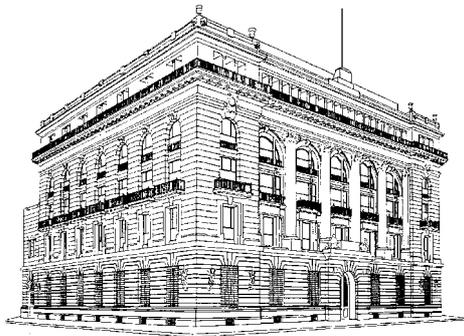


# Inflation Report

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April – June 2002



BANCO<sup>DE</sup>MEXICO

JULY 2002

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***FOREWARNING***

*Unless otherwise stated, this document has been prepared using data available as of July 24<sup>th</sup>, 2002. Figures are preliminary and subject to change.*



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## I. Introduction

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In this document Banco de México presents its assessment of the country's economic conditions which served as a basis for monetary policy decisions during the second quarter of 2002. It also includes the scenario behind the Central Bank's forecasts on inflation and economic activity. The balance of risks is also outlined.

The annual growth rate of the CPI rebounded during April-June. This mainly obeyed to increases in the subindex of agricultural and livestock prices and in the subindex of administered prices. Meanwhile, core inflation continued on a downward path. Core inflation of goods fell substantially despite the considerable depreciation of the exchange rate, therefore suggesting that the latter has not yet been transmitted to prices.

The synchronized recovery of the industrial sectors of Mexico and the United States continued during the second quarter of 2002. This parallel behavior became evident in three ways: the easing of the fall in manufacturing exports measured at an annual rate, the significant increase of these exports in seasonally adjusted figures, and the incipient job creation in the Mexican industrial sector. Thus, at the time of publishing this Report, seasonally adjusted figures show that the monthly average growth of industrial output during the period was 0.3 percent. Furthermore, data available for domestic demand suggests that consumption and investment have already recorded positive growth. As a result, annual GDP growth in the second quarter was nearly 1.8 percent, thus implying a quarterly increase in its seasonally adjusted figures.

As for inflation forecasts for the rest of the year, core inflation is expected to remain stable. Consequently, the path of annual CPI inflation will mainly depend on the behavior of the subindexes that are excluded from core inflation. Therefore, fluctuations in annual overall inflation are expected to continue. In particular, there will probably be a further increase in overall inflation in July, partly due to a statistical effect stemming from the deflation experienced in July 2001. Nevertheless, annual overall inflation is expected to retake its downward path in August and end the year at a level in line with the target. It is worth pointing out that although the current monetary policy stance is compatible with the attainment of this target, the volatility of the subindexes of agricultural and livestock prices and of prices administered or

regulated by the public sector could lead to sudden fluctuations in the overall inflation index for the remainder of the year.

Regarding the evolution of economic activity, forecasts are for the recovery to continue and become more generalized in all sectors. The main components of aggregate demand are expected to increasingly fuel this rebound. In the second half of the year, GDP is expected to expand at an annual rate of approximately 4 percent and 1.8 percent for the year as a whole. As will be explained, these forecasts are subject to a great deal of uncertainty due to a lack of consensus on the evolution of the world economy in the near future and to the recent volatility in the international financial markets.

This issue of the Inflation Report contains a new section that specifies inflation targets for 2003 and future years (the long-term objective). This objective consists of attaining an annual CPI inflation of 3 percent, maintaining it within a variability interval of plus/minus one percentage point around this target. This decision is extremely important. The long-term inflation target will guide monetary policy actions in the years beyond 2003 and will provide the public with a reference to evaluate Central Bank's actions. Therefore, the adoption of a long-term objective is indeed a significant advance in the accountability of Banco de México and in the transparency of designing and implementing monetary policy.

## II. Recent Developments in Inflation

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During the second quarter of 2002 annual overall inflation rose while core inflation declined. The rebound in CPI inflation represented a deviation from the stable path that had been forecasted for this variable in the Inflation Report of the previous quarter. In contrast, core inflation declined at a faster than expected rate. From the results attained during the quarter the following are noteworthy:

- (a) Annual headline inflation was higher than at the end of the previous quarter;
- (b) Annual core inflation continued to decline; therefore, the spread between this variable and overall inflation widened;
- (c) Despite the depreciation of the exchange rate, annual core inflation of goods fell considerably;
- (d) Annual core inflation of services decreased slightly;
- (e) Annual inflation of goods and services that are excluded from core inflation rose substantially due to increases in the price subindex for agricultural and livestock products and for goods whose prices are administered by the public sector; and
- (f) The downward trend of annual PPI inflation excluding oil and services was halted mainly because of the depreciation of the exchange rate.

### II.1. Evolution of Several Inflation Indicators

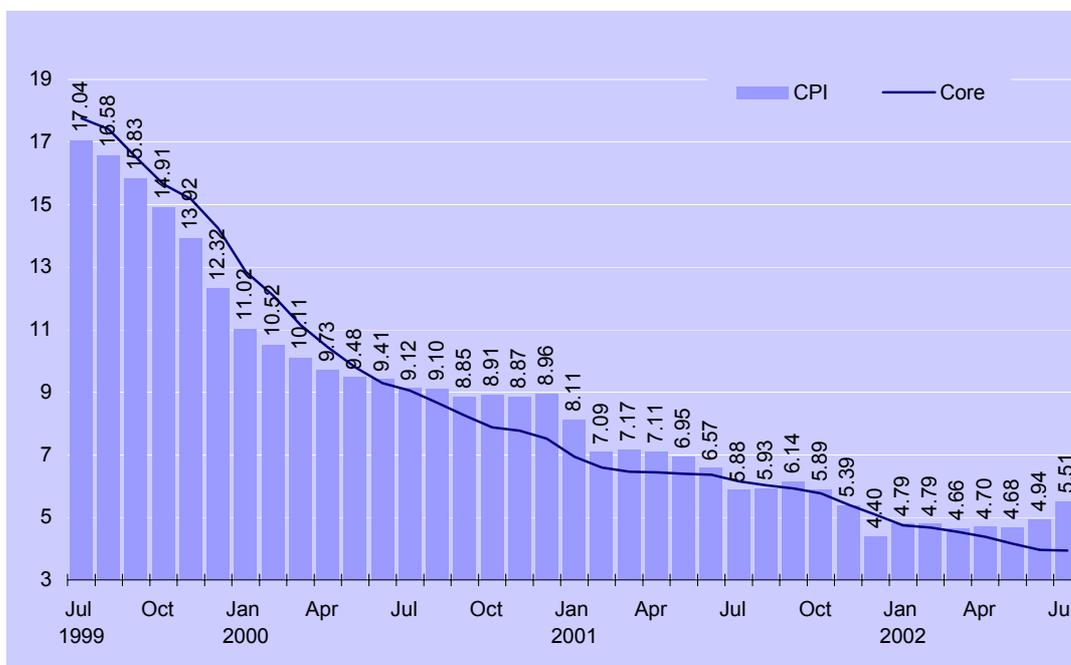
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#### II.1.1. Annual Inflation of the Consumer Price Index and of the Core Price Index

CPI annual inflation went up during the second quarter of 2002 compared to that at the end of the previous quarter, from 4.66 percent in March to 4.94 percent in June (Table 1). This upturn mainly responded to a 0.26 percentage point increase in the growth rate of the CPI in June compared to its level in May. However,

during April and May inflation of this index remained relatively stable.

**Graph 1 National Consumer Price Index and Core Price Index**  
Annual percentage change



The path of core inflation was favorable as it declined 0.58 percentage points during the quarter, from 4.54 percent in March to 3.96 percent in June. This result can be explained by the reduction in core inflation of both goods and services. For a second consecutive quarter, core inflation was lower than CPI inflation due to the high rate of growth of the price sub-indexes for education services, goods administered or regulated by the public sector and agricultural and livestock products (in particular, fruits and vegetables).

Inflation of agricultural and livestock goods fell during the first two months of the quarter but grew substantially in June (Table 1). Likewise, inflation of the sub-index of prices administered by the public sector rose, mainly due to the 16.01 percent increase in domestic gas prices from March to June 2002. The smaller seasonal reduction of electricity tariffs (11.6 percent compared to last year's 13.43 percent) contributed to higher levels of inflation in administered prices.

Table 1

**Price Indexes: CPI, Core, Agricultural and Livestock Products, Education and Administered or Regulated by the Public Sector**

Annual percentage changes

	Annual changes			Quarterly changes		
	Mar 2002/ Mar 2001	Mar 2002/ Mar 2001	Mar 2001/ Mar 2000	Mar 2002/ Mar 2002	Mar 2002/ Dec 2001	Mar 2001/ Mar 2001
	CPI	4.66	4.40	7.17	1.37	0.97
Core	4.54	5.08	6.46	1.67	0.78	2.20
Goods	2.84	3.85	5.66	1.01	0.46	2.01
Services	7.02	6.87	7.66	2.61	1.26	2.46
Agricultural and Livestock	2.85	1.35	3.98	-4.95	0.10	-6.33
Fruits and Vegetables	13.61	14.02	14.63	0.98	0.05	1.35
Meat and Eggs	0.42	4.56	4.67	-1.25	-0.71	2.82
Education	4.58	2.21	10.62	4.51	2.45	2.15
Administered or						
Regulated	7.28	5.13	6.01	4.34	0.66	2.24
Administered	7.27	1.35	11.49	1.00	4.73	-4.58
Regulated	6.66	7.28	6.89	0.91	4.34	1.49

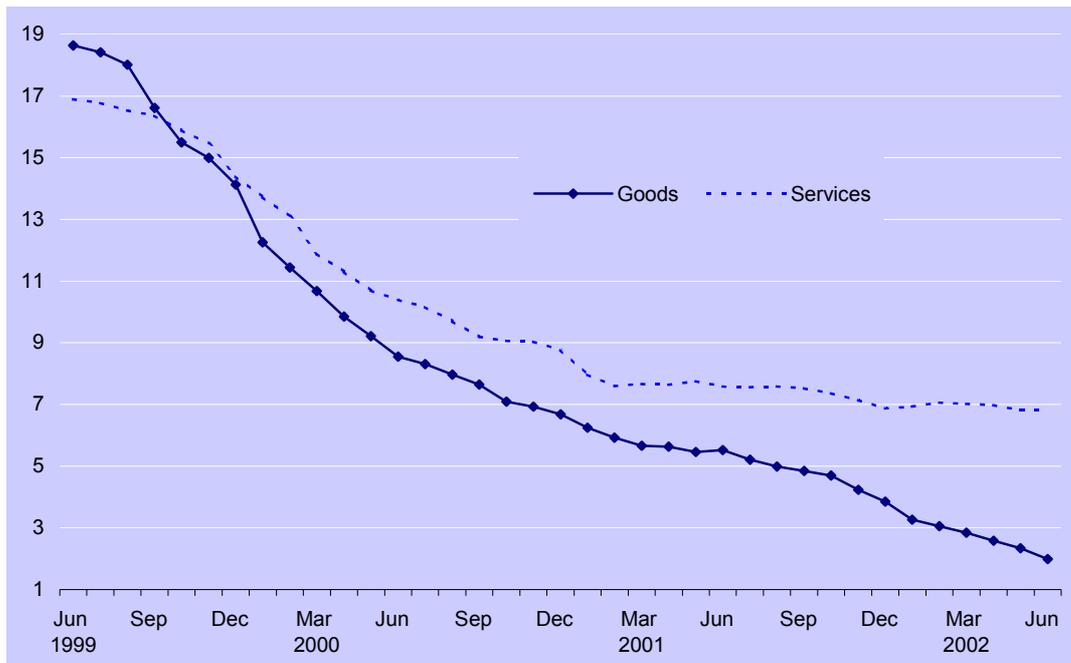
Core inflation of goods, which in past years had been very sensitive to exchange rate fluctuations, fell significantly during the quarter despite the considerable depreciation of the exchange rate. In June 2002, annual core inflation of goods turned out to be 1.99 percent, comparing favorably with that of March (2.84 percent), while core inflation of services posted a small reduction. The evolution of core inflation of services may have responded to the decline in the nominal growth rates of contractual wages over the last six months, which has perhaps started to have a moderate effect on this sector's price formation process. Furthermore, the impact of the new tax on luxury goods and services –which mostly affected prices in restaurants and bars– was small. In June 2002, the growth rate of the core services subindex was 6.81 percent, compared to 7.02 percent in March. Core inflation of services declined at a slower rate than that of goods, therefore widening the spread between both indicators (Graph 2).

