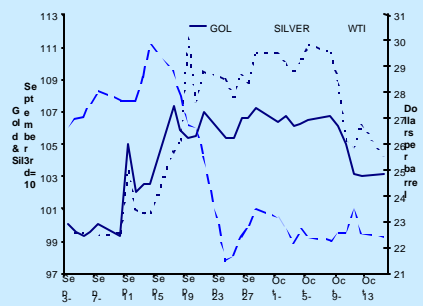


Meanwhile, the terrorist attacks caused the dollar to depreciate vis-à-vis the Euro and the Yen. This depreciation proved to be transitory and by October 15<sup>th</sup> the dollar had recovered its level prior to the terrorist attacks (Chart 2).

**Chart 2**  
Exchange Rate of the Euro and the Yen



**Chart 3**  
Oil and Commodity Prices



The most important reason for the above behavior is the rapid economic policy reaction in developed countries. Faced with the uncertainty that emerged after the attacks, the main central banks substantially reduced their reference interest rates.

**Table 1**  
Reference Interest Rates  
Annual Percentage

	US Federal Reserve	Bank of Canada	European Central Bank	Swiss National Bank
<b>14-Sep-01</b>	3.50	4.00	4.25	5.125
<b>17-Sep-01</b>	3.00	3.50	3.75	5.000
<b>02-Oct-01</b>	2.50	3.50	3.75	4.250

The monetary policy actions of the United States Federal Reserve were accompanied by an emergency fiscal program and Congress approved an additional financial package of around 70 billion dollars. Although details of this package have still not been completely defined, it is evident that it will be directed towards stimulating a faster recovery for the United States' economy. This can be expected to have favourable repercussions on the rest of the world's economies.

were accompanied by an extraordinary provision of resources via open market operations and credit lines to other central banks in order to supply liquidity in dollars to foreign banks. In addition to

the foregoing, minutes before the stock market reopened on September 17<sup>th</sup>, the Federal Reserve, out of the pre-established schedule for Open Market Committee meetings<sup>7</sup>, decided on an extra 50 basis points cut in its federal funds rate. This measure was also accompanied by interest rate reductions in the most important developed economies.

The above monetary policy reaction was complemented in the United States by a fiscal program focused on financing emergency expenditure, such as the substantial increase in defense spending. During the weeks following the terrorist attacks a 40 billion dollar emergency expenditure package was approved as well as 5 billion dollars to support the airline companies<sup>8</sup>. Besides this, the United States' Congress is currently discussing a proposal that includes public expenditure increases and further tax reductions<sup>9</sup>.

In the United States, both the fiscal and monetary policy reaction to the crisis was immediate. Even so, given the preceding deceleration it is likely that these stimuli will be insufficient to compensate for the recessive, short-term effects of their causal factors. Notwithstanding, the monetary policy measures adopted favor a stronger reactivation towards the second quarter of 2002, which will be more vigorous than had been forecast prior to the terrorist attacks.

### **II.2.1.3. Developments in the Rest of the World's Economies**

As in the United States, the economic activity of countries in the Euro zone decelerated during the second quarter, registering a growth of only 0.1 percent. The impact of the global slowdown on Europe's economies caused a reduction in both growth expectations and inflation pressures. For this reason the European Central Bank (ECB) cut its interest reference rate by 25 basis points for the second time in the year. This adjustment was followed by an additional 50-point cut during the third week of September in response to the events on the 11<sup>th</sup> of that month. The loosening of monetary policy implemented in Great Britain during the first quarter of the year meant its economy felt the effects of the global slowdown to a lesser extent. Nevertheless, the lower growth

---

<sup>7</sup> A further 50 basis points cut in its federal funds rate was agreed in the Open Market Committee meeting on October 2<sup>nd</sup>.

<sup>8</sup> Support for the airlines also included 10 billion dollars in guarantees authorized by the Government.

<sup>9</sup> Analysts estimate that the reconstruction and reactivation package amounts to around 1 to 1.5 percent of GDP.

rate in the European Monetary Union, its main trading partner, contributed to a significant deterioration in the performance of its manufacturing industry in the third quarter.

In Japan, the unfavorable evolution of the industrial sector was accompanied by a decline in consumption growth during the first quarter of the year. As a result, and in view of the Japanese government's plans for structural reform and fiscal consolidations, analysts revised their predictions for this country's economic growth in 2001 to around -0.5 percent. In Asia's emerging economies, the decline of technology intensive export growth continued to reflect the slowdown of the United States' economy. Towards the end of the quarter, the time frame for an eventual recovery of the region's economies was lengthened as a result of a new downward revision to forecasts for the growth of the United States' economy.

In Latin America, rising uncertainty in Argentina and the slowdown of the United States' economy had a negative impact on exports and capital flows to some countries in the area. Thus, as in the previous quarter, private sector analysts' forecasts for growth in the region in 2001 were reduced from 2.6 percent in June to 1.2 percent in September.

At the beginning of July, uncertainty in Argentina increased due to the significant fall in tax revenue during the second quarter. In that month, the net yield from Argentine bonds rose approximately 600 basis points. Even after the "zero deficit" program was passed by congress, country risk indicators continued to be highly volatile. In the penultimate week of the month, the International Monetary Fund approved a widening of the original agreement made with the Argentinean Government last December<sup>10</sup>. This caused a considerable improvement in country risk perceptions accompanied by a fall in domestic interest rates. In the second quarter GDP grew -0.5 percent, not as unfavorable as had been expected, while during July indicators for the construction industry improved. Nevertheless, surveys on industrial activity carried out in August showed a contraction in the sector that induced a downward correction to expected growth for the year, currently forecast at -1.8 percent. Likewise, the 14 percent fall in tax revenue in September and the proximity of parliamentary elections severely affected market perceptions regarding the viability of the Argentinean program.

---

<sup>10</sup> An additional 8 billion dollars was approved, which means a total of 22 billion dollars of expenditure over the next few years.

### Recent Developments in Selected Indicators in Some Latin American Countries

The terrorist attacks on September 11<sup>th</sup> caused increased risk aversion and meant resources were reassigned to safer financial assets, such as United States' treasury bonds. This translated into an increase in corporate bonds' spread in that country (Table 1). Aaa and Baa graded bonds' spread registered increases of 23 and 27 basis points, respectively, compared to the week preceding that of September 10<sup>th</sup> to 14<sup>th</sup>. As a result, at the end of that month Aaa and Baa bonds' spread had risen 53 and 56 basis points, respectively.

**Table 1**  
Interest Rates On Corporate Bonds In The United States\*  
(weekly average, basis points)

	Aaa Bonds	Baa Bonds
September 3 to 7	208	290
September 10 to 14	231	317
September 17 to 21	264	350
September 24 to 28	261	346
October 2 to 5	254	342

\*weekly averages for United States' corporate bonds' spread over 10 year Treasury Bonds. Source: United States' Federal Reserve

The above phenomenon caused volatility in the financial variables of most Latin American economies and lead the financial assets of those countries to lose value. After the attacks, in the second week of September, there was a deterioration of country risk perceptions for all countries in the area. The EMBI Global's spread widened 126 basis points for Argentina and 85 basis points for Brazil (Table 2). In contrast with this, the spread for Chile and Mexico increased by less than 13 and 35 basis points, respectively. At the end of the month the EMBI Global's spread widened for Argentina, Brazil, Chile and Mexico by 183, 230, 33 and 90 basis points, respectively, in relation to levels observed at the start of the period.

**Table 2**  
EMBI Spread\*  
(weekly average, basis points)

	Argentina	Brazil	Chile	Mexico
September 3 to 7	1442	940	197	343
September 10 to 14	1569	1025	211	377
September 17 to 21	1620	1094	229	401
September 24 to 28	1626	1170	230	433
October 2 to 5	1776	1216	230	434
October 8 to 12	1862	1191	234	404

\*weekly averages of EMBI Global's spread to October 12<sup>th</sup>. The EMBI Global index of J.P. Morgan includes bonds issued by sovereign and quasi-sovereign debtors such as Brady, Eurobonds, commercial credits and locally issued instruments denominated in dollars. The difference from other price indices of bonds issued by other emerging economies is that it is calculated for a greater number of countries, although this includes less liquid instruments than those used in the calculations of indices. In particular, Chile's limited indebtedness in dollar terms means the prices of its bonds are not included in instruments that only incorporate highly liquid instruments.

In the second week of September, domestic interest rates in Argentina, Brazil and Mexico increased (42, 43 and 11 basis points, respectively). In Chile they declined 8 basis points and the interest rate in Chile accumulated a 53 basis point decline during the month. Meanwhile, in Argentina, Brazil and Mexico domestic interest rates rose (105, 258 and 75 basis points, respectively).

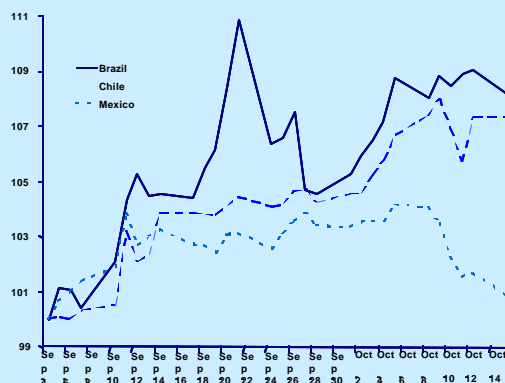
**Table 3**  
Short-Term Domestic Interest Rates\*  
(weekly average, basis points)

	Argentina	Brazil	Chile	Mexico
September 3 to 7	20.24	16.26	7.45	8.90
September 10 to 14	20.66	16.69	7.37	9.01
September 17 to 21	20.64	17.44	7.09	9.40
September 24 to 28	21.29	18.84	6.92	9.65
October 2 to 5	22.08	19.19	6.75	9.56
October 8 to 12	22.95	19.22	6.45	9.47

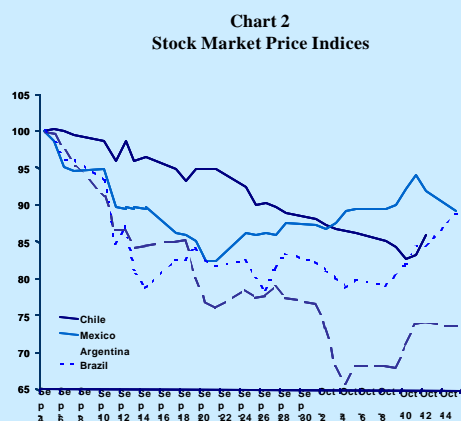
\* Weekly averages of interest rates in the secondary market.

In September, the exchange rate depreciated in Brazil, Chile and Mexico by 4.1, 3.4 and 4.3 percent, respectively (Chart 1). The rate increased in all three countries on September 11<sup>th</sup>. Subsequently, it remained stable in Mexico and later appreciated, while the Brazilian real fluctuated considerably during the period and the Chilean peso depreciated once again in the first few days of October.

**Chart 1**  
Exchange Rate Index  
(vis-à-vis the U.S. dollar)  
September 4<sup>th</sup> = 100



The stock markets of the countries mentioned above also performed adversely throughout September (Chart 2). After the terrorist attacks, the stock market indices of Argentina, Brazil, Chile and Mexico fell 6.8, 11.6, 3.8 and 9.2 percent, respectively (variation from September 10<sup>th</sup> to 17<sup>th</sup>). The results accumulated in the month for Argentina, Brazil, Chile and Mexico were -22.7, -16.7, -12.8 and -12.5 percent, respectively.



The Brazilian economy also felt the impact of the global slowdown. Although during the third quarter the effects of the electricity sector crisis were not as harmful as had been feared, the disappointing evolution of the United States' economy has led to continually weaker export growth. The foregoing, together with diminishing external capital inflows, in terms of both portfolio and foreign direct investment, continued to pressure foreign balances and the exchange rate. In the circumstances caused by the increased uncertainty in Argentina, the parity of the Brazilian currency rose by 15.5 percent during the quarter, reaching a level of 2.67 Reales per Dollar on September 28<sup>th</sup>. The possible repercussions of the depreciation of the Real on inflation led the Bank of Brazil to raise its interest reference rates for the fifth time during the year, to 19 percent. Thus, more restrictive fiscal and monetary policies have been added to the worsening outlook for the world economy and, as a result, expectations for the growth of the Brazilian economy this year have been revised downwards to around 1.4 percent.

## II.2.2. Compensations, Wages and Employment

Compensations, wages and employment are important factors that determine the future path of price growth. In the quarter covered by this Report, increases in compensations and real wages were not in line with the fall in inflation and in productivity. Given the current economic deceleration, these factors have contributed to a deterioration in labor market conditions.

### II.2.2.1. Compensations

According to information for July 2001, in the sectors for which data is available, nominal wages per worker increased at annual rates of between 6.5 and 13.5 percent. It is worth mentioning that so far in 2001, the nominal growth of compensations has exceeded 10 percent in three out of four sectors (the lowest increases have been registered in the commercial sector). The above translated into real increases in compensations per worker of over 4.9 percent in three of the referred to sectors during the January-July period (Table 5).