In the past, the pass-through effect of fluctuations in the exchange rate to prices in Mexico was extremely rapid and intense, mainly in the price subindex for goods. However, the most recent depreciation of the exchange rate in the second quarter of 2002 has not coincided with a rebound in core inflation of goods. This seems to suggest that up until the time of publishing this Report, exchange rate depreciation has not affected prices.<sup>1</sup> It is important to mention that the fact that this transmission has not taken place does not

<sup>1</sup> A more detailed explanation of this phenomenon can be found in Section III of this document.

mean that risks have dissipated. For this reason, Banco de México continually monitors price developments in order to detect any evidence of this phenomenon.

**Graph 2** **Core Price Index for Goods and Services**  
Annual percentage change

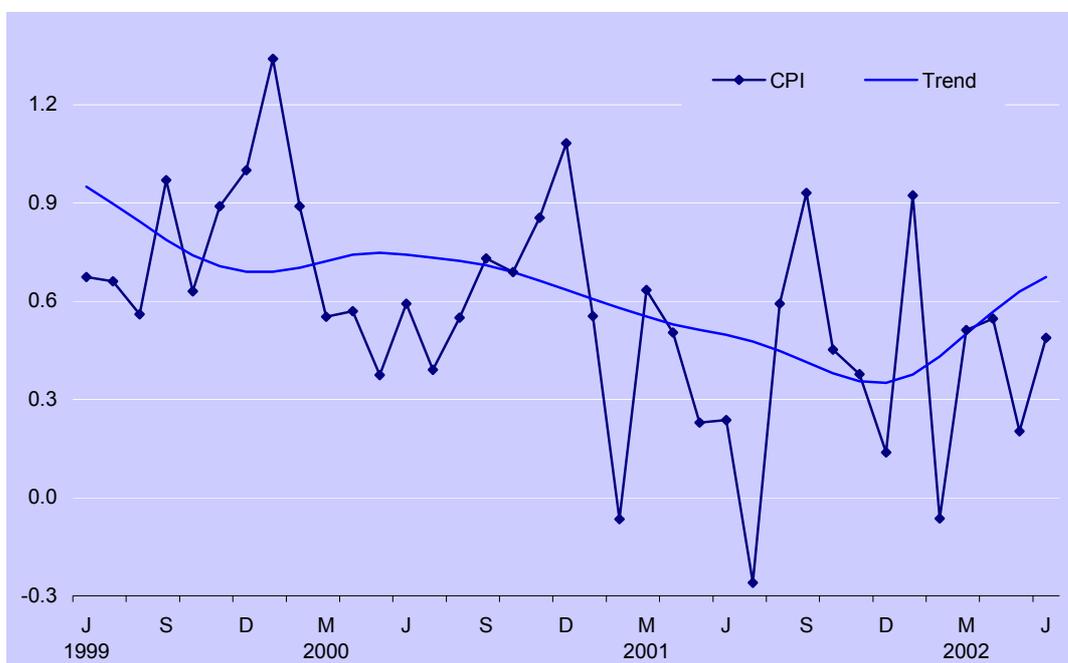


**II.1.2. Monthly Inflation of the Consumer Price Index and Core Price Index**

Monthly CPI inflation in April, May and June was 0.55, 0.20 and 0.49 percent, respectively. These results meant that the downward trend of CPI inflation that had prevailed since the second quarter of 2000 reverted (Graph 3). In particular, CPI growth in April and June outpaced that registered in the same months of the previous year.

Overall inflation in April and June 2002 was higher than expected by private sector analysts while in May it was very similar to the forecast (Table 2). The unexpected rise in inflation during April and June mainly responded to the rise in prices of administered goods and agricultural and livestock products. Usually, there is greater error in forecasts for these products because they are more volatile than the rest of the items included in the CPI basket.

**Graph 3** **Consumer Price Index**  
Annual percentage change



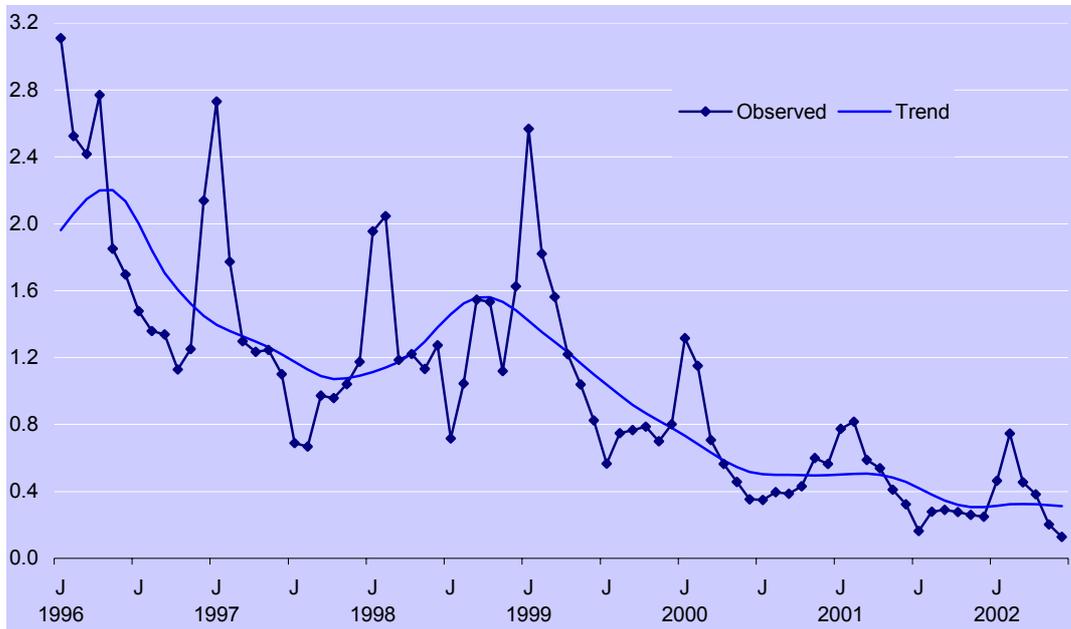
**Table 2** **Expected and Observed Monthly Inflation**  
Percentage

	2002		2001	
	Observed	Expected <sup>1/</sup>	Observed	Expected <sup>1/</sup>
April	0.55	0.37	0.50	0.51
May	0.20	0.22	0.23	0.69
June	0.49	0.24	0.24	0.63

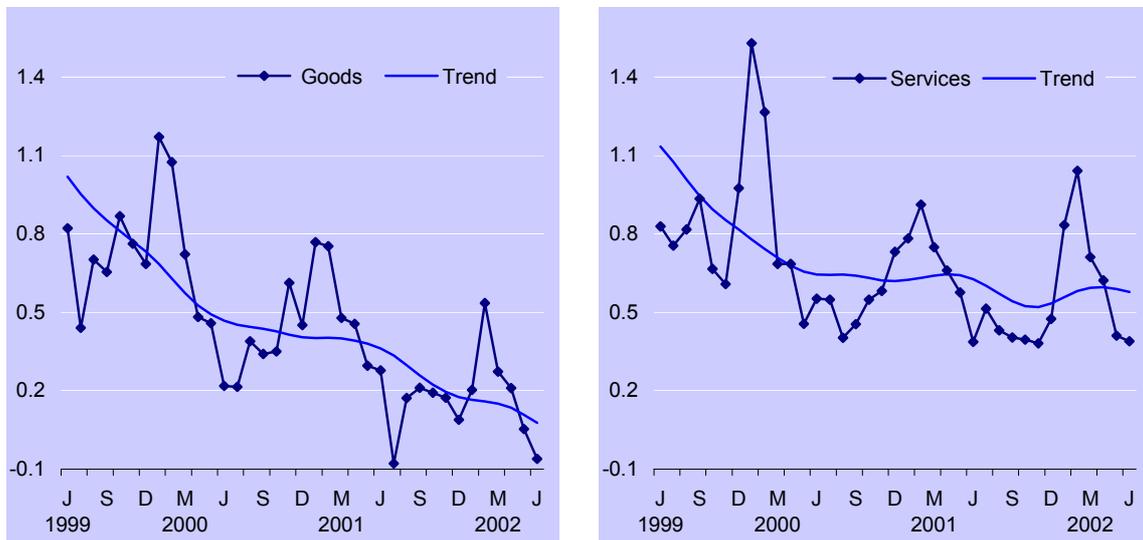
<sup>1/</sup> Source: Forecasts for inflation at the end of the first quarter of 2002 according to the Survey on Private Sector Economic Analysts' Expectations undertaken by Banco de México.

The statistical trend of core inflation during the second quarter was slightly downward, contrasting with the increase registered by overall inflation (Graph 4). This behavior can be explained by the stability of core inflation of services and the continuous decline of core inflation of goods (Graph 5).

**Graph 4** **Core Price Index**  
Monthly percentage change



**Graph 5** **Core Price Indexes for Goods and Services**  
Monthly percentage change



### **II.1.3. Producer Price Index (PPI)**

At the end of the second quarter of 2002, the annual growth of the Producer Price Index (PPI) excluding oil and services was 3.85 percent, implying a 2.19 percentage point increase over its level in the previous quarter. This rebound mainly stemmed from the depreciation of the exchange rate. Past evidence suggests that the upward trend of this variable could mean higher inflation over the medium term in the tradable goods' sector. However, this will depend on the final impact the depreciation of the exchange rate has on the CPI, which apparently has weakened.

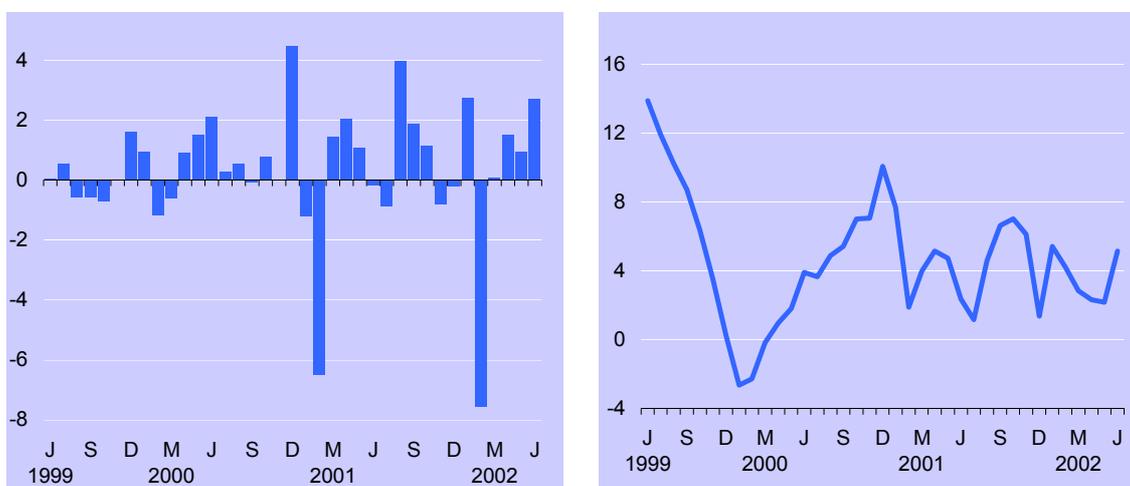
### **II.1.4. Transitory Factors that Affected Inflation**

During April-June 2002, annual inflation of agricultural and livestock goods closed at 5.15 percent, 2.30 percentage points higher than its level at end-March. This behavior responded to the high monthly growth rates of prices in April (1.52 percent), May (0.95 percent) and June (2.72 percent)<sup>2</sup> [Graph 6]. The increase in the price of tomato (37.85 percent), which has a high incidence on overall inflation, significantly influenced this result. Moreover, the price of oranges also rose considerably (74.74 percent). During the quarter the prices of the following products posted significant reductions: lemon, 22.82 percent; zucchini, 22.19 percent; eggs, 8.09 percent; fish and seafood, 4.44 percent; and beans, 4.49 percent.

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<sup>2</sup> In 2001, monthly variations of the subindex in April, May and June were 2.05, 1.08 and -0.20 percent, respectively.

**Graph 6** **Agricultural and Livestock Price Index**  
 Monthly percentage change      Annual percentage change



## II.2. Main Determinants of Inflation

The evolution of the international environment will be examined first due to its effects on Mexico's external accounts and its influence on the behavior of the exchange rate, output, aggregate demand and prices. Next, the path of wages and productivity will be reviewed, as both are direct determinants of unit labor costs, which have an important influence on the inflation process. Third, the evolution of aggregate supply and demand will be described. The analysis of these variables allows inflationary pressures derived from excess aggregate demand to be identified. The latter also affects the behavior of the current account, which will be studied separately. Then, the performance of the items that make up the capital account will be examined. Finally, the behavior of prices administered or regulated by the public sector will be assessed due to their direct and significant incidence on CPI inflation.

### II.2.1. International Environment

The main external variables that influence the performance of the Mexican economy posted mixed results. Although real variables had a relatively favorable behavior, that of international financial markets was less so, and by the end of the period new signs of uncertainty began to show up. Furthermore, indicators of economic activity in the United States did not have a uniform

evolution, as some variables continued to recover while others hardly showed any signs of improvement. On balance, evidence for the real sector indicates that economic recovery in that country is underway, albeit not as vigorously as expected. Moreover, most recent news regarding financial markets in the United States have been worrisome and could undermine the country's economic rebound. Finally, the economic outlook for Latin American countries deteriorated, especially for MERCOSUR members.

#### II.2.1.1. Oil Prices

In the second quarter of 2002, the average price of WTI oil was 26.29 US dollars per barrel, 4.83 US dollars higher than in the first quarter and 1.96 US dollars above average future prices contracts on the last day of March for delivery in April, May and June. The fact that this price fluctuated widely throughout the quarter is noteworthy.<sup>3</sup> The factors that seem to have contributed to the behavior of oil prices are the following:

- (a) Signs of economic recovery in the United States and a slight increase in world's demand for crude oil were factors that allowed oil prices to remain high. However, uncertainty regarding the strength of the aforementioned recovery affected the volatility of oil prices throughout the period;
- (b) Political tensions in the Middle East and the likelihood of a military action against Iraq by the United States led to higher and volatile oil prices, which added to Iraq's suspension of oil exports for most of the quarter; and
- (c) Expectations that OPEC would not increase oil supply in the second quarter of the year helped oil prices to remain at high levels. This forecast proved to be accurate when the OPEC decided not to raise production in the meeting held at end-June.

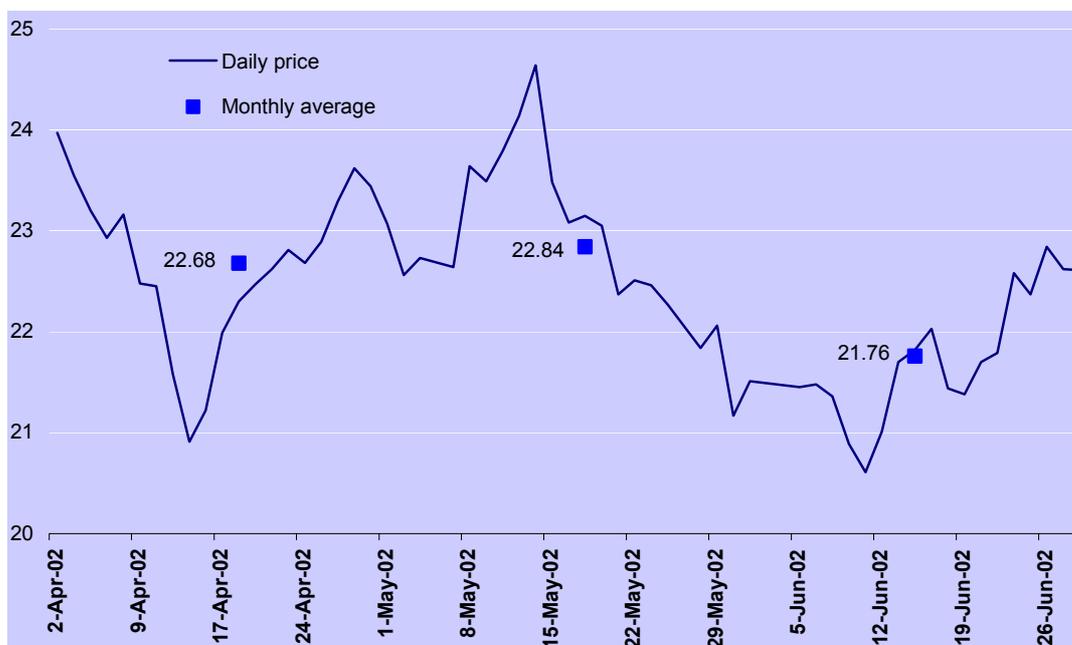
During April-June the average price of the Mexican oil export mix was 22.46 US dollars per barrel, 5.46 US dollars more than in the previous quarter. At the end of June this price was 22.61 US dollars, slightly above its level at end-March (Graph 7). During the second quarter, the spread between the Mexican oil export mix and the WTI fluctuated between 3.30 and 5.30 US dollars per

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<sup>3</sup> It fell in April, while the price of WTI oil reached a minimum of 23.47 US dollars. It went up in May when it rose to a maximum of 29.42 US dollars. It went down again at the start of June and then moved upwards by the end of the quarter. At the end of the period, WTI prices were 26.82 US dollars per barrel, higher than the 25.40 US dollar per barrel price recorded at the end of March 2002, for delivery in June of the same year.

barrel, being the widest at mid-May when the price of the WTI oil was at its peak.

**Graph 7** **Price of Mexico's Crude Oil Export Mix**  
US dollars per barrel



Source: REUTERS.

#### II.2.1.2. Evolution of the United States' Economy

The upturn in economic activity in the United States that began in the first quarter of the year continued, albeit less vigorously, throughout the second. Although this had already been anticipated, the growth slowdown between the first and second quarters was probably greater than expected. Nevertheless, forecasts continue to be biased towards an upturn of the United States' economy in 2002 that will prompt economic recovery worldwide. Nonetheless, risks surrounding this recovery have intensified recently, especially as a result of instability in the financial markets. Thus, the monetary authorities in the United States have decided to maintain their reference interest rates unaltered, while analysts have revised their growth forecasts for the second quarter and for the rest of the year slightly downwards.

The growth rate of real GDP in the United States was 6.1 percent<sup>4</sup> in the first quarter of 2002, meaning that recession in 2001

<sup>4</sup> Refers to seasonally adjusted GDP growth (at an annual rate).

was the shortest-lived in recent years. The recovery that took place during that quarter mainly derived from sustained household consumption, which reached a real annual rate of 3.3 percent during this period (after having increased 6.1 percent in the fourth quarter of 2001). This behavior can be explained by the decline in energy prices, tax reduction and low financing costs. The substantial fall in business inventories also had a significant influence on the sharp rise in GDP growth rate during the first quarter. This aggregate went from -120 billion US dollars in the last quarter of 2001 to -28 billion in the first quarter of 2002 (at 1996 prices). Furthermore, government expenditures in the first quarter increased at an annual rate of 6.6 percent, therefore stimulating GDP growth.

In the second quarter of 2002 the behavior of all the main contemporaneous and leading indicators of aggregate supply and demand in the United States' was positive (albeit showing some reversals and worrisome signs). This fact was attested by growth forecasts for the second quarter, which were between 2 and 3 percent. The following are the most outstanding features of the recent evolution of the United States' economy:

- (a) An improvement in consumer confidence indexes. Michigan University's confidence index moved from an average of 93 units in the first quarter of 2002 to 95 in the second. Nevertheless, this average increase conceals the reduction experienced by this index from 96.9 in May to 92.4 in June;<sup>5</sup>
- (b) The Institute for Supply Management's Survey, a leading indicator of industrial activity, reached 53.9, 55.7 and 56.2 percent in April, May and June, respectively. The figure for June was the highest in the year and above those observed in 2001;
- (c) In April and May new purchase orders for durable goods rose 0.4 and 0.6 percent, respectively, after having fallen in March;
- (d) Average new housing construction was 1.66 million (annual and seasonally adjusted figures), above levels observed in the previous two quarters;
- (e) Private consumption has apparently slowed, thus implying that the 0.1 percent reduction in May could lead to an annual growth rate of nearly 1.5 percent during the

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<sup>5</sup> The preliminary figure for July was 86.5 units.

second quarter, below the 3.3 percent registered in January-March. This trend was accompanied by an erratic behavior of the seasonally adjusted indicator for wholesale sales, which increased 1.2 percent in April, fell 1.2 percent in May and rose again 1.1 percent in June;

- (f) Against expectations, the reduction of inventories continued during the quarter. However, there are some signs that suggest that this fall has ceased. Thus, firm's and wholesalers' inventories decreased 0.2 percent and 0.9 percent, respectively in April. The latter rose 0.1 percent in May;
- (g) The monthly growth rate of the industrial output index (seasonally adjusted figures) was 0.2 percent in April, 0.4 percent in May and 0.8 percent in June, implying an average monthly growth of 0.5 percent in the second quarter, similar to that registered during the first quarter; and
- (h) Stock market indexes fell in the second half of the quarter. This can be attributed to the disclosure of fraudulent accounting practices in some of the most important corporations in the United States. This also added to adverse news on corporate profits. As a result, the Dow Jones Index fell 12 percent between May 17<sup>th</sup> and July 1<sup>st</sup> of this year. Interest rates on short and medium-term bonds issued by the United States' government went down around 50 basis points during the same period partly due to this deterioration.