**Table 5** **Compensations per Worker**  
Annual percentage change

	Nominal								Real							
	2001							Average* Jan-Jul	2001							Average* Jan-Jul
	Jan	Feb	Mar	Apr	May	Jun	Jul		Jan	Feb	Mar	Apr	May	Jun	Jul	
Manufacturing Industry	15.8	12.2	12.3	10.5	12.9	13.3	13.5	12.9	7.1	4.8	4.8	3.2	5.5	6.3	7.2	5.5
In-Bond Industry	14.4	13.0	13.5	15.1	15.5	13.9	13.1	14.1	5.8	5.5	5.9	7.5	8.0	6.9	6.8	6.7
Construction Industry	15.3	21.0	15.6	17.3	19.1	N.A.	N.A.	17.6	6.7	13.0	7.9	9.5	11.3	N.A.	N.A.	9.6
Commerce	8.8	6.4	5.9	4.5	4.4	4.9	6.5	5.9	0.7	-0.7	-1.2	-2.5	-2.4	-1.6	0.5	-1.1

\*The average of both nominal and real compensations in the construction industry is from January to May 2001.  
SOURCE: Prepared with information from INEGI.

So far this year, productivity gains, in general, have been negative or insufficient to offset real increases in the compensations paid. In particular, productivity in the construction industry and in commerce has registered negative annual variations in practically every month. This has led to a considerable increase in unit labor costs. The figures speak for themselves: from January to July this year, unit labor costs have grown at positive rates (except in commerce during January). Another additional factor is that this trend shows no sign of abating. On the contrary, in three of the four sectors mentioned above and for which information is available, the annual variation of unit labor costs has grown in the last three months (Table 6).



**Table 6**                      **Unit Labor Costs and Output per Worker**  
Annual percentage change

	Output per Worker								Unit Labor Costs							
	2001							Average Jan-Jul	2001							Average Jan-Jul
	Jan	Feb	Mar	Apr	May	Jun	Jul		Jan	Feb	Mar	Apr	May	Jun	Jul	
Manufacturing Industry	3.2	-2.4	0.1	0.1	0.7	0.5	0.9	0.4	3.7	7.4	4.7	3.1	4.7	5.8	6.2	5.1
In-Bond Industry	-1.3	-4.5	1.9	-5.3	0.5	-0.5	1.1	-1.1	7.2	10.4	3.9	13.5	7.5	7.4	5.7	7.9
Construction Industry	-3.8	-1.9	-2.9	-3.6	-2.8	N.A.	N.A.	-3.0	10.9	15.2	11.1	13.6	14.6	N.A.	N.A.	13.1
Trade Sector	1.2	-8.1	-5.2	-5.2	-7.6	-9.4	-10.7	-6.5	-0.5	8.1	4.2	2.9	5.6	8.6	12.6	5.9

SOURCE: Prepared with information from INEGI.

The damaging effect of increases in unit labor costs on employment is very obvious. During the last few months this rise has been inversely correlated to the growth rate of employment and the total wage bill. The contraction of employment and the total wage bill has been more pronounced in those sectors where increases in unit labor costs have been highest. For example, from January to May, in the construction industry, where rises in unit labor costs have been most evident, the number of people employed and the total wage bill have experienced average growth rates of -23.5 and -14.8 percent, respectively. Similarly, the number of people employed and the total wage bill of export companies in the in-bond sector have suffered a considerable decline, with rates of -9 and -2.8 percent, respectively, in July of the current year (Chart 7).

The rise in unit labor costs has had a considerable negative impact on the total wage bill. The behavior of the latter variable indicates that, in spite of increases in real wages, workers' total income has fallen. The foregoing also has negative implications regarding the future evolution of aggregate demand and the economy's medium-term performance.

### Recent Developments in Employment in the Non In-Bond Manufacturing Industry

From June 2000 to July of 2001 employment in the non in-bond manufacturing industry fell by 301,500 jobs. This contraction can be attributed to the reduction in the growth rate of industrial activity in Mexico, due to the downturn in the United States and to real wage rises.

In order to analyze the influence of these two factors on job losses, an econometric model was prepared that allows the study of their evolution in the manufacturing sector. The study explains employment as a function of real wages and manufacturing activity in Mexico and covers the period from January 1998 to July of 2001.

With the intention of separating the effects of real wage rises and the deceleration of manufacturing production on employment in the manufacturing industry, parameters from the estimation models are used to simulate the period from July 2000 to July 2001.

If the model incorporates observed data, it forecasts a 4.99 percent decline in employment from June 2000 to July 2001 (simulation using observed data, Chart 1). This estimation is lower than the observed fall of 6.12 percent, which means there was a prediction error of 1.12 percentage points.

Three hypothetical scenarios for the growth of manufacturing production and real wages are considered below. Using these hypothesis it is possible to estimate what proportion of the fall in employment is attributable to the increase in real wages and that associated with the deceleration of manufacturing production.

**Scenario A.** It is assumed that there is no deceleration of manufacturing production and that real wages are constant. To be specific, an annual growth of economic activity from June 2000 to July 2001 equal to that observed in the first five months of the year (7.9 percent) is used. Real wages remain unchanged at their level observed in May 2000. According to the corresponding simulation, under these circumstances, employment would have grown 2.46 percent. By comparing the rates of increase of employment for June 2001 to July 2001 in scenario A with those of scenarios B and C it becomes possible to measure the impact of the deceleration in manufacturing production and the growth of real wages on employment.

**Scenario B.** Data corresponding to observed real wages (growth from June 2000 to July 2001 was 7.8 percent in the non in-bond manufacturing industry) is incorporated and a constant annual growth of economic activity from June 2000 to July 2001, the same as in the previous case (7.9 percent), is assumed.

In this scenario, employment would have increased 0.15 percent. Given that in scenarios A and B the same increase in manufacturing production and a different rise in real wage are considered, the difference between the growth of employment in these scenarios indicates that the increase of real wages explains a 2.32 percentage point decrease in employment (the growth rate falls from 2.46 in scenario A to 0.15 percent in scenario B).

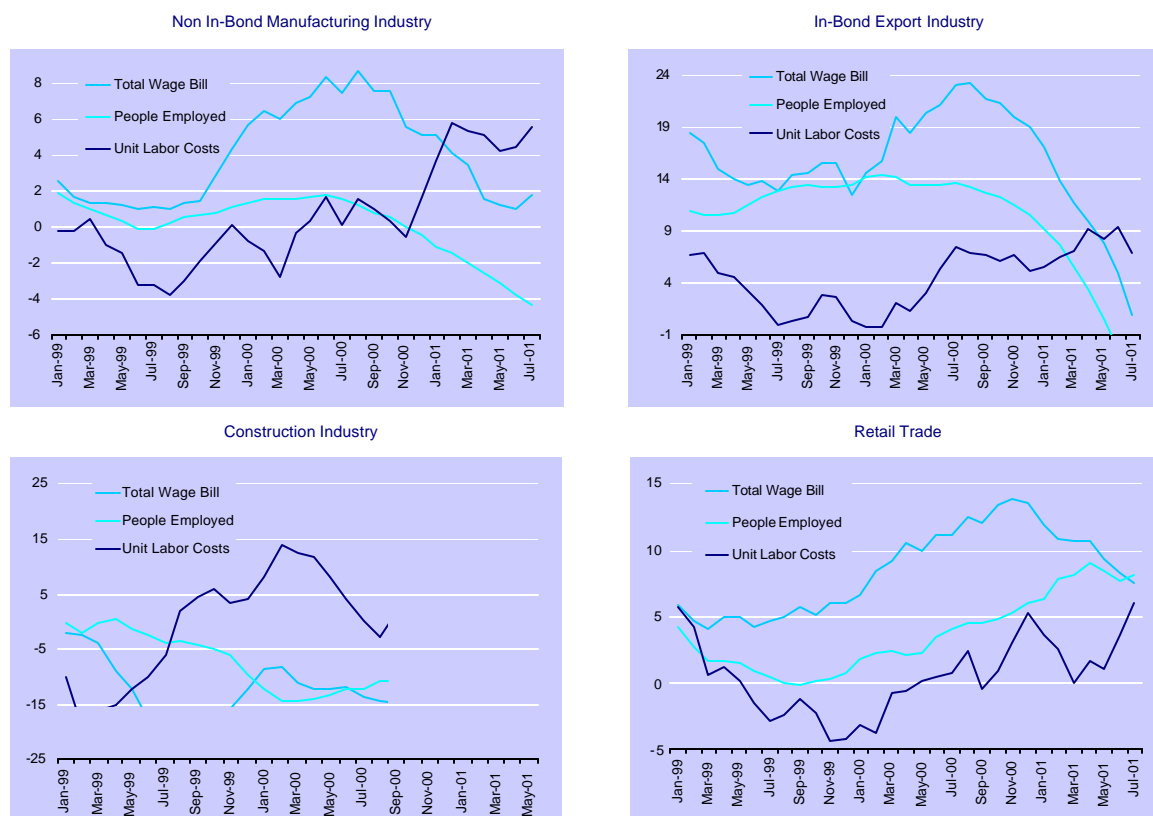
**Scenario C.** The level of real wages is maintained constant from May 2000 (as in scenario A) and the evolution of manufacturing activity is as observed (it fell 4 percent from June 2000 to July 2001). In this scenario employment would have declined 2.79 percent. From the difference between the results from scenarios A and C, which assume the same growth of real wages and distinct growth of manufacturing production, it can be inferred that the reduction of manufacturing activity explains a 5.26 percent fall in employment (the rate moves from 2.46 in scenario A to -2.79 percent in scenario C).

In sum, it is estimated that in the period from June 2000 to July 2001 the increase in real wages generated a 2.32 percent fall in employment (27 percent of its total variation), that represents a loss of 81,000 jobs. Moreover, the deceleration of manufacturing production led to a 5.26 percent fall in employment (61.3 percent of its total variation), that represents a loss of 185,000 jobs. Finally, it is worth mentioning that the model used in this study does not explain the 1.12 percent decrease observed in employment between June 2000 and July 2001.

**Table 1**  
Growth of Employment In The Non In-Bond Manufacturing Industry  
From June 2000 To July 2001  
Seasonally Adjusted Series

Scenarios	
Observed	-6.12
Simulation using observed data	-4.99
<b>A</b> Constant real wages without deceleration of manufacturing output	2.46
<b>B</b> Real wages grow without deceleration of manufacturing output	0.15
<b>C</b> Constant real wages and deceleration of manufacturing output	-2.79
Reductions in growth rate due to:	
<b>(A-B)</b> Real Wage Increase (Percentage)	2.32 27.01%
<b>(A-C)</b> Deceleration of manufacturing output (Percentage)	5.26 61.27%
Not explained by the model	1.12

**Chart 7** **Total Wage Bill, Number of People Employed and Unit Labor Costs**  
Annual percentage change



SOURCE: Banco de México and INEGI.

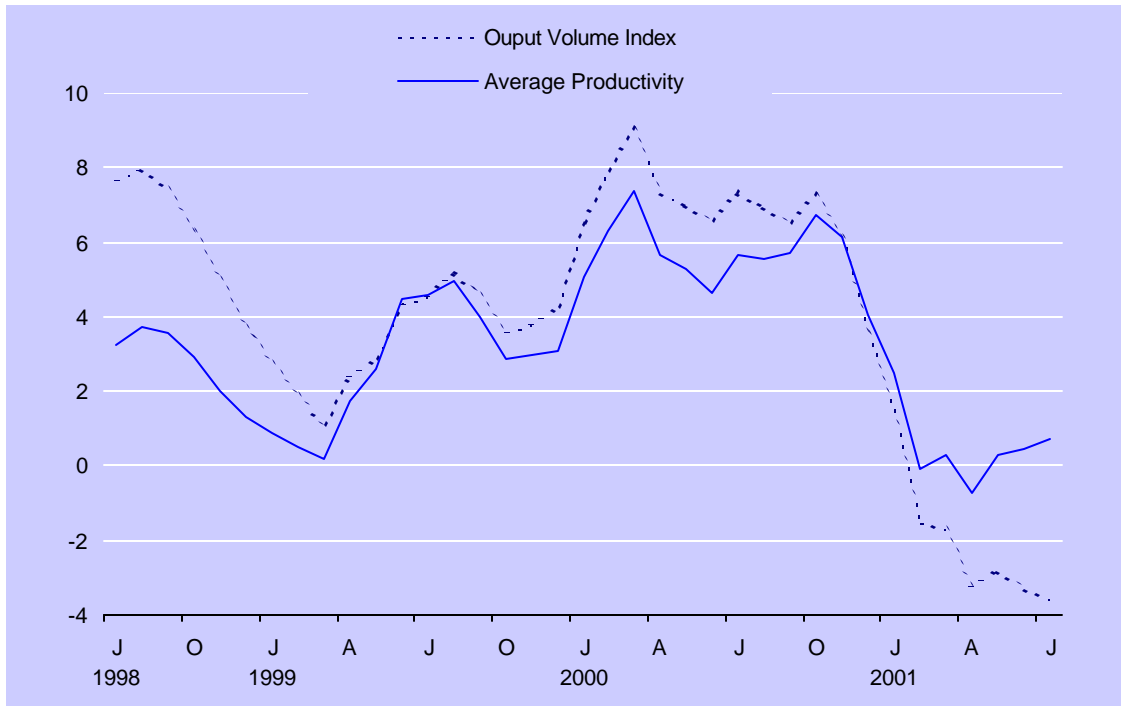
Although the reduction of the number of people employed is mainly due to the impact of the slowdown of the United States' economy on exports and output in Mexico, the upward behavior of unit labor costs has also contributed to the fall in employment. According to recent studies, the latter has undoubtedly had an unfavorable impact on employment. In particular, econometric analyses carried out by Banco de México have concluded that around 27 percent of the reduction in the growth rate of employment in the manufacturing sector is due to rises in real wages. From the aforementioned studies it is estimated that approximately 80,000 job losses from January to August of 2001 can be attributed to this factor.