The balance of the above effects on forecasts for the second quarter of 2002 is an annual GDP growth of between 2 and 3 percent and 2.5 and 3 percent for the year as a whole, a slight downward revision compared to expectations in May (Table 3). For the remainder of the year, estimates of the behavior of the various components of demand are as follows:

- (a) Private consumption's contribution to GDP growth could diminish. Some analysts foresee that consumption will have a downward adjustment in response to losses suffered in households' net worth due to corrections in the stock market indexes. However, housing values –an essential component of consumer's wealth– has strengthened due to the capitalization of house prices associated with the reduction of mortgage interest rates;

- (b) A moderate upturn in private investment is expected as a result of the continual decline in prices of technological equipment and the tax benefits included in the fiscal incentives package announced by the Federal Government in March;
- (c) The outlook for the following twelve months is that inventories will rise in response to the need to replenish warehouse stocks. Nevertheless, the contribution of inventory accumulation to GDP growth will be less noticeable during the remainder of the year compared to the first quarter; and
- (d) The expansionist bias of fiscal policy derived from the incentives' package will remain in force for the rest of the year until its likely reversal in 2003. The federal public deficit is expected to be higher than 1 percent of GDP.

One of the main risk factors limiting the recovery in economic activity stems from the sluggish rebound in the labor market. It is noteworthy that this recovery has relied on a substantial increase in worker productivity (annual rate of 8.4 percent during the first quarter), hence translating into relatively modest job creation. However, during May and June statistics for non-agricultural payrolls increased slightly. Towards the end of the first quarter the total number of unemployment claims rose above 400 thousand per week.<sup>6</sup> For most of the second quarter this indicator remained close to 410 thousand per week and only decreased to 382 thousand by the end of June. In the latter month the unemployment rate was 5.9 percent (above the non-inflationary unemployment rate).

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<sup>6</sup> This figure is still distorted due to the extension of the deadline to maintain welfare benefits.

Table 3

**Growth Forecasts for the United States Economy**

Annual percentage change

	Start of April 2002		Start of July 2002	
	II/2002	2002	II/2002	2002
Consensus Forecasts <sup>1/</sup>	n.a.	2.6	n.a.	2.8
Deutsche Bank	4.4	3.1	3.0	3.0
Goldman Sachs	3.0	2.4	2.0	2.5
JP Morgan	5.0	3.1	2.0	2.8

<sup>1/</sup> April 8<sup>th</sup> and July 8<sup>th</sup> 2002 *Consensus Forecasts*. Since the quarterly forecasts correspond to a survey carried out on a date different from that of the *Consensus Forecasts*, no reference is made to the quarterly forecast in this document.  
n.a. Not available.

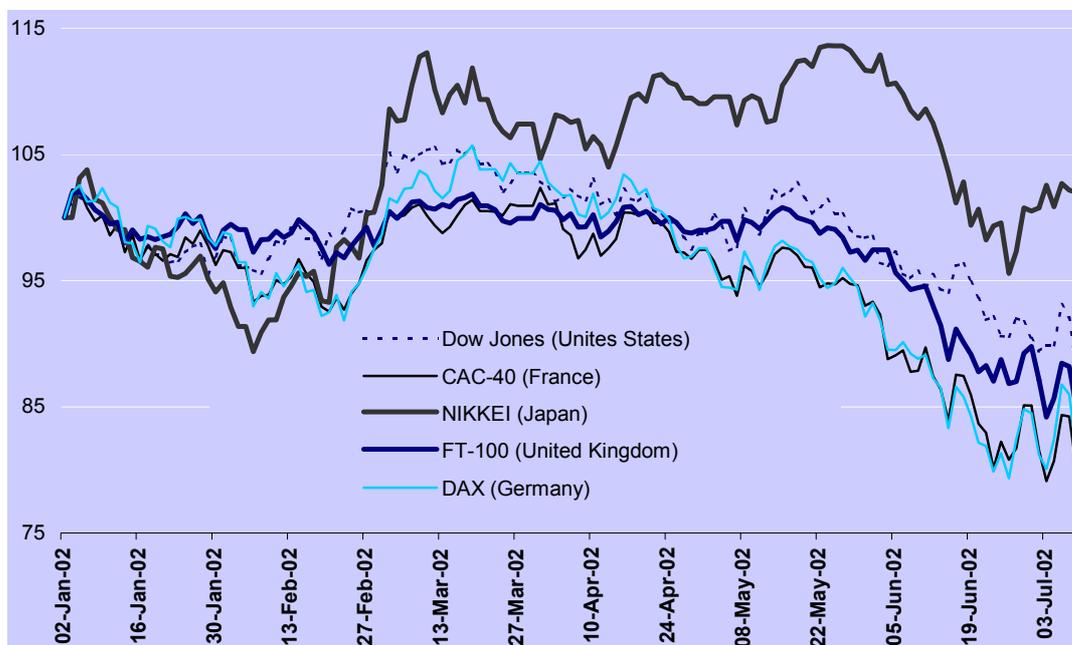
An additional risk factor that could hinder economic rebound in the United States is the recent wave of scandals involving corporations. The disclosure of firms' fraudulent accounting practices along with adverse news about profits have interrupted what seemed to be an incipient recovery of the stock markets after their fall in September 2001. The aforementioned also added to the decline in the prices of technology shares, which had already been recorded. In July of 2002, just before Worldcom's accounting fraud was announced, the NASDAQ index plummeted below 1,400 points. Meanwhile, the Dow Jones index continually fell, reaching a level of 8,019 points on July 19th, lower than its level in September 2001 (Graph 8). Nevertheless, according to some analysts and based on traditional value indicators such as the ratio price to earnings per share, most shares are probably still overvalued. This situation could have serious repercussions. First, the accumulated effect of falling financial wealth that has been taking place since the middle of 2000 could have an adverse impact on consumption. This could take place especially if the housing market weakens, since total household wealth has been aided by the boom of housing prices. Second, the stock market's weakness implies companies' financing costs will likely increase, therefore leading to adverse consequences for investment. Similarly, the outlook for a weak recovery in stock markets could make portfolio investment less attractive in the United States, exerting pressure on the US dollar and causing it to depreciate. In this regard, during the second quarter the US dollar fell against the yen and the euro—in fact, in July, the euro exceeded parity with the US dollar.<sup>7</sup>

<sup>7</sup> On June 22 the euro was valued at 1.009 US dollars while it had been 87 cents at end-March.

Graph 8

**Stock-Market Indexes in the United States, Japan, Germany, France and United Kingdom**

(January 2, 2002=100)



Source: REUTERS.

The Federal Reserve has been extremely cautious given the complex scenario surrounding the recovery of economic activity in the United States coupled with an environment characterized by significant uncertainty. In response to the economic slowdown in the fourth quarter of 2001, the Federal Reserve cut in several occasions its federal funds rate target bringing it to an historical minimum of 1.75 percent. Nonetheless, it kept it unaltered during the first quarter of 2002. The fact that this monetary policy instrument remained unchanged reflects the different trends and the changing outlook observed throughout the quarter. During January-March, as economic indicators clearly suggested that the economy would rebound, the Federal Reserve decided to cease lowering interest rates. Towards the end of March, economic data showed that recovery was underway. Many specialists interpreted the statement of the Federal Reserve regarding its neutral assessment of the balance of risks as the prelude to a gradual reversal of the interest rate cuts applied in 2001. However, evidence from the second quarter, especially concerning the labor market, precluded any modification of the balance of risks. This caused analysts to forecast an increase in interest rates by the Federal Reserve during the final months of the year. The decision not to raise interest rates in the United States has

been mainly based on the low inflation prevailing in this country,<sup>8</sup> the sluggish recovery of employment and concerns over the possible effects of eventual negative shocks to demand. In the last few weeks of June two additional factors were taken into consideration in the Federal Reserve's estimates: the depreciation of the US dollar and volatility in the stock markets stemming from the corporate scandals. Nevertheless, since no inflationary pressures have been detected the U.S. central bank seems determined to maintain the current monetary policy stance unaltered while there are no signs of a robust recovery of demand and employment.

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

Economic rebound has continued in the euro zone, although some concerns over its strength emerged among market analysts, especially in light of the downward revisions of forecasts for growth in the United States' economy in 2002 and the appreciation of the euro. Fueled by exports, real GDP expanded at an annual rate of 0.9 percent during the first quarter. The contribution of domestic demand has been modest, reflecting the sluggish growth of private consumption and investment. However, the replenishment of inventories is expected to make a positive contribution to growth during the remainder of the year. Although, both contemporaneous and leading indicators of economic activity point to consolidation and recovery in the following few months, signs are not uniform and have also led to uncertainty. Thus, industrial output has registered positive rates since December of 2001 and retail sales rose in the first four months of the year. However, business and consumer confidence indicators, which behaved favorably in January-April, had a mixed performance in May, as they fell in Germany, Belgium and Italy. Unemployment has also persisted, rising slightly from 8.2 percent in March to 8.3 percent in April.

During the period analyzed, there were positive news regarding inflation. After having registered levels above the 2 percent target for several months, price increases fell to 2 percent in May and 1.7 percent in June (the lowest level since December 1999).<sup>9</sup> Furthermore, the recent appreciation of the euro vis-à-vis

<sup>8</sup> The Consumer Price Index grew 1.2 percent between May 2001 and May 2002, while core inflation was 2.5 percent during the same period, with an annual rate of 2.1 percent from November 2001 to May 2002.

<sup>9</sup> May's results partly responded to a statistical phenomenon, as inflation in May 2001 was the highest of that year.

the US dollar could translate into a further reduction of pressures on prices. Despite this, concerns on inflation persist as the core inflation index has been outpacing the inflation target, partly because of increases in services' prices. During the current year the European Central Bank (ECB) has maintained its reference interest rate unchanged in response to the balance of risks concerning economic recovery and an inflation surpassing 2 percent. Given the recent evolution of inflation and renewed uncertainty over the United States and the euro zone's pace of recovery, analysts do not expect the ECB will modify its reference interest rate in the next few months.

Signs of economic recovery in Japan, although somewhat confusing, continued. Triggered by exports, real GDP grew at an annual and seasonally adjusted rate of 5.7 percent. Nevertheless, just as in other regions, the strength of the economic upturn is uncertain and even though seasonally adjusted indicators for industrial output displayed positive rates in February and March, they stagnated in April and then rebounded in May. Furthermore, unemployment has remained high, reaching 5.4 percent in March (a figure higher than that observed during the previous 12 months). As a result, market analysts forecasted real GDP will increase between minus one and one percent for the entire year. However, common belief is that a more vigorous growth will take place in 2003 (Table 4). Meanwhile, Japan continues to be immersed in a deflationary process, with a -0.9 percent inflation in consumer prices during the 12-month period that ended in May of 2002. Nominal interest rates are virtually at zero and the yen appreciated approximately 4 percent vis-à-vis the US dollar in June, despite the intervention of the Bank of Japan that sold yens equivalent to 40 billion US dollars to support the United States' currency.

The recently industrialized Southeast Asian economies performed extremely favorably in the first quarter of 2002, as they were able to take advantage of renewed growth in the United States by rapidly increasing their exports and industrial output. In these countries annual growth rates for real GDP were high. For example, China posted real growth rates of 7.6 percent while South Korea, Philippines, and Thailand, of 5.7, 3.8 and 3.9 percent, respectively. One important feature of recovery in this group of economies is China's increasing role as the "final assembling center". Thus, China's exports, mainly destined to countries outside the region, expanded at an annual rate of 13 percent in the first five months of 2002. This was partly brought about by the advantages of this country's inclusion in the World Trade Organization (WTO). Meanwhile, other countries in the region, such as

Thailand, Malaysia and the Philippines have substantially increased their exports to China.