The deterioration in employment has been of such magnitude that it has begun to counteract the decline of output in some sectors. As has been mentioned in previous Inflation Reports, during phases of economic deceleration, productivity tends to fall due to the lag with which the labor force adjusts to the economic

cycle. However, in the Mexican manufacturing industry, during the last few months the accumulated number of job losses has compensated for the fall in output. As a result, worker productivity in this sector has stabilized (Chart 8).

**Chart 8** **Output and Average Productivity in the Non In-Bond Manufacturing Industry**

Annual percentage variation of the 3 month moving average



SOURCE: Prepared with information from INEGI.

It is important to emphasize that a situation where real wages and unit labor costs are rising while employment is falling is clearly indicative of imbalances in the labor market. This is in line with the notion that, when aggregate demand falls, real wages should make a downward adjustment or grow at more moderate rates in order to provide the additional employment required by the significant yearly growth of the labor force due to demographic factors. Moreover, the negative impact on income distribution is lessened in a situation where the level of employment is maintained and real wages rise more slowly than in a situation like the present. Substantial gains are currently being obtained in real wages, but at the cost of a considerable number of job losses.

The increases in real wages, which are clearly incompatible with the evolution of productivity, have produced two extremely undesirable results: loss of competitiveness and an

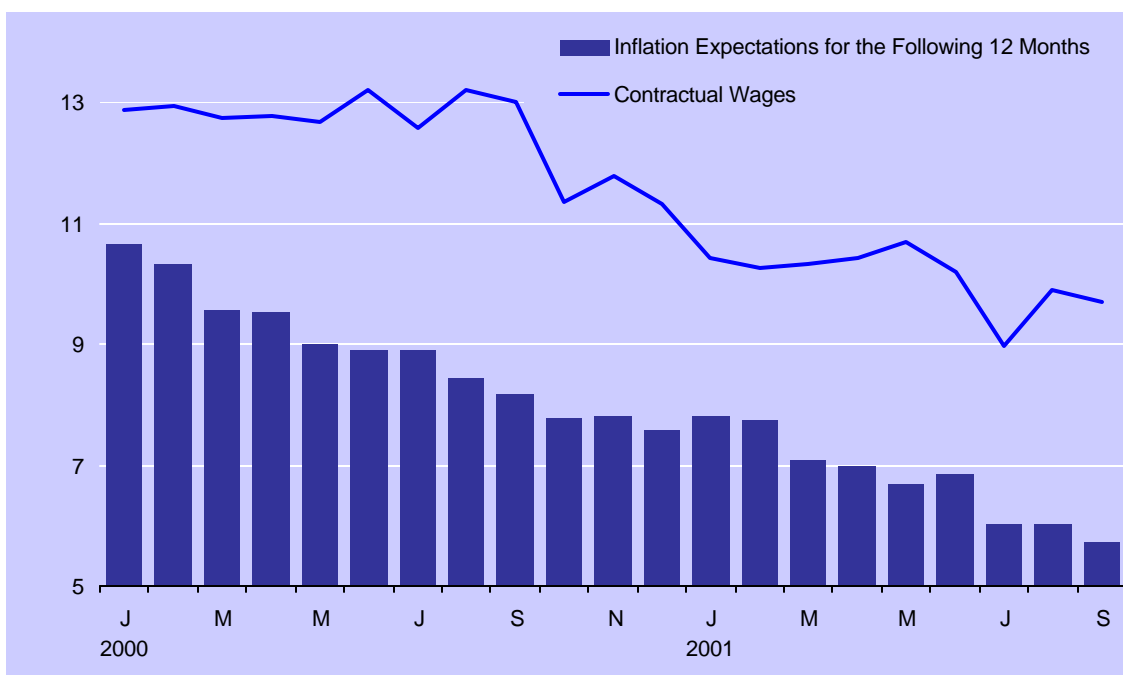
environment unfavorable to job creation. These trends have materialized at the same time as the process of economic deceleration. The conjunction of these factors has worsened the present situation as well as medium-term prospects for the labor market. Furthermore, as has been repeatedly mentioned, real wage rises incompatible with productivity gains constitute an important inflationary pressure.

#### **II.2.2.2. Contractual Wages**

In the quarter covered by this Report, the average increase in nominal contractual wages was 9.28 percent, with a nominal variation in July of 8.98 percent. However, the average increase in contractual wages registered in that month was to a great extent influenced by wage settlements in Pemex. If the increase authorized by this state-owned company is excluded from calculations, the average is 9.7 percent. Likewise, during August and September the average increase in contractual wages was slightly below 10 percent. In the first nine months of 2001, the nominal average growth of contractual wages moved from 10.4 to 9.7 percent, while in the same period private sector expectations regarding inflation for the following 12 months decreased from 7.8 to 5.7 percent. As a consequence, instead of narrowing, the spread between these two variables widened in the first three quarters of this year (Chart 9).

**Chart 9 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 Welfare.

Although in the first few months of 2001 nominal contractual wage rises in the manufacturing industry were higher than those awarded in other sectors, since June they have moved back into step (Table 7).

**Table 7 Contractual Wages by Sector**

Annual percentage change

	2001								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Manufacturing	11.1	10.7	10.8	10.9	10.9	10.2	9.0	10.1	9.8
Other Sectors	10.0	9.8	9.9	10.3	10.5	10.1	9.0	9.9	9.1

SOURCE: Prepared by Banco de México using information provided by the Ministry of Labor and Welfare.

In the context of an economic downturn, producers find it more difficult to transfer higher production costs to the price of their products. Thus, the necessary adjustments tend to be made through reductions in employment and in company profits. However, higher production costs could eventually be passed through to prices and in this way nominal contractual wage rises may constitute a latent source of inflationary pressure.

### II.2.2.3. Employment

The slowdown of both the Mexican and the United States' economies has caused a serious deterioration in employment. Although during the third quarter of 2001 the loss of formal jobs eased, this variable has registered a considerable accumulated fall.

From June to September this year, the number of workers (temporary and permanent urban employees) affiliated to the Mexican Social Security Institute (*Instituto Mexicano del Seguro Social*, IMSS) fell by a little over 19,100 (Chart 10a). This is the lowest quarterly fall observed in 2001. However, the accumulated reduction in employment is significant, as in the first three quarters of the year there were over 220,000 job losses.

It is important to point out that this moderation in the number of job losses is partly due to the number of temporary urban workers employed in the construction industry. However this type of occupation is volatile and seasonal, which means it is likely that the observed increase may well be reversed. Furthermore, the increasingly poor outlook for the United States' economy and its impact on the Mexican economy is a factor that could hinder a more vigorous recovery of employment.

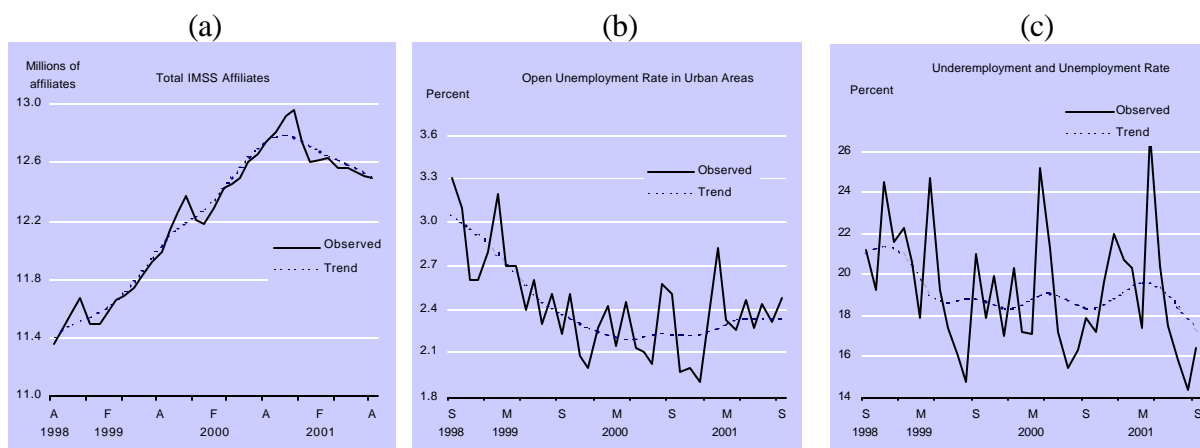
The easing of job losses during the third quarter of the year helped to stabilize unemployment indicators. Consequently, in September 2001 open unemployment stood at 2.49 percent. Taking this figure into account, the monthly trend series for this variable has been slightly above 2.30 percent since March (Chart 10b). Likewise, the trend series for unemployment and underemployment has fallen slightly since April this year (Chart 10c).

The open unemployment and underemployment rates have not shown pronounced increases, as would be expected given the evolution of economic activity and the total number of workers affiliated to the IMSS.

Chart 10

## Employment and Unemployment Indicators

## Trend Series



Based on the history of employment over the last five years, it is unlikely that a significant number of jobs will be created in the remainder of the year 2001, as is supported by the relevant data.

During the fourth quarters of 1997 and 1999 when very high seasonally adjusted real economic growth rates were observed, the average number of jobs created exceeded 230,000. However, in the same quarters of 1998 and 2000, when real seasonally adjusted GDP growth rates were negative, the average number of jobs contracted by more than 16,000.

According to private sector analysts' forecasts, the annual growth of GDP in the fourth quarter of 2001 would be around zero percent, which could imply negative seasonally adjusted growth. As a result, employment is unlikely to recover in the remainder of the year and at best will maintain the losses it has already accumulated. Moreover, the prospects for economic growth and the rigidity of wage settlements do not favor job creation in the medium-term.

### II.2.3. Aggregate Supply and Demand

During the second quarter of the current year the deceleration of the Mexican economy that began at the end of 2000 continued. Regarding aggregate demand, this process was characterized by a reduction in the annual growth rate of all its components, except private consumption. The annual rates of expansion of the two items that make up aggregate supply, GDP and imports, also decreased.



A surprising aspect of the slowdown that the Mexican economy is experiencing is the rapid weakening of the components of domestic demand. Thus, the annual growth rates of investment and total consumption moved from levels of over 10 percent in the third quarter last year to -5.5 and 3 percent, respectively, in the second quarter of 2001. In turn, the annual rate of expansion of the domestic component of aggregate supply, GDP, declined, moving from 7.3 percent in the third quarter of 2000 to zero percent in the second quarter of 2001 (Table 8).

Table 8

**Aggregate Supply and Demand in 2000 and 2001**

Real annual percentage change

	2000					2001	
	1st Q	2nd Q	3rd Q	4th Q	Annual	1st Q	2nd Q
Aggregate Supply	11.7	11.2	11.4	8.0	10.5	3.0	0.4
GDP	7.7	7.6	7.3	5.1	6.9	1.9	0.0
Imports	24.9	22.3	23.2	16.1	21.4	6.3	1.5
Aggregate Demand	11.7	11.2	11.4	8.0	10.5	3.0	0.4
Total Consumption	8.9	9.4	10.0	6.6	8.7	5.3	3.0
Private	9.6	10.2	10.5	7.6	9.5	6.5	3.8
Public	3.9	4.6	6.1	0.6	3.5	-3.0	-2.2
Total Investment	10.9	10.5	11.1	7.6	10.0	0.4	-5.5
Private	12.8	8.9	10.8	8.2	10.2	-0.7	-5.3
Public	-4.5	26.0	13.1	5.3	8.6	11.3	-6.8
Exports	17.3	15.8	16.9	14.1	16.0	4.7	-0.4

SOURCE: INEGI.

The fall in Mexico's economic growth rate has been principally due to changes in the United States' economy. The main connection between the two economies is trade. The manufacturing sector plays a crucial role in this link due to the fact that 90 percent of Mexico's exports to the United States are manufactured goods. It is important to mention here that the downturn in the United States' manufacturing sector preceded that of other sectors of the economy. In Mexico this has led to a fall in activity, exports and employment in the manufacturing sector since the final months of the year 2000. The manufacturing sector's contribution to the growth of investment and employment in the last few years has also been a fundamental factor in understanding the swift deceleration that both of these variables suffered in the first quarter of 2001. Furthermore, the significant fall in employment had a negative impact on private sector consumption.

The relevance of the Mexican manufacturing sector in job creation and investment is one of the factors that explains why the fall in growth has been more pronounced in Mexico than in the

United States. Other factors that have also contributed to this phenomenon are:

- (a) The reduced level of credit granted to the private sector by commercial banks has considerably hampered the Mexican financial system's ability to mitigate the fall in investment and consumption, as has occurred in the United States; and
- (b) After the modest performance in 1999, the high rate of economic expansion registered in Mexico in the year 2000 allowed observed GDP to move closer to its potential level. This recovery was sustained by the accelerated growth in investment and consumption, which rose less in 1999 as a result of the impact of the Russian financial crisis that took place in the second quarter of 1998. As a result, this rate was unsustainable, even in a more stable economic environment than at present.

The annual rate of increase of private investment continued to fall during the second quarter of the year, thereby confirming the close relationship of this aggregate with variations in GDP, manufacturing activity and exports. Although the growth of total and private sector consumption has also suffered a downward adjustment, it is the only component of aggregate demand that still presents positive annual rates of change. The behavior of private consumption has been negatively influenced by slow economic growth and job losses. However, the increase in the total wage bill during the first months of 2001 and, to some extent, the recovery of credit for consumption, are two factors that mitigated the reduction in the growth rate of this item of expenditure.

The combination of the foregoing factors meant that domestic demand expanded 0.7 percent in the second quarter of 2001. This is in contrast to the zero growth of GDP in the same period. As a result of the latter, the trade deficit for this period continued to register positive annual rates of growth.

In order to properly understand recent movements in this variable's trend, the quarterly growth of its seasonally adjusted figures have to be studied, which are more informative than its annual rates. Based on seasonally adjusted figures, private and public investment and exports registered falls of 1.7, 6.8 and 0.6 percent, respectively, in the second quarter, while private and public sector consumption increased 0.6 and 0.4 percent, respectively. The combined performance of these variables resulted

in a slight contraction of 0.2 percent in domestic demand. Furthermore, GDP remained constant during the second quarter of the year and imports fell 1 percent. Thus, unlike what is shown by annual rates of growth, seasonally adjusted figures suggest that, after having declined in the two previous quarters, the economy stabilized during the second quarter of the year.

Although only preliminary information exists on the behavior of the main components of aggregate supply and demand in the third quarter of 2001, the available data indicates the following:

- (a) The annual growth rate of private consumption would have declined again in the third quarter to below 2 percent and the seasonally adjusted figure for the expansion of private consumption was very probably around zero. These estimates are based on the following information:
- Figures reported by INEGI showed that wholesale and retail sales of business establishments contracted at an annual rate during the July-August period. Annual retail sales growth decreased from 2.9 percent in the second quarter to -0.5 percent in July-August, while in the same period the annual variation of wholesale sales changed from -6.8 to -7.4 percent;
  - The annual growth rate of sales reported by members of the National Association of Supermarket and Department Stores (*Asociación Nacional de Tiendas de Autoservicio y Departamentales*, ANTAD) moved from 8.2 percent in the second quarter to 7.2 percent in the third. Likewise, sales of durable goods such as refrigerators, stoves and washing machines weakened during the quarter; and
  - Although imports of consumer goods continue to expand at a high annual rate, they decreased from 21.6 percent in the second quarter to 18.1 percent in the third.
- (b) The annual growth rate of private investment was probably lower than the -5.3 percent registered in the second quarter. This was due to the following:
- The annual growth rate of gross fixed investment was -4.8 percent in July;

- The annual growth rate of imports of capital goods fell from -0.8 in the second quarter to -15.1 percent in the third; and
  - The construction sector contracted at an annual rate of -3.7 percent in the July-August period, compared to -6.9 percent in the second quarter of 2001.
- (c) A greater than expected slowdown in the United States' economy and the effects of increased security measures on the border as a consequence of the attacks on September 11<sup>th</sup>, account for decreases of -6.9 percent at an annual rate of non-oil exports.

The aforementioned developments would be congruent with an annual decline in aggregate demand of around 3 percent in the third quarter.

Regarding the evolution of aggregate supply, available information suggests the following:

- (d) In the third quarter GDP contracted more than 1 percent at an annual rate. This conclusion is based on the following information:
- The annual growth rate of the Global Indicator of Economic Activity (GIEA) was -0.9 percent in July;
  - Industrial output decreased 4.4 percent at an annual rate in the July-August period;
  - The effect of lower growth in the United States' industrial sector due to the terrorist attacks was only partially reflected in September. Its main repercussions will be felt from October on; and
  - The unfavorable impact of the September 11<sup>th</sup> attacks on specific sectors such as tourism and aviation.
- (e) As a consequence of the deceleration of all the components of aggregate demand, the growth rate of imports fell from 0.1 percent in the second quarter to a rate of -9 percent in the third.

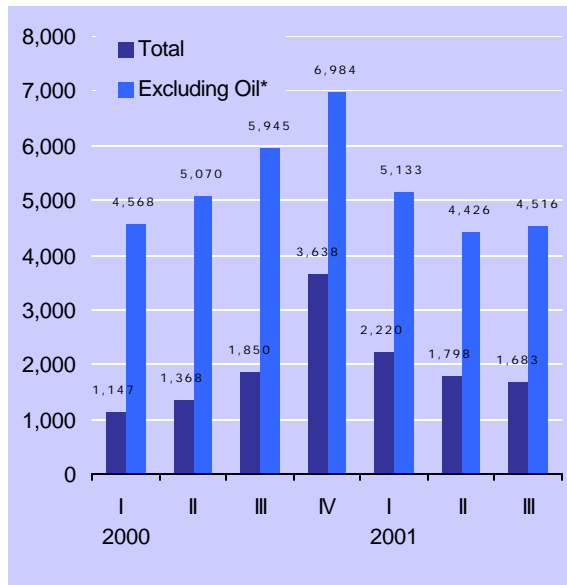
Taking all of the above into account, Banco de México estimates that the annual growth rate of GDP could be around zero percent in 2001.

### II.2.4. Balance of Payments, Capital Flows and Exchange Rate

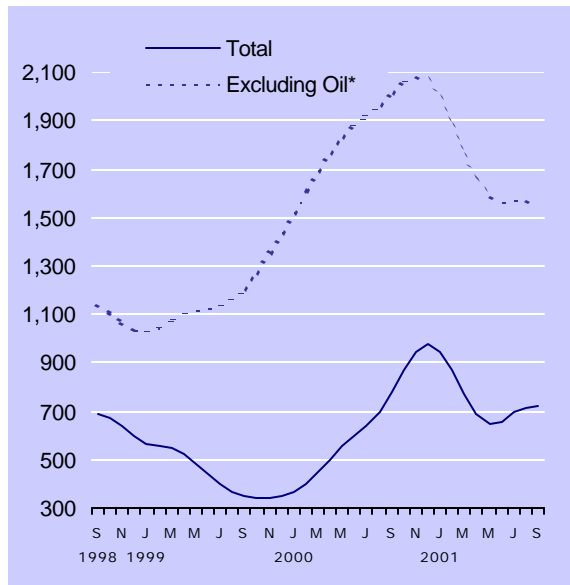
The rapid and pronounced correction of aggregate demand growth in the first nine months of the year limited the widening of the current account deficit. This was a result of the deceleration of exports and output associated with reduced economic growth in the United States. As a result, although the total accumulated trade deficit during the first nine months of the year increased at an annual rate of 30.6 percent, the non-oil deficit fell 24 percent. Furthermore, in the third quarter the total trade deficit was lower than that registered in the same period last year and trend data suggest that the trade deficit has been narrowing throughout the year (Chart 11). This information points towards a greater balance between the expansion of domestic supply and demand. The aforementioned evolution of the trade deficit has been an important factor in limiting the Mexican economy's demand for external resources and this has, in turn, contributed to the stability shown by the exchange rate.

**Chart 11 Trade Deficit: Total and Excluding Oil**  
Millions of dollars

Quarterly



Monthly: Trend Series



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

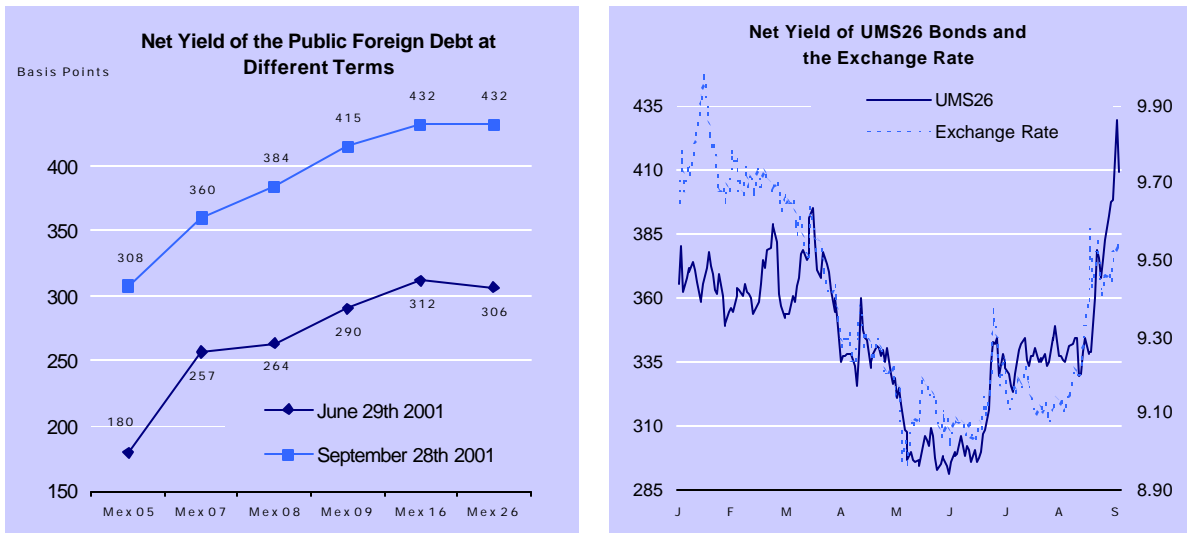
As stated in previous Inflation Reports, another factor that explains the exchange rate's stability to date, is the favorable behavior of capital flows. The surplus in the capital account during the first quarter was one of the highest over the last 7 years for this period. Moreover, long-term capital flows, mainly foreign direct

investment, financed 85 percent of the current account deficit during the aforementioned period. Estimates suggest a current account deficit of 3.1 billion dollars and a capital account surplus of 3.8 billion (including errors and omissions) for the third quarter. Of this total, 701 million dollars represent portfolio investment.

During the July-September quarter, net yields on bonds placed by the Mexican government on the international markets increased considerably for all maturities (Chart 12). The net yields on UMS26 bonds rose 113 basis points between the end of June and the end of September. Consequently, this bond reached a level of over 400 basis points for the first time in the year.

In response to the deterioration of country risk perceptions, both the exchange rate and domestic interest rates rose. Thus, after having remained at historically low levels for part of July and August, interest rates increased and the exchange rate depreciated as a consequence of the seasonal rise in inflation and the terrorist attacks in the United States. These adjustments were orderly, unlike in other countries or as has occurred during other periods of extreme international volatility.

**Chart 12 Country Risk Indicators and Exchange Rate**



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

The average exchange rate was 9.24 pesos per dollar in the July-September quarter, which implied a 0.6 percent depreciation vis-à-vis its average in the previous quarter. At the start of July, the parity rose 3 percent, reflecting the uncertainty in Argentina. Due to the fact that this depreciation was transitory, the

average level was 9.15 pesos per dollar from July to August, practically the same as in the previous quarter. There was an upward trend in the exchange rate during September that intensified after the terrorist attacks on the 11<sup>th</sup> of that same month. The exchange rate depreciated 3.3 percent in September, ending the quarter at 9.52 pesos per dollar, 5.3 percent higher than its prevailing level at the end of the previous quarter (Chart 12).

## II.2.5. Prices Regulated or Provided by the Public Sector

In July, August and September the monthly variations in the sub-index of prices for goods and services provided or regulated by the public sector<sup>11</sup> were -1.51, -0.48 and 0.93 percent, respectively. Meanwhile, the CPI growth rates for the same months were -0.26, 0.59 and 0.93 percent (Chart 13).

Chart 13

### Price Index for Goods and Services Provided or Regulated by the Public Sector and the CPI

Monthly percentage change



Similar to the case of the April–June quarter, the favorable evolution of this sub-index during the period covered by this Report is mainly due to the behavior of prices regulated by the

<sup>11</sup>The prices considered in the sub-index for goods and services provided by the public sector are: gasoline, domestic gas and electricity. The products whose prices are regulated by the public sector are: long distance international telephone calls, local telephone services, long distance domestic telephone calls, telephone line installation and service fees, taxi fares, city bus fares, subway or electric transport fares, inter-city bus services, parking lots, automobile ownership taxes, oils and lubricants, and duties and licences.

public sector. In July, August and September these prices registered monthly variations of -3.61, -1.55 and 1.95 percent, respectively. While the sub-index for prices provided by the public sector increased 0.15, 0.32 and 0.17 percent in the same months.

The slower rate of growth of prices regulated by the public sector can mainly be explained by the decrease in the price of domestic gas. The accumulated reduction of this price during the quarter was -14.54 percent. The regulated prices that rose the most during the period were electricity and gasoline, 2.37 and 1.45 percent, respectively.

## **II.2.6. Summary**

Annual CPI inflation fell from 6.57 percent in June to 6.14 percent in September. In the same period, annual core inflation decreased from 6.36 to 5.93 percent.