**Table 4** **IMF Forecasts for Gross Domestic Product Growth**  
Percentage change

	2000	2001	2002 <sup>ef</sup>	2003 <sup>ef</sup>
World	4.7	2.5	2.8	4.0
Advanced Economies	3.9	1.2	1.7	3.0
United States	4.1	1.2	2.3	3.4
Japan	2.2	-0.4	-1.0	0.8
Germany	3.0	0.6	0.9	2.7
France	3.6	2.0	1.4	3.0
Italy	2.9	1.8	1.4	2.9
United Kingdom	3.0	2.2	2.0	2.8
Canada	4.4	1.5	2.5	3.6
Rest of the World	5.2	1.6	2.5	3.7
European Union	3.4	1.7	1.5	2.9
RIE <sup>1/</sup> of Asia	8.5	0.8	3.6	5.1
Latin America	4.0	0.7	0.7	3.7
Argentina	-0.8	-3.7	-10 to -15	0 to 3
Brazil	4.4	1.5	2.5	3.5
Chile	4.4	2.8	3.0	6.0
Mexico	6.6	-0.3	1.7	4.9
Uruguay	-1.3	-3.1	-1.7	3.0
Venezuela	3.2	2.7	-0.8	1.3

Source: World Economic Outlook, April 2002, IMF.

e/ estimated.

1/ Recently Industrialized Economies.

Towards the end the first quarter of 2002, confidence began to emerge that contagion from the Argentinian crisis would not reach other Latin American countries. However, by June this confidence had almost completely vanished and was gradually replaced by a worrisome climate. The most relevant cases for concern were the other members of MERCOSUR. The depreciation of the exchange rate and the fall of the stock markets in Brazil are noteworthy for two reasons. First, the fact that deteriorating country risk perceptions for this country stemmed from domestic problems, including the uncertainty caused by the electoral campaign and concerns about the maturity profile of its public debt for the following few months. Second, although the Brazilian government has been managing economic policy in an orderly manner, Brazil's public finances are weak due to high levels of indebtedness, currently accounting for 54 percent of GDP. The contractual features of this debt (mostly domestic) means its service, which was 8 percent of GDP in 2001, is extremely burdensome and volatile. Thus, despite the high primary surplus

obtained by the government during recent years (no less than 3.5 percent of GDP), the ratio of debt to GDP has gone up.

Two of the main signs of Brazil's crisis of confidence have been the depreciation of the real and higher country risk perception. During the second quarter, its currency fell 20 percent vis-à-vis the US dollar, from 2.27 to 2.83 reals (a similar level to that observed at the start of the Fall in 2001 when this country was still decoupling from Argentina). Furthermore, in the first few days of April 2002, the EMBI+ for Brazil was around 700 basis points, its lowest level since the start of the crisis in Argentina in the summer of 2001. Nevertheless, by the end of June this indicator had reached 1,700 basis points, a level lower than the Argentinian EMBI+ and comparable with those observed during the most critical moments of the Brazilian crisis in 1998.

Most analysts attribute the deterioration of Brazil's country risk perception to political factors such as uncertainty regarding the result of presidential elections to be held next October and the likelihood of a new government having to face an uncooperative Congress. Another factor with some features of self-fulfilling prophecy is the fear that Brazil will have problems refinancing its domestic public debt with nearest term to maturity. Despite this, Brazil has managed to comply with the public finance and monetary policy commitments of the stand-by agreement signed with the International Monetary Fund (IMF). Market turbulence has prompted the government to announce, among other measures, an additional fiscal adjustment (an increase in the primary surplus objective from 3.5 to 3.75 percent of GDP). However, public finances are still threatened by the negative effects of high levels of domestic public debt and their sensitivity to changes in interest rates. At the same time, the Brazilian government decided to use available resources from its stand-by agreement with the IMF (around 10 billion US dollars) to repurchase 3 billion US dollars of short-term external debt. Until now these measures have not been successful in alleviating the crisis of confidence. Nonetheless, Brazil has practically covered all its financing needs until the next presidential elections.

Although the situation in Argentina worsened and social and political tensions continued –even causing the presidential elections to be brought forward to March 2003– they have not been as severe as in the last quarter of 2001 and the first quarter of 2002. At the end of the second quarter the exchange rate reached 3.56 pesos per US dollar, after having been slightly below 3 pesos in March. Meanwhile, real GDP fell 16 percent in the first quarter and it is expected to decrease around 15 percent for the entire year. The

IMF and the Argentinian government are still negotiating, although the former organization will expect the government to make a new agreement on fiscal adjustment with all the provinces and solve the problem of the freeze (*corralito*) on bank deposits before granting further financial support. In this context it is important to mention that Congress approved a plan for a voluntary “swapping” of bank deposits for government bonds. However, the success of the plan is doubtful because depositors refuse to take definitive losses. Moreover, there have been legal rulings in favor of depositors, allowing them to withdraw their resources. There are also serious doubts on the aforementioned plan’s capacity, even if it were fully implemented, about whether it will really contribute to straighten the banking sector. Despite all of the above, the IMF has agreed to postpone some due dates on payments that had originally been programmed for 2002. Argentina is also trying to obtain similar concessions regarding its obligations with other multilateral organizations.

Concerned about the possibility of a freeze being imposed on bank deposits just like in Argentina, Uruguay residents began to withdraw their resources from the banking system to purchase US dollars. This deteriorated the banks’ situation and put pressure on the exchange rate. Finally, on June 20<sup>th</sup> the Uruguayan authorities allowed the peso to float. This decision was accompanied by a deepening of the adjustment program supported by the IMF. During the first few months of the year the Paraguayan economy also contracted as its main trading partners began to face difficulties. Authorities have allowed the country’s currency (guarani) to depreciate, thus protecting the country’s international reserves.

## **II.2.2. Compensations, Wages and Employment**

Labor market conditions began to show signs of a modest improvement. Employment started to grow again after having fallen significantly in 2001. Nevertheless, this increase was smaller than the average observed in 1996-2000 and than the flow of new entrants to the labor market.<sup>10</sup> Thus, the job creation shortfall that had accumulated during 2001 continued expanding. Meanwhile, rises in real wages in several sectors were above productivity gains, leading to higher unit labor costs and fewer new jobs. In other sectors of economic activity, unit labor costs decreased due to

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<sup>10</sup> According to the National Development Financing Program 1997-2000, an average of one million individuals join the labor market every year.

increased productivity associated with the cyclical factors that appear in the initial stages of economic recovery.

### II.2.2.1. Compensations

In April 2002 nominal wages per worker showed annual increases between 9.3 and 14 percent, thus registering average annual percentage changes between 8.6 and 19.6 percent and real increases ranging from 3.7 to 14.1 percent during January-April of 2002 (Table 5).

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

	Nominal								Real							
	2001			2002				Average Jan-Apr 2002*	2001			2002				Average Jan-Apr 2002*
	Oct	Nov	Dec	Jan	Feb	Mar	Apr		Oct	Nov	Dec	Jan	Feb	Mar	Abr	
Manufacturing industry	13.4	12.9	14.7	10.2	8.3	6.6	9.3	8.6	7.1	7.2	9.8	5.1	3.3	1.8	4.4	3.7
In-bond industry	14.7	12.9	13.3	14.7	12.0	8.7	11.4	11.7	8.4	7.2	8.5	9.4	6.9	3.9	6.4	6.7
Construction	11.1	9.2	13.1	23.4	15.8	n.a.	n.a.	19.6	4.9	3.6	8.3	17.7	10.5	n.a.	n.a.	14.1
Commerce	5.7	4.9	7.6	8.3	9.4	5.6	14.0	9.3	-0.1	-0.5	3.1	3.3	4.4	0.9	8.9	4.4

\* Construction is the only sector for which the average is calculated for January-February 2002.

Source: Elaborated by Banco de México with data from INEGI.

n.a. Not available.

During the same month productivity went up between 3.5 and 16.7 percent while changes in unit labor costs fluctuated in an interval from -10.6 to 2.8 percent. During January-April, productivity gains in the manufacturing industry more than offset the upward trend of real wages. However, productivity did not rise faster than real wages in the in-bond industry, and unit labor costs rose in the commerce sector as well (Table 6).

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

	Output per Worker								Unit Labor Costs							
	2001			2002				Average Jan-Apr 2002*	2001			2002				Average Jan-Apr 2002*
	Oct	Nov	Dec	Jan	Feb	Mar	Apr		Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Manufacturing Industry	1.9	3.0	2.3	3.3	5.7	-1.8	16.7	6.0	5.1	4.0	7.4	1.8	-2.3	3.7	-10.6	-1.9
In-bond industry	-3.3	-2.2	2.9	-0.4	0.6	-2.1	3.5	0.4	12.0	9.5	5.4	9.9	6.3	6.1	2.8	6.3
Construction	2.7	0.7	9.6	10.8	9.5	n.a.	n.a.	10.2	2.2	2.9	-1.2	6.3	0.9	n.a.	n.a.	3.6
Commerce	-10.1	-9.7	-4.8	-4.2	-2.1	-5.9	3.7	-2.1	11.1	10.2	8.3	7.9	6.6	7.2	5.0	6.7

\*Source: Elaborated by Banco de México with data from INEGI.

It is important to point out that the substantial changes in output per worker and unit labor costs in May and April mainly responded in part to the seasonal effects of the Easter Holiday. In particular, these indicators were distorted because in 2001 this vacation period fell in April, whereas in 2002 it took place in March. As a result there were less business days in the latter month (compared to the previous year) than in April. Thus, taking the average variations in March and April to correct for said effect, the change in output per worker was 7.5 percent in the manufacturing industry and -1.1 percent in the commerce sector. Meanwhile, the average change in unit labor costs during March and April was -3.5 percent in the manufacturing industry, 4.4 percent in the in-bond industry and 6.1 percent in the commerce sector.

The manufacturing industry began to show signs of an incipient recovery. Increases in output per worker and falling unit labor costs in this sector during March and April, albeit influenced by seasonal factors, were encouraging. The rise of productivity in manufacturing stems from its strong links with industrial output and the export sector, and, therefore, the rebound of economic activity in the United States has had a favorable effect on Mexico's rate of output. As normally occurs during the first weeks of an economic recovery, higher output was not accompanied by equally strong demand for labor. This is due to uncertainty still surrounding recovery as well as to lesser use of labor in the downturn stage of the business cycle. Since productivity increases during the upward phase for cyclical reasons, it is likely that future productivity growth will ease as recovery of output firms up and job creation becomes more vigorous. Moreover, it is possible that wages in this sector might have contributed to the recovery of employment as they grew the least during the previous year.

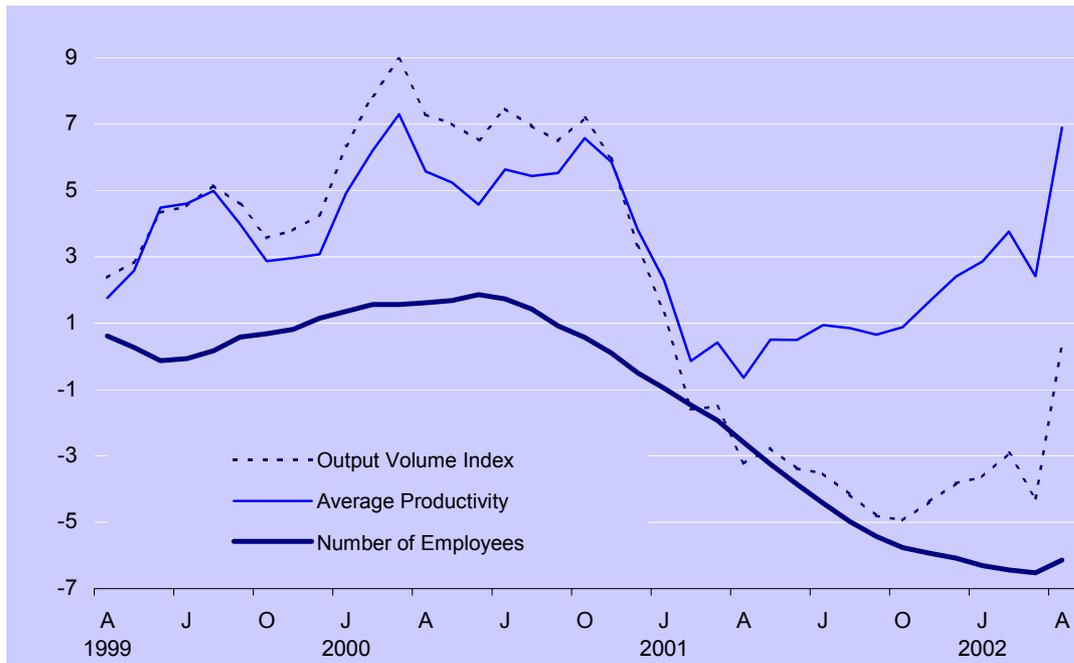
In 2001 and up until January of 2002 there was a considerable decline of jobs in the non in-bond manufacturing sector. This caused average productivity to stabilize and even grow during part of 2001. However, as was shown in the previous quarterly Inflation Report, increased productivity was mainly brought about by job cuts and not by an improvement in companies' production conditions. Therefore, this result is not representative of favorable developments in labor market conditions.

In contrast, in the second quarter of 2002 significant productivity gains in the non in-bond manufacturing industry were accompanied by fewer job losses (Graph 9). Productivity gains are characteristic of initial stages of recovery in the business cycle

because output is mainly obtained by a more intense use of installed capacity rather than by increased employment.

**Graph 9 Output, Average Productivity and Number of Employees in the Non In-Bond Manufacturing Industry**

Annual percentage change of the 3-month moving average



Source: INEGI.

Cyclical movements of productivity can be divided into four stages. First, at the start of the downward phase, output falls faster than employment and average productivity declines. Second, employment continues to diminish but at a higher rate than output and average productivity begins to stabilize and even grow. Third, at the start of the expansion period, employment grows less than output, causing average productivity to rise. Finally, during expansion employment increases more than output and, consequently, average productivity tends to fall. Based on these cyclical movements it is reasonable to foresee that the rise in average productivity observed in March and April will most probably not persist.

In contrast to the developments in the manufacturing sector, unit labor costs continued to rise in the in-bond industry and in commerce. In particular, gains in output per worker in these two sectors during April 2002 were not sufficient to offset real wage increases; therefore, unit labor costs went up. As has been pointed

out in previous Inflation Reports, higher unit labor costs forestall the creation of new jobs.

During the period covered by this Report, the total wage bill and the number of employees in the non in-bond manufacturing industry registered average annual rates of -1.3 and -5.5 percent, respectively. In the in-bond export sector, annual changes in both aggregates were -9.9 and -15.4 percent. Meanwhile, the total wage bill and the number of employees in the commerce sector posted average rates of 1.94 and -0.7 percent during the same period. In all cases, the referred changes point to an improvement compared to the first quarter of 2002. In the last few months, variations in the number of employees and the total wage bill have begun to stabilize (Graph 10).

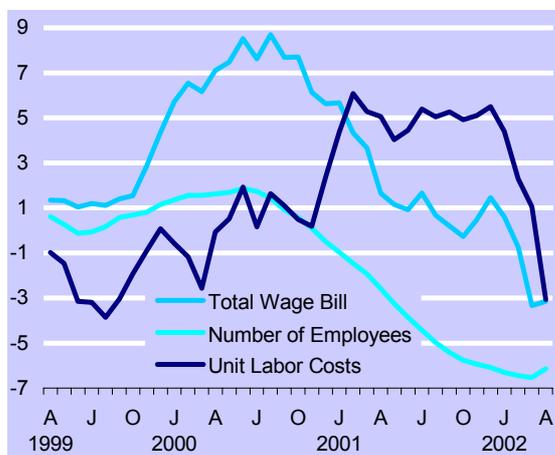
At present, the deterioration of labor market conditions that occurred from 2001 until the first quarter of 2002 is beginning to experience an incipient correction. Regarding the manufacturing sector, the number of employees and productivity have increased while the total wage bill has leveled off. Nonetheless, in the second quarter of 2002 employment posted a modest recovery that has not yet reached the commerce and construction sectors. This is not surprising given that productivity has grown at a slower rate in both sectors and real wages at a higher rate than in the manufacturing sector.

**Graph 10**

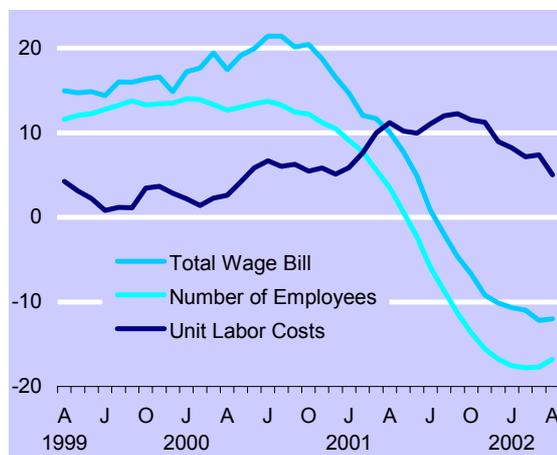
**Total Wage Bill, Number of Employees and Unit Labor Costs**

Annual percentage change of the 3-month moving average

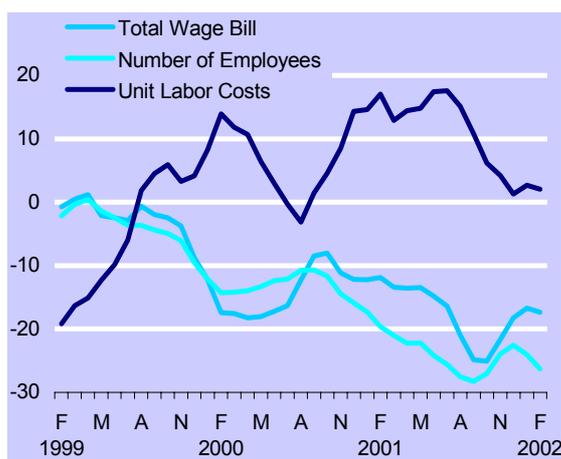
Non In-Bond Manufacturing Industry



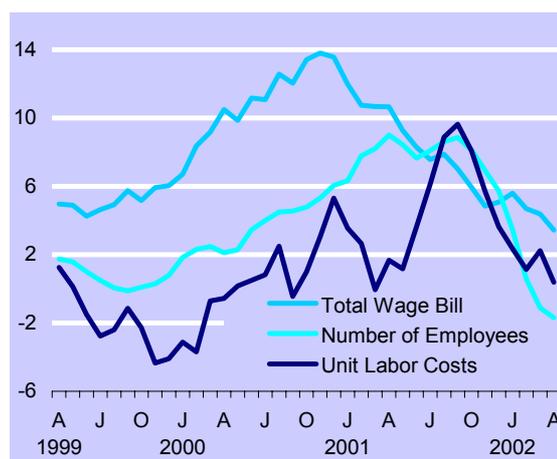
In-Bond Industry



Construction



Retail Trade



Source: Banco de México and INEGI.

**II.2.2.2. Contractual Wages**

The average growth of nominal contractual wages was 6.1 percent during the period reported, slightly less than in the first quarter of 2002. Thus, average nominal contractual wage increases in April, May and June were 5.8, 6.5 and 6 percent, respectively.

Nominal contractual wages rose at higher rates in the manufacturing industry than in any other sector, with an average spread of 1 percent (Table 7). Although this would seem to be compatible with the fact that productivity growth higher in the manufacturing industry than in the other industries, the latter is a

cyclical and transitory phenomenon. Moreover, employment fell substantially in this sector throughout 2001 and there is still a very large employment deficit. It would therefore be desirable that contractual wage increases in this sector reflect more accurately the slack in the labor market.

**Table 7** **Contractual Wages by Sectors**  
Annual percentage change

	2001			2002					
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun*
Manufacturing	9.1	6.3	6.8	7.0	6.9	6.2	6.6	6.4	6.5
Other sectors	6.7	7.3	9.3	6.4	6.8	6.0	5.6	6.6	5.8

Source: Elaborated by Banco de México with data from the Ministry of Labor.  
\* Preliminary data.

Regarding contractual wages by type of company, private firms posted average increases of 6.2 percent while public enterprises recorded 5.1 percent.

**Table 8** **Contractual Wages by Type of Company**  
Annual percentage change

	2001			2002					
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Private companies	9.1	6.9	7.4	6.8	7.0	6.5	6.0	6.5	6.2
Public enterprises	11.0	10.5	11.1	5.3	5.3	5.4	5.5	5.1	4.7

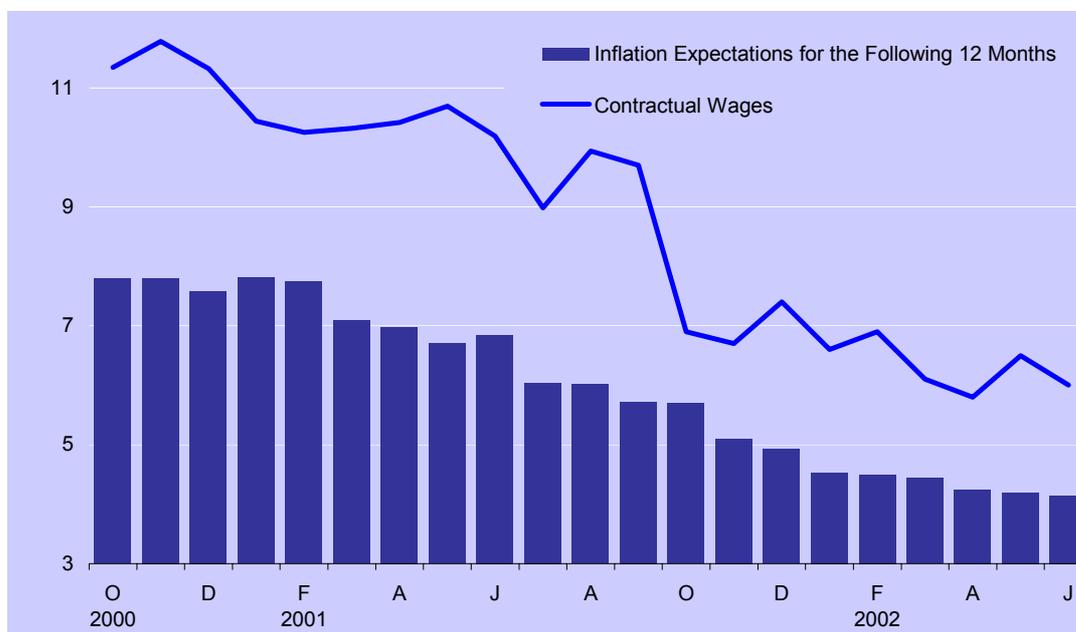
The average gap between nominal contractual wage increases and expected inflation for the following twelve months was 1.83 percent (Graph 11). This gap was narrower than that observed during the same period of 2001 (3.36 percent) and in the first quarter of the current year (1.96 percent).

Although the rate of growth of nominal contractual wages decelerated, it should be emphasized that wage revisions need to be more in line with inflation expectations. Given the uncertainty regarding economic recovery, and taking into account that any productivity increases at the start of the upward phase of the business cycle are temporary, wage revisions should be moderated. This is especially relevant for those sectors that have obtained limited productivity gains or where employment has not yet expanded. Thus, contractual wage increases must continue easing in order to be more consistent with current labor market conditions.