The fall of core inflation was sustained by a considerable reduction in the annual growth rate of the sub-index for goods, while that for services remained practically unchanged. The evolution of core inflation for goods was mainly in response to the stability of the exchange rate. Meanwhile, the rigidity of inflation for services is the result of the significant increases in unit labor costs.

The downturn of economic activity in the United States had a negative impact on activity and employment in Mexico's industrial sector. However, these factors led to a swift downward adjustment in the growth of aggregate demand, which re-established the balance between increases in aggregate demand and the supply of goods and services. This in turn helped to offset inflationary pressures in two ways. Firstly, this phenomenon has meant a lower than expected trade deficit that led to reduced demand for external resources. The latter together with an abundant supply of capital from abroad contributed to exchange rate stability and the fall of annual inflation for goods. Secondly, the slowdown in the growth of aggregate demand probably limited the capacity of service providers to pass on rises in unit labor costs to their prices, thus avoiding a rebound in the annual inflation of the core services sub-index.

Regarding the behavior of the sub-indexes of prices excluded from the calculation of core inflation, a significant rise was recorded in the annual inflation of agricultural and livestock goods and a fall in the price rate increase of goods and services provided or regulated by the public sector. Furthermore, the annual



inflation of the education prices' sub-index remained practically constant. These effects almost completely cancelled each other out, in virtue whereof the general annual rate of inflation fell by the same amount as core inflation.

### III. Monetary Policy during the Third Quarter of 2001

---

The following section analyzes the reasons that led Banco de México to alter its monetary policy stance during the July-September quarter. A complementary evaluation of the impact of the adopted measures on inflation expectations and on both nominal and real interest rates is also presented. Finally, the evolution of the monetary base and other monetary aggregates is reported.

#### III.1. Monetary Policy Actions

---

On July 31<sup>st</sup> 2001, Banco de México's Board of Governors decided to reduce the "short" from 350 to 300 million pesos, and maintained it at that level for the rest of the quarter. As in the case of the reduction in the "short" accorded in the previous quarter, this measure was taken in response to the favorable behavior of inflation and the mitigation of certain risk factors that had been identified as potential obstacles to the attainment of the inflation target for 2001. These factors were identified and evaluated by Banco de México in its Monetary Policy Program for 2001.

The decision to ease the monetary policy stance was based on the following information:

- (a) The accumulated growth of the CPI during the January-June period had been 2.11 percent and in the first two weeks of July, inflation for the last 12 months had fallen to 5.87 percent. The corresponding results for the core prices index were 3.5 and 6.26 percent, respectively;
- (b) The trend of prices during July meant an annual rate of expansion for the CPI of under 6.5 percent could be expected. Thus, the evolution of the prices sub-indexes were clearly in line with the annual inflation goal of less than 6.5 percent in December;
- (c) The private sector's expectations for annual inflation in 2001 were below 6 percent during the period. According to the Survey of the Expectations of Private Sector

Economic Specialists carried out by Banco de México in July, expectations for annual inflation in 2001 were 5.48 percent;

- (d) The significant deceleration of the United States' economy translated into a considerable reduction in Mexico's economic growth. As a result, the rate of expansion of domestic demand had shown a rapid downward adjustment that reduced the disparity that had previously existed between the growth of output and expenditure;
- (e) The above was reflected by a lower than expected accumulated trade balance deficit in the January-July period as well as a downward revision in private sector analysts' estimates for the current account deficit for 2001 as a whole. In July, the Survey of the Expectations of Private Sector Economic Specialists forecasted a current account deficit of 19.796 billion dollars, compared to a 22.037 billion forecast at the end of December last year;
- (f) There was an abundant supply of foreign capital, especially foreign direct investment, during the first two quarters of the year. As a consequence, the evolution of the current account together with that of the capital account translated into stable exchange rate parity; and
- (g) Preliminary information for public finances in the January-May period implied that the evolution of the fiscal policy stance was favorable to stabilization.

Observed developments in the economy and of inflation during the third quarter suggest that the diagnosis made at the time of adjusting the monetary policy stance was correct. In particular, core inflation continued its downward trend. Moreover, the fact that prospects for growth in the United States' economy deteriorated even further suggests less pressure on prices in the near future. Lastly, the supply of foreign capital was maintained, although it was less abundant than in the first two quarters of the year.

However, as has been reiterated in previous Reports, nominal contractual wage rises have remained above the sum of the foreseeable gains in labor productivity and the inflation target. This has probably limited the fall in inflation, particularly that associated with the services core index. Among the reasons that supported the reductions in the "short" was the expectation that a

substantial fall in the rate of employment would lead to a downward movement in contractual wage settlements. When this downward movement failed to materialize, Banco de México's Board of Governors decided not to relax the monetary policy stance any further, given that rising unit labor costs would hamper the attainment of the inflation target for 2002.

Annual CPI inflation increased in August and September as a consequence of the evolution of its most volatile and unpredictable components. This was particularly the case for the prices of goods provided or regulated by the public sector and for agricultural and livestock products. Although the aforementioned increase has not affected the evolution of core inflation, it could contaminate the formation of expectations in the near future.

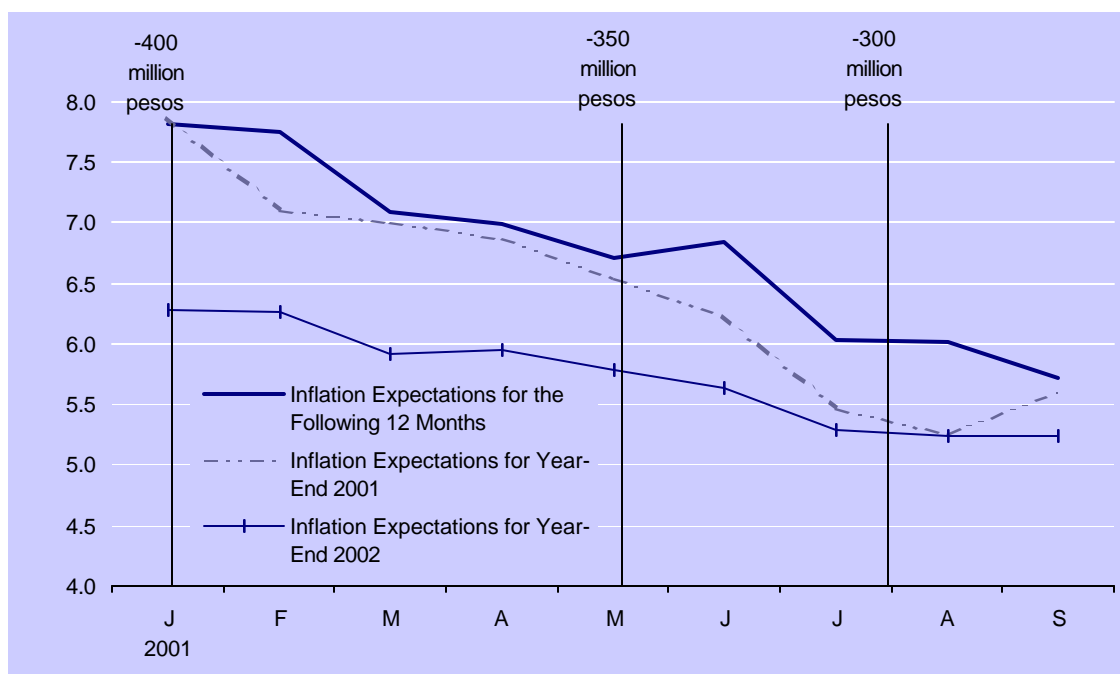
Finally, the September 11<sup>th</sup> terrorist attacks in the United States will probably have a negative effect on the following variables: the supply of capital to emerging economies and exports, tourism, and remittances from Mexican workers abroad. It is therefore feasible that the relative abundance of foreign resources experienced in the first eight months of the year will be reversed in the future.

The trend of inflation expectations is important for evaluating the results of monetary policy and for identifying inflationary pressures. To this end, it is worth noting that inflation expectations for year-end 2001 were significantly reduced. This further validates the diagnosis carried out at the time the "short" was modified (Chart 14). Nevertheless, as a consequence of the upturn experienced by annual inflation since August, these expectations have increased from 5.25 percent in that month to 5.6 percent in September. Inflation expectations for year-end 2001 have been extremely volatile due to the fact that they have responded more than proportionally to monthly overall inflation figures. In turn, the latter have been influenced to a high extent by the sub-indexes of prices that are excluded from core inflation calculations. The impact of these volatile factors is confirmed by the fact that inflation expectations for the following twelve months and for 2002, in the absence of a tax reform, fell in the June to September period.

One final element to consider regarding the evolution of inflation expectations is that those for the following 12 months are still higher than those associated with 2001. This phenomenon has been present throughout the year, despite the fact that inflation expectations for 2002 are below both figures. As was stated in the previous Report, this is most likely due to the possible effects that

the passing of the tax reform could have on expected inflation, or that analysts foresee certain transitory instability in the absence of such tax reform. Furthermore, the fact that overall inflation fell rapidly during the first half of 2001 is noteworthy. This was partly due to the favorable pricing trend for some of the more volatile components of the CPI that are excluded from core inflation. It is possible that analysts will therefore expect the evolution of the latter components to lead to a slight reversal in the trend of annual inflation in the first few months of next year, although this may only be temporal.

**Chart 14**                      **Inflation Expectations and Accumulated Balances Objective ("Short")**  
Percent

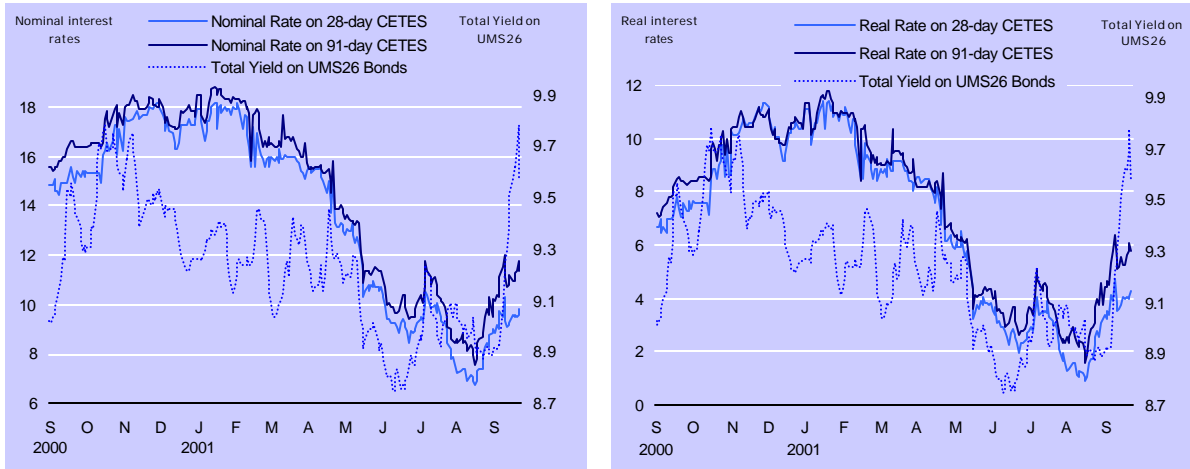


SOURCE: Survey of the Expectations of Private Sector Economic Specialists, Banco de México.

In the quarter covered by this Report, nominal and real interest rates experienced an important change in direction (Chart 15). During the first half of July, nominal interest rates on 28 day Cetes increased substantially, which was in line with increases in external interest rates. This behavior was mainly due to the impact of the worsening situation in Argentina. Shortly before the reduction of the "short" both domestic and external rates decreased in response to the announced extension of the IMF's program for Argentina and in anticipation of the aforementioned reduction of the "short". The modification of the monetary policy stance was followed by a dissociation between domestic and external interest

rates. The latter increased while domestic rates decreased. To summarize, between the close of the day preceding the implementation of this measure and the close of the following-day, nominal interest rates on 28 day Cetes fell 75 and 77 basis points. Meanwhile, yields on UMS26 bonds increased 6 basis points.

**Chart 15** **Nominal Interest Rates, Real Interest Rates <sup>1/</sup> and Total Yield on UMS26 Bonds**  
Percent



1/ Equivalent to nominal interest rates adjusted by inflation expectations for the following 12 months.

After alteration of the monetary policy stance, domestic interest rates maintained a downward trend until mid August. This trend was reversed at the end of the same month, a movement that did not correspond to a similar movement of external rates. This can be explained by several factors. Firstly, there could have been perceptions among the public of a further reduction of the “short”, which weakened as a result of the fact that inflation in the first two weeks of August was higher than expected. The latter combined with the reaction to demands for high contractual wage rises at the Volkswagen plant, which eventually led to a strike.<sup>12</sup> Thirdly, there was a belief among the public that changes would be made to the Retirement Savings System Act that would allow the Afores to invest in a more diversified portfolio of debt instruments. However, this amendment to the law never materialized. The upward trend of domestic interest rates observed at the end of August intensified as a result of the tragic events that occurred in the United States. As a consequence, external rates also increased by a substantial amount.

<sup>12</sup>The strike in Volkswagen began on August 18<sup>th</sup> and ended on September 15<sup>th</sup>.

The reduction in the “short”, as well as the expected developments that never materialized, translated into lower domestic interest rates and narrowed the spread between them and foreign interest rates. However, this fall in rates was partially reverted on later dates - an outcome attributable to the combination of the following influences: an upturn in annual inflation and of inflation expectations for the year, the implications of the foregoing on monetary policy management and greater international financial volatility associated with events in the United States. Although the aforementioned factors do not imply inflationary pressures that endanger the achievement of the inflation target this year, when combined with the persistently high nominal contractual wage rises, they justified a prudent monetary policy stance in order to ensure that the 2002 inflation target is attained.

## **III.2. Monetary and Credit Aggregates**

---

### **III.2.1. Monetary Base, Net Domestic Credit and Net International Assets**

In the third quarter of 2001 the stock of the monetary base rose at a nominal average annual rate of 11.7 percent, lower than that registered in the same period last year (27.3 percent). During the quarter the monetary base remained below the forecast levels, with an average deviation of -2.4 percent. This can principally be explained by the lower-than-expected economic growth.

From 1999 to 2000 commercial banks held around 10 percent of the stock of bills and coins in circulation. In the July-September quarter the nominal balance of cash held by the banks grew at an average annual rate of 21.1 percent. This increase is partly explained by the growth in payroll accounts and, to a lesser extent, by the larger number of automatic teller machines.

The net international assets of Banco de México rose 2.047 billion dollars in the quarter analyzed in this Report. In contrast to the first quarter of the year, the Federal Government contributed to the aforementioned accumulation of international assets, mainly through the revenue it received from the recovery of collateral associated with Brady Bonds repurchases. This accumulation of international assets was reflected in the decrease of net domestic credit by 18.092 billion pesos in the July-September period (Table 9).

**Table 9** **Monetary Base, International Assets and Net Domestic Credit**  
Millions

	Balances		Effective flows	Effective flows	Effective flows	Accrued annual effective
	To Dec. 30th 2000	To Sep. 28th 2001	January - March 2001	April - June 2001	July - September 2001	flows <sup>v</sup> To Sep. 28th 2001
<b>(A)</b> Monetary Base (Pesos)	208,943	182,188	-32,833	4,624	1,454	-26,755
<b>(B)</b> Net International Assets (Pesos) <sup>2/</sup>	342,386	408,089	46,162	4,677	19,546	70,385
Net International Assets (US Dollars) <sup>2/</sup>	35,629	42,912	4,716	521	2,047	7,284
<b>Change in Net International Assets</b>			4,716	521	2,047	7,284
<i>Pemex (US Dollars)</i>			3,820	1,234	767	5,821
<i>Federal Government (US Dollars)</i>			-238	-1,751	628	-1,361
<i>Options purchases</i>			735	628	0	1,363
<i>Other (US Dollars) <sup>3/</sup></i>			399	410	652	1,461
<b>(C)</b> Net Domestic Credit (Pesos) [(A)-(B)] <sup>1/</sup>	-133,443	-225,901	-78,995	-53	-18,092	-97,140
<b>Memorandum:</b>						
<b>(D)</b> International Reserve <sup>4/</sup> (US Dollars)	33,555	39,415	4,481	695	684	5,860

1/ In the estimation of effective flows in pesos of net international assets, the exchange rate applied to the operation generating each flow is considered. The differential between net international asset stocks in pesos does not correspond to the concept of effective flows, due to the fact that the stocks of the former definition are valued at the exchange rate on the respective date. This also explains why the differential between net domestic credit stocks is not the same as the reported effective flows.

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

3/ Mainly composed of dollar sales operations and interest earned on international assets.

4/ As defined in the Banco de México Act.

### III.2.2. Monetary Aggregates M1 and M4

The real annual growth of the narrow monetary aggregate (M1) increased considerably in the July-September period compared to the previous quarter. The most important variation was the increase in checking accounts held in foreign currency. This was mainly due to operations connected with the acquisition of Banamex by Citicorp. Furthermore, current account deposits (payroll accounts) have continued to grow strongly as a result of their promotion by commercial banks and this has led to an increase in the number of accounts held in the banking system (Table 10).



Table 10

**Monetary Aggregates**

Real annual percentage change of average balances

	2001		
	January-March	April-June	July-September
<b>M1</b>	<b>6.75</b>	<b>3.49</b>	<b>7.77</b>
Currency Held by the Public	7.35	3.13	6.26
Checking Accounts in Pesos	4.07	3.14	4.20
Checking Accounts in Foreign Currency	6.46	-1.25	23.29
Current Account Deposits	17.65	10.24	13.49
<b>M4</b>	<b>6.44</b>	<b>6.72</b>	<b>8.83</b>
Bank Deposits	-10.32	-7.27	-2.83
Government Securities 1/ 2/	37.07	31.13	28.43
Private Securities 2/	19.99	10.69	5.54
Retirement Funds (without Siefos) 3/	18.26	17.26	14.80

1/ Including Federal Government securities, BPAS and BREMS.

2/ Including securities held by Siefos (Specialized Retirement Funds).

3/ Including housing funds and Banco de México's retirement funds.

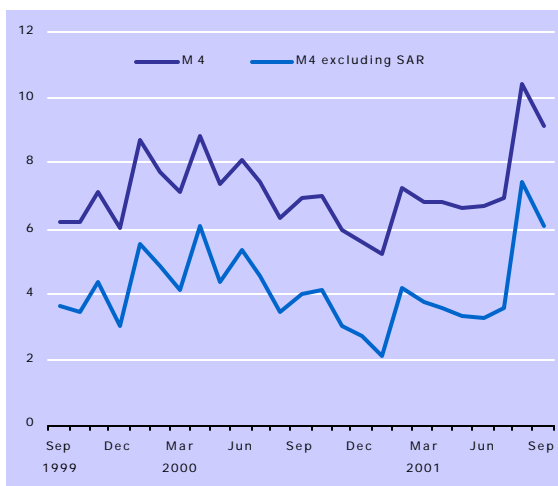
Preliminary data shows that the real annual growth of the broad monetary aggregate M4 rose significantly in the period covered by this Report (Chart 16). This was partly a result of the 28.8 billion peso increase (a 23.1 percent nominal variation in the quarter) in deposits denominated in foreign currency stemming from the purchase of Banamex by Citigroup in the third quarter of the year. The latter had its greatest impact on the broad monetary aggregate in August.

Chart 16

**Retirement Savings System and M4**

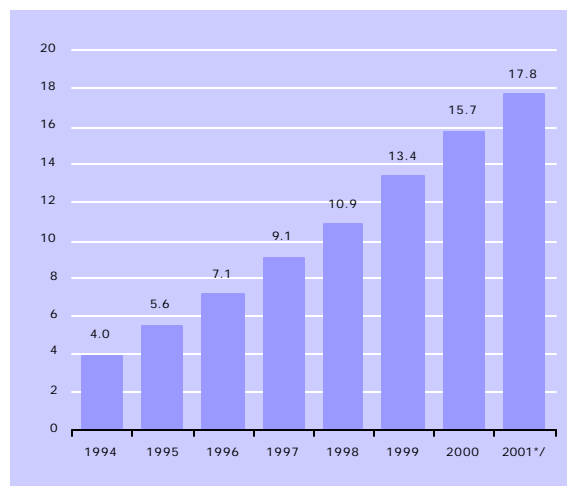
**M4**

Real annual percentage change



**Retirement Savings System**

Percentage of the balance of M4



\*/ Information up to September 2001.

Irrespective of the foregoing causes of the increase in the broad monetary aggregate, throughout 2001 this aggregate has

maintained a relatively high level of real annual growth (7.3 percent on average). This behavior is even more noteworthy considering the fact that economic activity has weakened over the year. The analysis of M4's components suggests that the persistent vigor of this monetary aggregate is to a great extent due to the trend of financial savings channeled through the retirement savings system. This system, which is mainly made up of housing funds and Siefos, has grown at real rates of over 25 percent during the year and currently represents almost 18 percent of M4. If financial savings channeled through the retirement savings system were excluded from calculations, M4 would have increased at an average real annual rate of 4.1 during the first nine months of the year (Chart 16).

Of the financial instruments that make up M4, BPAS (issued by the IPAB) and BREMS (issued by Banco de México) have registered the highest increases during 2001. BPAS have allowed the IPAB to substitute revenues collected from the public via intervention banks or under special circumstances. The placement of securities by Banco de México is due, among other factors, to the sterilization of the accumulation of international assets. Regarding the latter, during the year BREMS issues have gradually replaced other securities placed with the aim of monetary regularization (Table 11).

Table 11

#### Securities Placed by Banco de México with Monetary Control Purposes

Million pesos

	Stocks				Flows
	Dec-00	Mar-01	Jun-01	Sep-01	Jan-Sep 01
Total	162,764	156,773	170,570	188,659	25,895
BREMS	21,834	47,116	79,798	118,082	96,248
Other Securities	140,930	109,657	90,772	70,577	-70,353

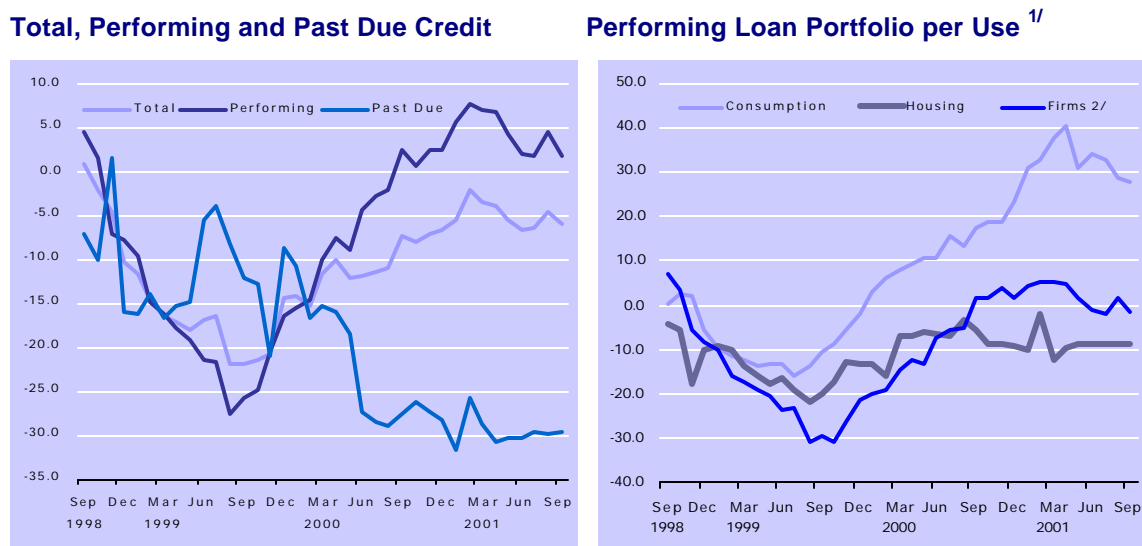
### III.2.3. Financing to the Private Sector

Financing granted to the private sector by commercial banks recovered slightly in the third quarter of the year. The latter can be seen in the evolution of the performing loan portfolio<sup>13</sup>,

<sup>13</sup> Refers to commercial banks own portfolio that excludes credit associated with debtor support and bank rescue programs (promissory notes IPAB-FOBAPROA and Cetes-UDIs).

which increased at positive real annual rates (Chart 17), particularly consumer credit.

**Chart 17** **Credit Granted by Commercial Banks to the Private Sector**  
Real annual percentage change



1/ Refers to commercial banks' own portfolio that excludes credit associated with debtor support and bank rescue programs (promissory notes IPAB-FOBAPROA and Cetes-UDIs).

2/ Firms and individuals with a business activity. Does not include credit granted to non-bank financial intermediaries.

Taking into consideration a wider range of credit sources available, the following factors can be detected:

- (a) Credit granted by mortgage Sofoles grew 38.9 percent at a real annual rate in August 2001, in contrast to the reduction of this type of financing by commercial banks;
- (b) The increase in the stock of commercial paper in the first nine months of the year (7.827 billion pesos) was higher than the accumulated flow of performing credit granted to firms by commercial banks (5.376 billion pesos); and
- (c) In August 2001, the stock of credit provided by automobile loan Sofoles rose at an annual rate of 37.3 percent in real terms, while bank loans for the consumption of durable goods increased by 26.8 percent.

## IV. Private Sector Outlook<sup>14</sup>

---

During the July-September quarter of 2001, private sector financial analysts revised their estimates as follows: there was a downward adjustment of economic growth, inflation expectations remained practically unchanged and there was increasing uncertainty (as seen in the dispersion of their answers).

### IV.1. Private Sector Outlook for 2001 and 2002

---

#### IV.1.1. Forecasts for the Main Determinants of Inflation

The estimates of private sector financial analysts regarding the evolution of the international economy for the rest of the year underwent a significant downward revision. To this regard, the following points are worth mentioning:

- (a) Expectations related to the annual growth rate of the United States' economy for the year 2001 were cut from 1.6 percent in June to 0.8 percent in September. Notwithstanding the foregoing, the growth rate of the US economy is expected to recover to 1.8 percent in the year 2002. Accordingly, the standard deviation of answers has increased reflecting greater uncertainty about the future of United States' GDP<sup>15</sup>. On the other hand, the average forecast of American analysts for economic growth in that country during the third and fourth quarters of 2001 are -0.5 and -0.8 percent, respectively, while for the year as a whole the forecast is 1.1 percent<sup>16</sup>. In 2002, an upturn is expected in the second quarter with an annual growth of 1.5 percent. It is worth pointing out that the most important international investment banks predict a more unfavorable scenario. This can be seen in the average forecast by Goldman Sachs, JP Morgan and Deutsche Bank of 0.8 percent for economic growth in the United States (Table 12); and

---

<sup>14</sup> Unless specified otherwise, the forecasts reported in this section are taken from the Survey of the Expectations of Private Sector Economic Specialists conducted each month by Banco de México.