Graph 11

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

Annual percentage change



Source: Survey of Private Sector Economic Analysts' Expectations, Banco de México and Ministry of Labor.

**II.2.2.3. Employment**

During the second quarter of 2002, employment showed signs of an incipient improvement. Regarding formal employment, the number of permanent and temporary urban employees affiliated to the Mexican Social Security Institute (IMSS) at the end of June was 12,232,842 individuals, 69,205 above the total recorded at year-end 2001 (Graph 12a). It is important to mention that around 103 thousand new jobs were created during April, May and June, comparing very favorably with the more than 100 thousand job losses registered during the same period of 2001. Seasonally adjusted series for permanent and temporary urban employees affiliated to the IMSS recorded an increase of nearly 90 thousand individuals, indicating a modest recovery of employment.

The number of permanent employees affiliated to the IMSS in the services sector grew by approximately 51 thousand individuals during the second quarter, after having fallen more than 35 thousand in the first three months of the year. From this increase, more than 23 thousand stemmed from the commerce sector. On the other hand, employment in the agricultural sector contracted by over 65 thousand jobs, comparing unfavorably with the increase of 48 thousand registered during the first quarter of

2002. Finally, the number of jobs in the industrial sector expanded by more than 59 thousand, after having decreased around 3 thousand in the first quarter. In the manufacturing sector, 24 thousand jobs were created, substantially less than the average recorded in 1996-2000 (76 thousand new jobs per quarter, almost 45 percent of the total number of jobs created in the formal sector).

It is evident that the contraction of employment has started to revert during the last few months. In particular, the recent behavior of employment figures in the industrial sector can be seen as a positive sign for the future evolution of the labor market, although employment on this sector was the hardest hit by the previous year's economic downturn.

In the second quarter of 2002, the behavior of the main unemployment indicators was very similar to that observed during the first quarter. The average open unemployment rate was 2.6 percent, while it had been 2.8 percent in the first three months of 2002. It is important to mention that during the period analyzed trend series for open unemployment began to decline, interrupting the upward path they had shown during 2001 and the first quarter of 2002 (Graph 12b).

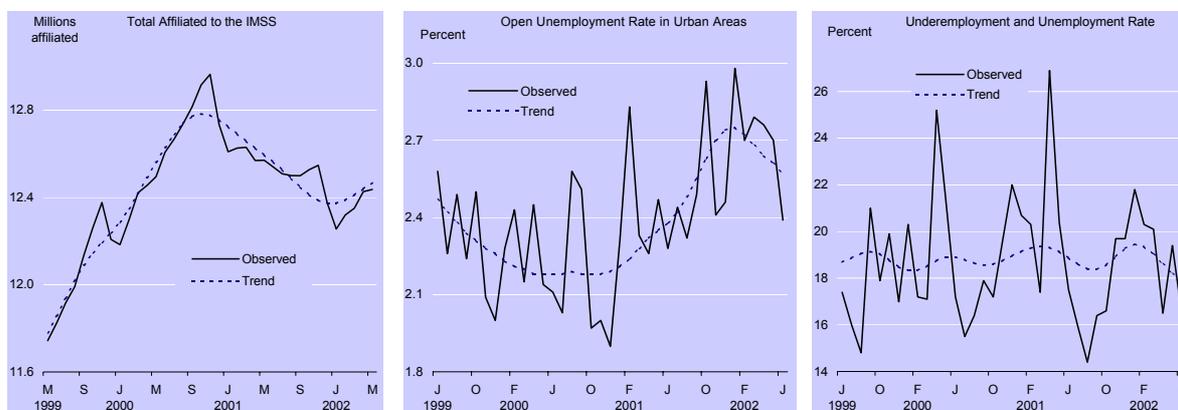
Average underemployment (less than 35 hours worked per week) was below its prevailing level during the first quarter of the year. This rate was 17.5 percent in the second quarter, comparing favorably to the 20.7 percent registered in the first quarter. It is worth mentioning that trend series for this indicator also started to decline, after recording continuous increases since October 2001. This result should be taken with some caution, as these series are the most volatile and their trends are not as clear as in other cases (Graph 12c).

Unemployment was similar for both men and women. The average rate of unemployment among men was 2.7 percent while for women it was 2.5 percent. Nonetheless, the average duration of unemployment increased and the percentage of individuals unemployed for more than five weeks rose from 38.7 percent in the first quarter to 44.2 percent in the second.

Graph 12

## Employment and Unemployment Indicators

## Trend Series



Source: IMSS and INEGI.

Employment in the informal sector rose slightly. One indirect way of measuring employment in this sector is via the percentage of the Economically Active Population (EAP) that does not receive any benefits. On average, this indicator was 47.6 percent during the first quarter and 48.3 percent in April-June.

#### II.2.2.4. Summary

During the second quarter of 2002, prevailing labor market conditions began to show a modest improvement. On the one hand, employment started to grow moderately after having fallen in 2001. Seasonally adjusted figures for permanent and temporary urban employees affiliated to the IMSS recorded an increase of almost 90 thousand individuals, while open unemployment decreased slightly. It is worth mentioning that the increase in formal employment –which was below the average of 175 thousand jobs recorded during the same period of 1996- was insufficient to provide the necessary jobs for the new entrants to the labor force. Consequently, the employment deficit continued widening, therefore suggesting that a large number of individuals became part of the informal sector.

Nominal increases in contractual wages fell to between 5.8 and 6.5 percent. Nonetheless, these rates remain high given the slack in the labor market and have limited the recovery of employment. In order to create the necessary jobs to satisfy the needs of an expanding labor force and begin to recover jobs lost in 2001, wage rises must continue to ease in order to be consistent with current conditions in the labor market. As mentioned above, increased productivity in the manufacturing sector is a

phenomenon usually present during the initial stage of economic recovery and, therefore, transitory. For this reason Banco de México reiterates the need to ease real wage increases. In addition, firms and employees should agree on a labor reform aimed to reduce or eliminate rigidities in the market.

### **II.2.3. Aggregate Supply and Demand**

During the first quarter of 2002, for the third consecutive year, aggregate supply and demand fell compared to their levels during the same period of the previous year. However, the 2.5 percent annual reduction in January-March was smaller than that observed in the third (3.4 percent) and fourth (3.3 percent) quarters of 2001. Both components of aggregate supply contributed to this result as GDP fell 2 percent and imports, 3.8 percent. Regarding aggregate demand, and for the first time since the first quarter of 1996, private consumption fell 1.5 percent on a yearly basis. The acquisition of non-durable goods and services as well as consumer durables contracted substantially, 1.6 percent and 2.9 percent, respectively. According to INEGI, reduced consumption of consumer durables responded to a decline in purchases of vehicles and metallic furniture, among others, as well as of electronic and electrical appliances.

The rest of the components of aggregate demand continued weakening, although at lower rates than observed in the final quarters of 2001. Private investment fell 5.9 percent compared to the second quarter of 2001 and exports grew 5.8 percent. On the other hand, annual public sector expenditure contracted, consumption 1.1 percent and investment 13.3 percent (Table 9).

The considerable decrease in GDP and its components was partly a consequence of seasonal factors related to the Easter vacation. According to figures provided by INEGI that have been adjusted for this effect, the annual decline of GDP in the quarter was 1.5 percent.

In the first quarter, private consumption fell and the only item that made a positive contribution to the growth of aggregate demand was inventories. It is worth pointing out that the fall in GDP (2 percent) was higher than had been forecasted in the previous Inflation Report (1.6 percent). This difference can mainly

be explained by the fact that consumption weakened more than had been expected.<sup>11</sup>

Examining the evolution of the different components of aggregate supply and demand via seasonally adjusted figures enables to identify some signs of recovery that cannot be seen in an analysis based on annual growth rates. Thus, in January-March aggregate supply and demand registered their first positive quarterly growth (0.2 percent) since the third quarter of 2000. On the supply side, growth was mainly due to increased imports (0.7 percent) and to the stable behavior of GDP. Meanwhile, on the demand side, the components of private spending behaved unfavorably, private investment fell for the fifth consecutive quarter (0.2 percent) and consumption declined (0.2 percent). Public sector consumption also diminished during the quarter while public investment increased considerably.

**Table 9** **Aggregate Supply and Demand in 2001 and 2002**  
Percentage change

	Real annual percentage change					Real annual percentage change (seasonally adjusted series)						
	2001					2002	2001					2002
	1st Q	2nd Q	3rd Q	4th Q	Annual	1st Q	2nd Q	3rd Q	4th Q	Annual	1st Q	
Aggregate Supply	2.8	0.2	-3.4	-3.3	-1.0	-2.5	-0.6	-0.6	-1.4	-0.1	0.2	
GDP	2.0	0.1	-1.5	-1.6	-0.3	-2.0	-0.3	-0.3	-0.2	-0.5	0.0	
Imports	5.2	0.6	-8.0	-7.7	-2.9	-3.8	-1.4	-1.4	-4.6	1.1	0.7	
Aggregate Demand	2.8	0.2	-3.4	-3.3	-1.0	-2.5	-0.6	-0.6	-1.4	-0.1	0.2	
Total Consumption	5.3	3.1	1.1	1.8	2.8	-1.5	1.7	0.2	-0.2	-0.1	-0.3	
Private	6.6	4.1	1.6	1.5	3.4	-1.5	1.8	0.2	-0.3	-0.1	-0.2	
Public	-3.5	-3.2	-3.5	3.3	-1.4	-1.1	1.1	-0.1	0.5	0.4	-0.9	
Total Investment	0.5	-5.5	-8.9	-9.1	-5.9	-6.9	-2.6	-2.0	-3.5	-1.1	0.9	
Private	-1.2	-5.2	-1.3	-12.8	-5.1	-5.9	-6.4	-1.9	-0.8	-2.1	-0.2	
Public	12.8	-7.6	-38.0	6.6	-9.6	-13.3	22.2	-2.4	-17.3	5.4	6.9	
Exports	2.6	-1.7	-9.5	-10.9	-5.1	-5.8	-4.4	-1.0	-3.4	-1.4	1.1	

Source: Banco de México and INEGI.

Available data on aggregate demand and output in the second quarter of 2002 point to a rebound in economic activity. Nonetheless, the statistical effects of the Easter vacation prevent these results from being correctly interpreted. Following are the main factors that suggest a recovery in the economy:

<sup>11</sup> The sudden fall of consumption and the considerable change in inventories could stem from certain measurement problems that will likely be corrected in the following quarters.

- (a) The Global Economic Activity Indicator (*Indicador Global de Actividad Económica, IGAE*) as well as industrial output registered positive annual variations in April. Although April's result originated from the previously mentioned statistical effects, after averaging the annual growth rates in March and April to eliminate those effects, variations of industrial output as well as the IGAE were 0.2 and 0.2 percent, respectively. Moreover, April was the fourth consecutive month in which seasonally adjusted monthly figures for this indicator increased (0.89 percent). According to seasonally adjusted figures calculated by Banco de México, industrial output rose in each of the first five months of 2002, while manufacturing output registered positive growth rates in four of them. Finally, the number of manufacturing industry branches that have posted annual increases in output has also risen;
- (b) Seasonally adjusted figures for retail sales continued growing, showing a monthly increase of 1.1 percent in May. Although wholesale sales posted negative growth (0.6 percent), their seasonally adjusted figures have remained relatively stable in the last few months (increasing 0.7 percent in April);
- (c) In June, total sales reported by members of the National Association of Self-service and Department Stores (*Asociación Nacional de Tiendas de Autoservicio y Departamentales, ANTAD*) increased considerably (5.6 percent at an annual rate);
- (d) Domestic sales and output in the auto industry strongly advanced during the second quarter, expanding at average annual rates of 30 and 5 percent, respectively;
- (e) The annual growth rate of gross fixed investment was 7.6 percent in April. Seasonally adjusted figures for this variable showed a 0.62 percent increase compared to its level in March. Thus, in the first four months of 2002 investment registered three positive monthly growth rates. In fact, based on seasonally adjusted figures investment spending expanded 4.9 percent compared to its minimum level observed in September 2001;
- (f) Based on seasonally adjusted figures provided by INEGI, employment in the in-bond industry increased 0.14 percent in April compared to the previous month.