<sup>15</sup> Likewise, the variation coefficient shows a greater dispersion of survey answers.

<sup>16</sup> Source: Consensus Forecasts, September 25<sup>th</sup> 2001. The forecast for the third quarter corresponds to monthly-annualized growth of the seasonally adjusted series.

- (b) The average price of the Mexican crude oil export mix forecast for 2001 is 19.69 dollars per barrel<sup>17</sup>. By 2002, the average price is expected to be 17.16 dollars per barrel. It is worth pointing out that, the implicit volatility in oil futures prices has risen considerably as a result of the prevailing uncertainty in the world economy.

Table 12

**Expectations for GDP Growth in the United States in 2002**

Annualized quarterly percentage change

	2001			2002				
	III	IV	Annual	I	II	III	IV	Annual
Consensus Forecasts	-0.5	-0.8	1.0	1.5	3.2	3.9	3.9	1.2
Deutsche Bank	-0.9	-2.6	1.0	-0.3	3.2	5.0	5.5	0.9
Goldman Sachs	-0.5	-2.5	1.0	0.5	2.0	3.0	3.0	0.5
JP Morgan	-2.5	-1.5	0.8	-0.5	3.0	4.0	4.0	0.6
<b>Average*</b>	<b>-1.3</b>	<b>-2.2</b>	<b>0.9</b>	<b>-0.1</b>	<b>2.7</b>	<b>4.0</b>	<b>4.2</b>	<b>0.7</b>

\*Average of the forecasts from Deutsche Bank, Goldman Sachs and JP Morgan revised until October 22<sup>nd</sup>.

During September, the forecast for the exchange rate at year-end 2001 also increased as a consequence of uncertainty in the international markets.

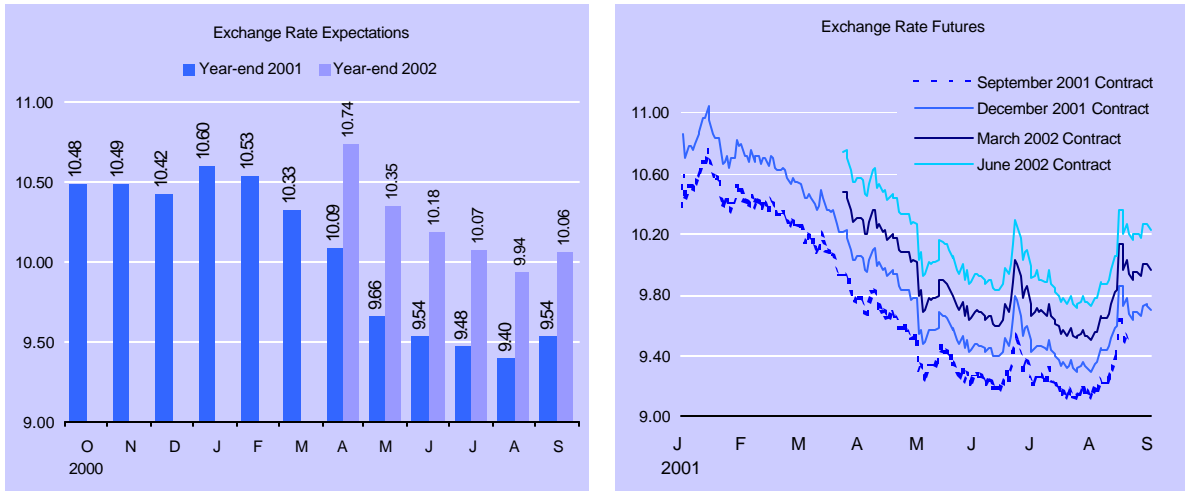
At the end of September the private sector predicted that the exchange rate would be 9.54 pesos per dollar in December 2001 and around that time (September 28<sup>th</sup>) peso futures prices for year-end 2001 were situated at 9.70 pesos per dollar (Chart 18).

Those specialists who took part in the survey estimate that the exchange rate at year-end 2002 will be 10.06 pesos per dollar, while peso futures indicate that it will be 10.80<sup>18</sup> pesos per dollar.

<sup>17</sup> Taking into account the difference between WTI oil futures prices (October 1<sup>st</sup>) and the price of the Mexican crude oil export mix on that date, the average price for Mexico's crude oil mix is estimated at 19.11 dollars per barrel for 2001.

<sup>18</sup> This is the future price on September 28<sup>th</sup>; however on October 15<sup>th</sup> the peso future price for year-end 2002 was 10.45 pesos per dollar.

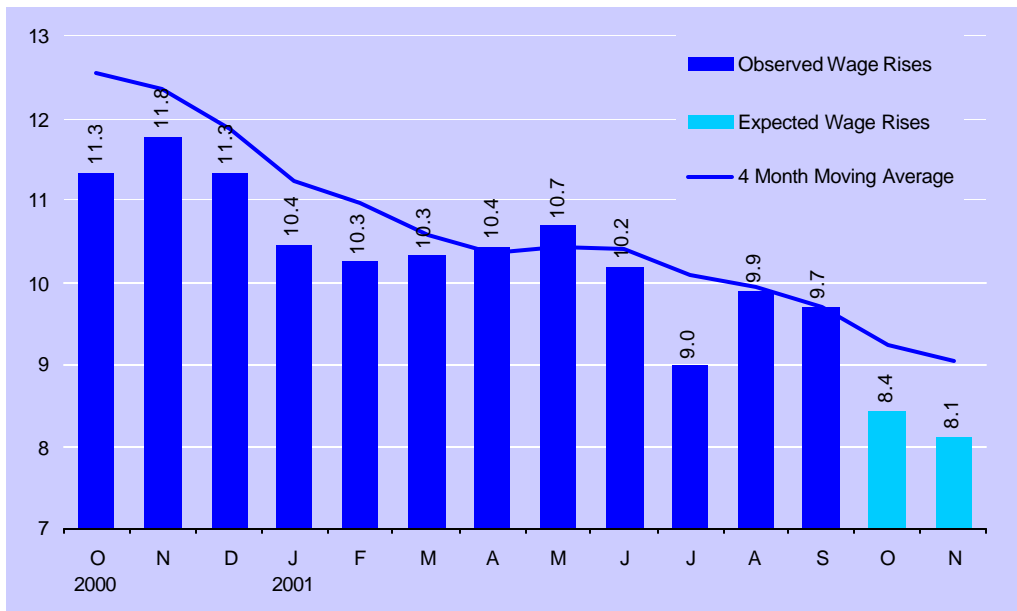
**Chart 18** **Peso Futures Prices and Exchange Rate Expectations for Year-end 2001**  
Pesos per dollar



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

The contractual wage rises expected by analysts in October and November are 8.43 and 8.13 percent, respectively (Chart 19). It is worth mentioning that throughout the current year the downward adjustment of contractual wages that had been expected by analysts failed to materialize.

**Chart 19** **Contractual Wage Rises**  
Annual percentage change



SOURCE: Ministry of Labor. For October and November of 2001, information was taken from the forecasts reported in Banco de México's Survey of the Expectations of Private Sector Economic Specialists carried out in 2001.

Consultants predict that the annual growth rate of GDP will be 0.21 percent in 2001, clearly below that reported in June (2.07 percent). This revision was accompanied by a considerable increase in the dispersion of answers to the survey<sup>19</sup>. For the year as a whole, analysts forecast narrower trade and current account deficits than those estimated in June, making downward revisions of 11.359 to 9.001 billion dollars and of 20.866 to 18.413 billion, respectively. Moreover, for 2001, analysts estimate a 0.8 percent increase in non-oil exports and a 16.2 percent reduction in oil exports. They also predict that imports will increase 0.9 percent in 2001. Finally, analysts taking part in the survey made a slight correction to their forecasts for foreign direct investment flows expected this year, from 17.615 billion dollars in June to 17.684 billion in September.

The forecast for real GDP growth in 2002 was revised downwards, from 4.46 percent in June to 2.85 percent in September. Furthermore, answers were more dispersed.<sup>20</sup> Predictions for the current account and the trade deficits next year are 20.834 and 11.056 billion dollars, respectively. Expectations regarding foreign direct investment inflows moved from 14.742 billion dollars in June to 13.885 billion in September.

Business climate and business confidence indicators for the private sector remained weak. Only 7 percent of the analysts who took part in the survey considered that the business environment will be favorable in the next quarter, while 21 percent thought it will remain unchanged, and 72 percent believed it will deteriorate.

In the opinion of private sector analysts, the main factors that could limit Mexican economic activity over the following six months are: the weakness of external markets and of the world economy (28 percent of answers); the international financial instability and international political uncertainty (12 percent each); uncertainty regarding the Mexican economy and the possible contraction of the supply of external resources (8 percent each); and, finally, the fall in oil export prices and the weak domestic market (7 percent each).

---

<sup>19</sup> The variation coefficient moved from 0.29 in June to 1.57 in September 2001.

<sup>20</sup> The variation coefficient increased from 0.19 in June to 0.44 in September 2001.

### IV.1.2. Private Sector Inflation Expectations

In the September survey, monthly inflation forecasts for October, November and December were 0.60, 0.68 and 0.87 percent, respectively. These forecasts imply that annual inflation will fall from 6.14 percent in September to 5.64 percent in December.

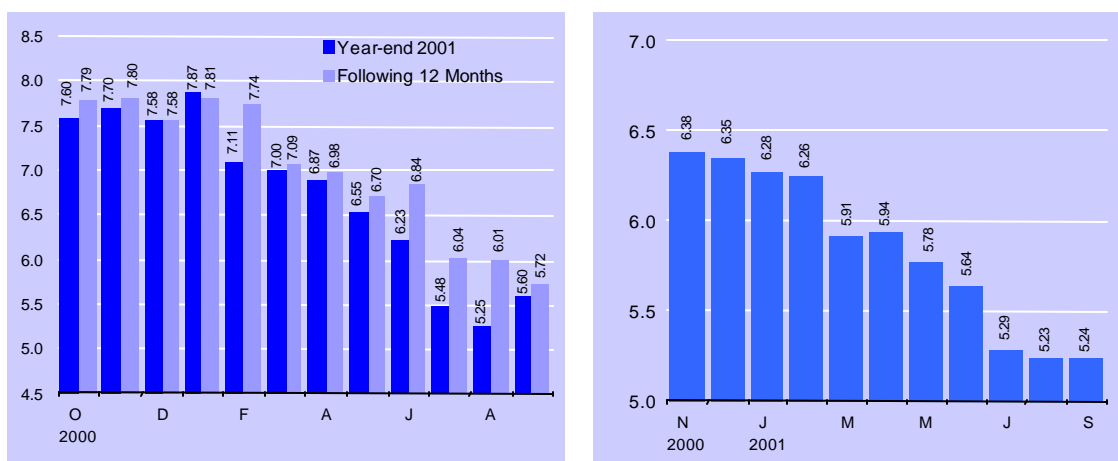
Those analysts participating in the survey revised their inflation expectations for the following twelve months downwards from 6.84 percent in June 2001 to 5.72 percent in September and for year-end 2001 from 6.23 percent in June to 5.60 percent in September. Taking into account the likely effects of an eventual passing of the tax reform, consultants have estimated inflation of 6.55 percent for the following twelve months and of 6.25 percent for the end of this year. Core inflation expectations for year-end 2001 decreased from 6.18 percent in June to 5.36 percent in September. Analysts forecasted annual inflation at 5.24 percent for year-end 2002, lower than the 5.64 percent reported in June (Chart 20). Finally, expected inflation for 2003 is 4 percent.<sup>21</sup>

Chart 20

#### Evolution of Inflation Expectations

Annual percentage change

Year-end 2001 and the Following 12 months      Year-end 2002



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

<sup>21</sup> Survey of Inflation Expectations, Infosel Financiero.



## V. Balance of Risks and Conclusions

---

The performance of the Mexican economy throughout 2001 has been affected principally by three factors:

- (a) the drastic slowdown of the United States' economy;
- (b) the availability and terms of external financing; and
- (c) the increase in unit labor costs derived from large contractual wage rises.

The significant downturn of economic activity in the United States had an unfavorable and immediate impact on the expansion of exports, private investment and employment in Mexico. Furthermore, its effects on employment, although delayed, led to an important fall in the growth rate of consumption. In this way, domestic supply and demand adapted swiftly and without disruption to the economic weakening of Mexico's main trading partner. Finally, as has already been stated in this Report, the reduction in the growth rate of domestic demand is the main reason why the widening of the current account deficit has been significantly less than expected. Obviously, this phenomenon, via its direct impact on prices and its role in exchange rate stability, contributed to the lower inflationary pressures registered in 2001.

The second factor that has significantly influenced the evolution of the economy is the abundant supply of foreign capital during the first three quarters of the year, especially long-term investment. This has helped to limit the impact of the external environment on the costs and availability of external financing for Mexico and has contributed to the fall in domestic interest rates as well as the appreciation of the exchange rate.

The economic slowdown and the abundant supply of foreign capital have together created an environment favorable to the disinflation process. This is due to the fact that the easing of aggregate demand expansion and the plentiful supply of external resources limited the capacity of producers to pass on the increases in unit labor costs to their prices of non-tradable goods. Furthermore, by favoring exchange rate stability, foreign capital has induced a considerable reduction in the inflation of tradable goods.

Lastly, contractual wage rises during the year have been clearly incompatible with the inflation target and labor productivity gains. This, together with the contraction of external and domestic demand, has led to the highest number of job losses registered in the first nine months for the last five years. Moreover, increases in unit labor costs have represented an obstacle to the disinflation process and have limited the fall of overall inflation.

The behavior of all the aforementioned factors will, to a great extent, determine the path of the economy and prices in Mexico over the next few months. It is worth mentioning here that the behavior of the world economy, and specifically that of the United States, already pointed towards a period of more pronounced economic weakness even before the terrorist attacks on September 11<sup>th</sup>. The attacks confirmed this insight and induced an increase in international capital markets' risk aversion. This impact will lead to an increment in the cost and reduced availability of financing for emerging economies. Furthermore, the deterioration of prospects for growth of the world economy has given rise to an important reduction in the price of oil. Thus, regrettably, the external risks that Banco de México warned of in its previous Inflation Report have materialized: a weaker United States growth rate, a lower oil price and stricter external financing terms.

Below are the main assumptions that make up Banco de México's base scenario for the evolution of the external environment during the remainder of 2001 and 2002:

- (a) The growth of the United States' economy is expected to be around 1 percent in the year 2001 and between 0.5 and 0.9 percent in 2002. Furthermore, a rapid recovery is expected in the second quarter of next year as a consequence of the implemented expansionary monetary and fiscal policies. It is worth mentioning that given the prevailing global economic and political uncertainty, these assumptions are subject to a higher degree of error than normal. In addition, the aforementioned intervals do not consider the possibility of new terrorist attacks in the United States that could reduce consumer confidence further and delay economic recovery;
- (b) Based on the spread between WTI futures prices and the Mexican crude oil export mix, it is estimated that in 2001 the average price of the latter will be around 19 dollars per barrel and between 16 and 17 dollars per barrel in 2002;

- (c) The impact of the deterioration of the international environment on the terms of access to financial markets will continue to be reflected in increased financing costs for the great majority of international companies and for emerging economies; and
- (d) The fragile financial situation in some economies in the region could lead to adverse outcomes that may affect other countries.

The increased weakness of the international environment will be transmitted to the Mexican economy through various channels, among which the most important are:

- (a) Reduced exports, revenue from tourism and, probably, remittances from Mexicans living abroad;
- (b) Fewer facilities to finance the current account, as a result of reduced flows of portfolio and foreign direct investment; and
- (c) Increasing uncertainty will cause investment projects to be postponed. Furthermore, it is foreseeable that the slack in the labor market will eventually lead to slower consumption growth.

Based on the foregoing and the trends of leading indicators, a forecast for the main macroeconomic variables in the remainder of 2001 and 2002 was prepared. The most important results of this prognosis are described below:

- (a) Information available at present relating to the downward revisions of forecasted growth for the United States' economy point to annual GDP growth in Mexico of approximately 0.5 percent in 2001. However, the impact of deteriorating economic expectations for the United States, the sectorial effects of the terrorist attacks and the fall in oil prices suggest that GDP will probably not grow in 2001. Meanwhile, in 2002 the Mexican economy is expected to expand by around 1.5 percent. It is worth pointing out that these projections are subject to a high degree of uncertainty due to the fact that they not only depend on the evolution of the world economy and the behavior of the international financial markets but also on the way the domestic economy responds to these influences;

- (b) The impact of changes in the international environment on the evolution of inflation is uncertain. On the one hand, the reduced growth of aggregate demand in Mexico, induced by the global deceleration, could help to lessen inflationary pressures. On the other, although aggregate demand and imports have been flexible in accommodating the fall in external demand, thereby avoiding substantial increases in the deficit of the external accounts, adjustments to lower revenue from tourism, remittances and oil exports might not be as automatic, as has occurred in the case of falls in manufactured goods exports. This is due to the fact that these items are not directly related to imports. In contrast, manufacturing exports contain a significant proportion of imported materials and this, together with the possible reduction of capital flows, could lead to greater volatility in the foreign exchange market, which in turn would put pressure on the prices of tradable goods. Furthermore, the increases in unit labor costs and the downward rigidity of core inflation for services indicate that inflationary pressures incompatible with the inflation target for 2002 will continue to be originated in that sector;

Although recent developments in inflation suggest that there is a high probability of meeting the inflation target in 2001, for the year 2002 there are indications of pressures on prices that mean it is unwise to actively pursue less restrictive monetary conditions, at least while wage rigidity persists. However in an environment of slow economic growth and in the absence of factors causing financial vulnerability, it is highly likely that the pass through effect on prices of movements in the exchange rate and unit labor costs could be weaker than in the past; and

- (c) The deceleration of aggregate demand in 2001 is in line with an annual current account deficit of less than 3 percent of GDP. The repercussions of the deterioration in the international environment on exports and tourism could lead to the widening of this deficit to around 3 percent of GDP in 2002.

Table 13

**Forecasts of the Main Macroeconomic Variables for 2002.**

<b>Gross Domestic Product</b> (Annual Growth)	1.5
<b>Private Consumption</b> (Annual Growth)	1.8
<b>Private Investment</b> (Annual Growth)	3.1
<b>Trade Balance</b> (Percent of GDP)	1.8
<b>Current Account</b> (Percent of GDP)	3.0
<b>Inflation</b> (Dec-Dec)	4.5
<b>Oil Price</b> (US\$/Barrel)	16 - 17
<b>US Economy</b> (Annual Growth)	0.7

Despite the probability of these unfavorable effects, it is worth emphasizing that the current economic cycle is clearly different from past financial and balance of payments' crises. The national economic downturn is a consequence of unfavorable global conditions and not of domestic imbalances. Thus, in spite of the shocks that the Mexican economy has been exposed to, it has not experienced exchange rate instability, capital outflows or sudden interest rate hikes. On the contrary, the exchange rate has been stable, there have been high levels of foreign investment and even reductions in interest rates. These results are to a great extent based on the many strengths of the Mexican economy, the most significant of which include:

- a flexible exchange rate regime;
- prudent fiscal policy;
- administration of the public sector debt with the aim of reducing the concentration of amortizations;
- inflation target-based monetary policy; and
- a more solid financial system.

The main external risk factors to which the above base scenario is exposed are:

- (a) reduced economic growth in the United States; and
- (b) a drastic fall in oil prices.

However, the majority of analysts that follow the United States' economy anticipate that from the second quarter of 2002 it will begin to register positive growth rates. Nevertheless, the likelihood that such a scenario could be delayed must not be ignored.

This could occur if the fiscal and monetary incentives implemented by United States authorities have a less than expected impact and, as a consequence, the rapid recovery expected for the second quarter of 2002 fails to materialize. Although the possibility exists that these stimuli will have a greater and faster impact than has been assumed, everything seems to point to lower economic growth than contemplated by the base scenario. Furthermore, if new terrorist attacks were to take place in the United States, consumer confidence and the business climate would be severely damaged.

In the above context, oil prices would also most probably experience further falls. If these phenomena were to occur they would cause slower economic growth and reduced job creation in Mexico. As has been stated, such a situation would have an ambiguous impact on inflation due to the fact that slower economic growth would be associated with weakening inflationary pressures. Nevertheless, its unfavorable impact on exports and economic activity in Mexico could also lead to a fall in the demand for Mexican assets that in turn could cause the exchange rate to depreciate. Due to the significant impact such depreciation would have on the formation of inflation expectations, monetary policy would have to be tightened in order to attain the proposed inflation targets.

At the time of publication of this document, the principal domestic risk factors that could lead to a change in the foregoing base scenario are:

- (a) that an eventual rejection of the tax reform bill or the passing of a version with a lower revenue effect than expected by the markets were to lead to a drastic deterioration of expectations; and
- (b) that the gap between contractual wage settlements and the sum of the inflation target and foreseeable labor productivity gains were to widen.

If the Mexican Congress passes the proposed tax reform, three goals should be achieved: a reduction in public finances' reliance on oil income, an increase in government revenue and a

decrease in the government's financing requirements. Consequently, the aforementioned reform is bound to play an important role in the successful completion of the disinflationary process.

As has been frequently repeated, contractual wage rises incompatible with the sum of foreseeable gains in labor productivity and the inflation target are not only a cause of inflationary pressures but also have a negative impact on job creation and company profits. In the current year, the lowest number of job losses has been in sectors with the most moderate wage settlements. In the context of the economic downturn and the fall in demand, firms have compensated for increased unit labor costs by cutting the work force. It is therefore important to achieve contractual wage congruence in order to protect employment and ensure a rapid recovery in the near future. If this gap becomes wider the competitiveness of Mexican industry will deteriorate and this will have a negative impact on economic growth and job creation. Under such circumstances monetary policy would have to become more restrictive in order to ensure the attainment of medium-term inflation goals and contribute to a swifter recovery of employment.

\* \* \*

The adverse international environment implies that the rebound of growth in exports and of the Mexican economy as a whole will be gradual. Furthermore, when this occurs it will be difficult to expect the expansion to be as vigorous as that achieved over the last two years. This is due to the fact that the growth rates of the United States' economy are not expected to return to their high levels of the last five years in the near future.

The difficult situation that the Mexican economy is currently going through has led some analysts to recommend the application of monetary and fiscal measures in order to stimulate the economy. In the monetary field, the rapid fall in annual inflation during 2001 has allowed for an important reduction in interest rates. However, in the fiscal realm, the economic downturn has further weakened public sector revenue. Therefore, the most prudent course of action will be to strengthen the efforts to preserve fiscal discipline. In this context, a larger public deficit could cause confidence to deteriorate, interest rates to increase and financial volatility. This is in contrast to the implementation of an anti-cyclical fiscal policy in the United States and which is feasible there due to the surplus in the accounts of the public sector.

Faced with the aforementioned outlook, the following areas of the domestic economy must be strengthened in order to allow Mexico to expand its growth potential:

- (a) macroeconomic stability; and
- (b) the advancement of pending reforms.

Regarding macroeconomic stability, the greatest contribution that can be made by fiscal and monetary policies, is to persevere with the prudence that has characterized them to date. For this reason, the Board of Governors of Banco de México ratifies the commitment to achieve a rate of inflation below 4.5 percent by the end of 2002 and inflation of 3 percent in 2003.

In addition, the passing of a satisfactory tax reform bill that strengthens the solvency of the public sector and allows greater spending on health and education, as well as programs to alleviate poverty, is indispensable.

In terms of structural aspects, progress needs to be made in the following priority areas, among others:

- (a) reform of the energy sector;
- (b) deepening of the economic deregulation process;
- (c) promotion of the development of the capitals market and the achievement of higher domestic rates of saving; and
- (d) stimulus of investment in infrastructure, technology, education and health.

Progress in the aforementioned fields will permit an increase in domestic economic productivity. In turn, this will favor faster economic growth, more and better jobs and a more equitable distribution of income

From the fall of the Berlin wall to the present, the globalization process of the world's economies has moved forwards at a rapid pace. Although the costs and benefits of this process have been the subject of lengthy discussions, it is generally recognized that it has opened opportunities to improve living standards, as has occurred in Southeast Asian countries. The forces driving this process and the speed at which it extended seemed inexorable.



The recent terrorist attacks have cast doubt on the implications of globalization. It is possible that concerns about national security as a result of the terrorist attacks will lead to greater controls on the flow of goods and on the movement of people from certain regions of the world, as well as greater interest in places where risk perceptions are more favorable. This suggests that in the future the opening process will be redefined in more regional terms.

Under these circumstances, Mexico has the opportunity to consolidate its economic integration with the United States and Canada. This would be achieved through greater convergence of macroeconomic, financial, labor, regulatory and legal policies, as has occurred among European countries over the last decade. This could be done without limiting the search for more diversified commercial and financial relationships between Mexico and countries on other continents.

There are other factors besides those of an economic nature that should be taken into consideration so that Mexico can take full advantage of the possibilities offered by the present situation. Among these is the opportunity to strengthen collective security in North America, which would make Mexico a more attractive destination for tourism and investment and facilitate the flow of migrants and the transfer of technology.

The immediate future holds important challenges for Mexico's economy. In contrast with the recent past, when the external environment was favorable, adverse global conditions today have to be compensated through an increase in the competitiveness of Mexican companies. This will only become a reality if decisive progress is made in the current Administration's agenda of structural change, with the active participation of the Congress, in an atmosphere of democratic and plural debate. This is the road to faster recovery and the achievement of high and sustainable growth rates, in a context of low and stable inflation. Both are indispensable if a permanent improvement is to be made to the standard of living of Mexicans.