Likewise, the number of hours worked rose 1.27 percent and average real paid wages, 1.21 percent;

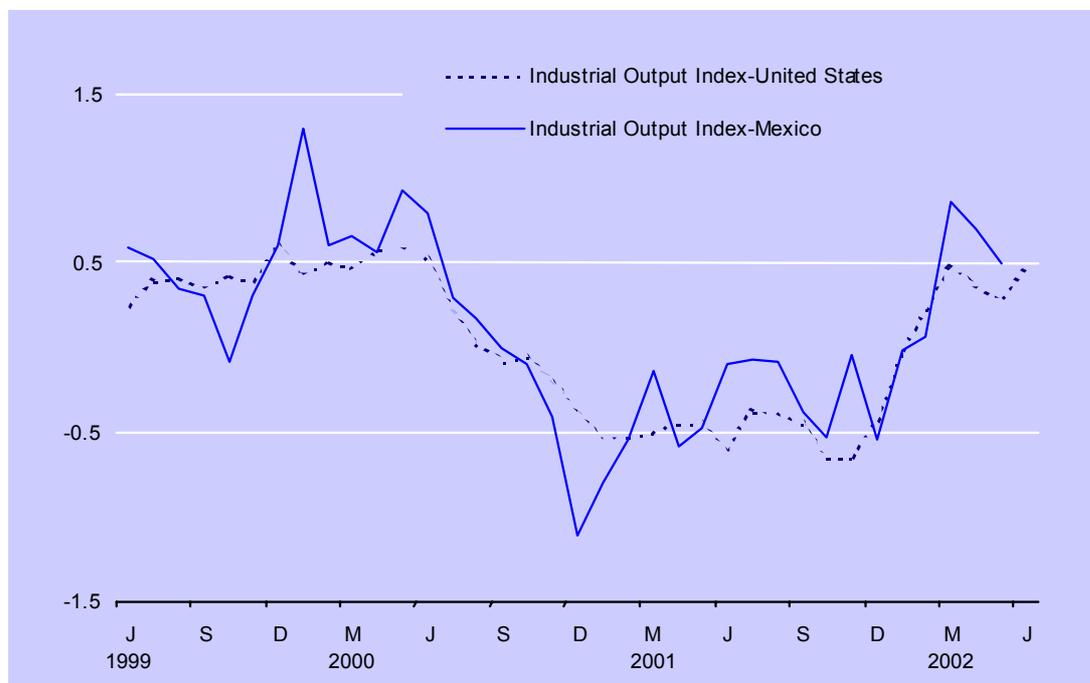
- (g) The number of workers affiliated to the IMSS continued escalating in June as did the number of states reporting an improvement in formal employment; and
- (h) Coincident and Leading Indicators published by INEGI recorded monthly increases in April.

The recovery still shows some signs of fragility. In particular, business climate expectations among private sector analysts and the confidence index of manufacturing firms weakened in June and May, respectively.

As will be mentioned below, the accumulated total and non-oil trade deficits for the first half of 2002 were 19.5 and 6.4 percent lower than those registered in the same period of the previous year (Graph 15). This suggests that the still incipient recovery stage of the business cycle is first taking place in the industrial sector. This is explained by the high level of synchronization between this sector and its counterpart in the United States (Graph 13).

**Graph 13****Industrial Output Index in Mexico and the United States**

Monthly percentage change (seasonally adjusted series: 3-month moving average)



Source: INEGI.

Given its relevance in Mexico's external trade, it is reasonable to assume that the evolution of the industrial sector greatly contributed to the recovery of economic growth during the second quarter while the other components of aggregate demand (consumption and investment) had modest positive contributions mostly from the public sector.

Based on available information, Banco de México estimates real GDP grew at an annual rate of around 1.8 percent during the second quarter of 2002 and its seasonally adjusted figures also imply positive quarterly growth. Meanwhile, consumption and investment likely expanded at a 1 percent rate.

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

The incipient recovery of the industrial sector has mainly depended on the export sector. Thus during the first stage of the economic upturn, the annual contraction in exports eased significantly. Although a similar phenomenon occurred regarding

imports, the weakness of domestic demand contributed to a slower adjustment compared to exports. As a result, the trade deficit for the second quarter of 2002 was smaller than in the same period of 2001. The previous Inflation Report described a similar behavior during the first quarter. Thus, in the first half of 2002 the trade deficit declined from 3.97 billion US dollars in 2001 to 3.2 billion. The current account deficit for the second quarter is estimated to have amounted to 3.3 billion US dollars and to approximately 7.2 US billion in the first half of the year.

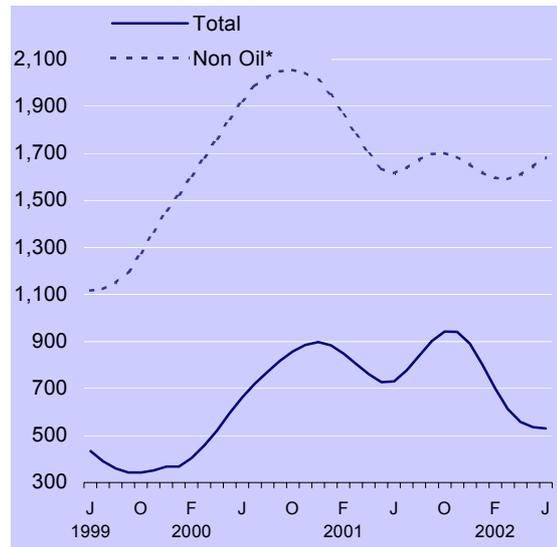
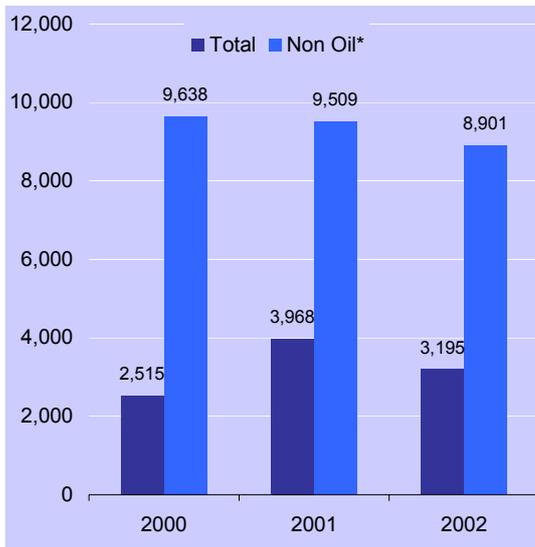
In short, the main factors explaining a reduced demand for external resources are weak domestic demand, the rebound in export activity and rising oil prices. The results in the current account helped the Mexican economy to show stability despite the volatility in international capital markets during the second quarter.

As for the capital account, there was a contraction in the supply of portfolio investments in response to higher risk aversion caused by a deteriorated international environment. Notwithstanding, Foreign Direct Investment (FDI) rose, fueled by the sale of Aseguradora Hidalgo (AHISA) and of the BANCOMER share package held by the government. As a result, the capital account surplus was 3.8 billion US dollars during the quarter.

**Graph 14** Trade Deficit: Total and Excluding Oil  
Million US dollars

January-June

Trend

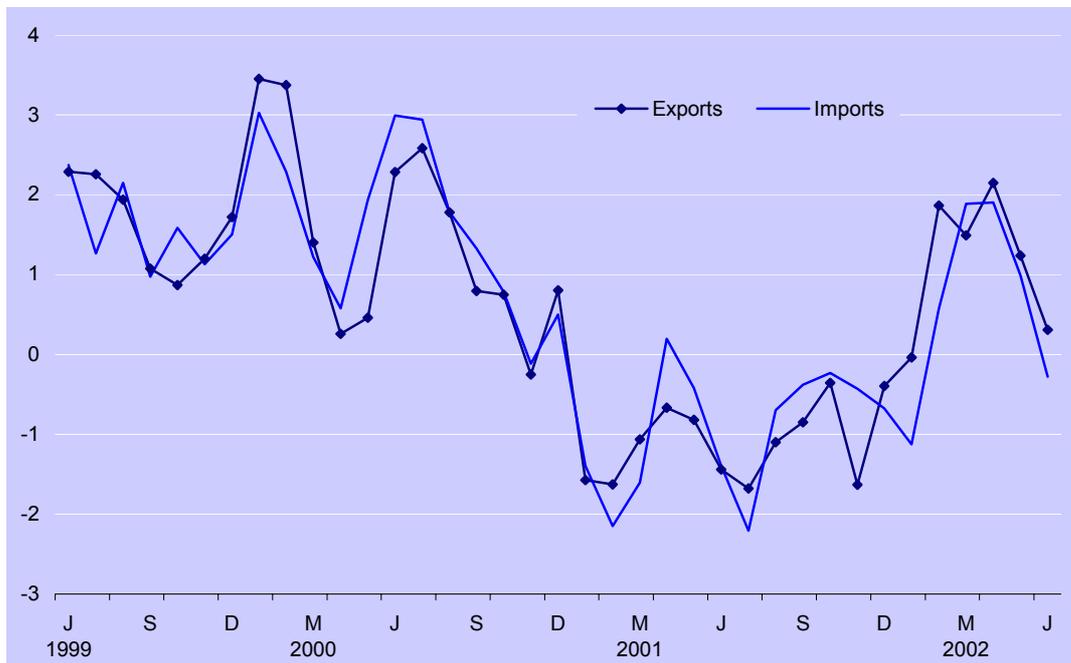


\* Excluding oil exports and gasoline, butane and propane gas imports.

Graph 15

**Exports and Imports: Seasonally Adjusted Series**

Monthly variation (3-month moving average)



A less benign international environment and the change in foreign investors' expectations on the future growth of the national economy contributed to worsen country risk perception, therefore leading to higher external financing costs for Mexico.

Among the factors that account for the above developments the following are noteworthy:

- (a) Higher risk aversion in the international capital markets had an adverse impact on the stock market and on corporate and government bond markets. This phenomenon has originated from the following:
- Less optimism regarding world economic recovery;
  - Inherent difficulties in financing the growing United States' current account deficit, and the depreciation of the US dollar;
  - Scandals concerning accounting practices of firms in the United States and Europe;

- Lack of solutions for the crisis in Argentina and its impact on Uruguay;
  - Current financial problems in the Brazilian economy; and
  - Geopolitical uncertainty stemming from Middle East tensions, the fight against international terrorism and the conflict between India and Pakistan.
- (b) Tempered optimism regarding economic recovery in the United States had a significant impact on growth expectations for Mexico, thus adversely affecting the price of the country's assets; and
- (c) The faltering belief among investors that pending structural reforms will be implemented due to prevailing political tensions in Mexico.

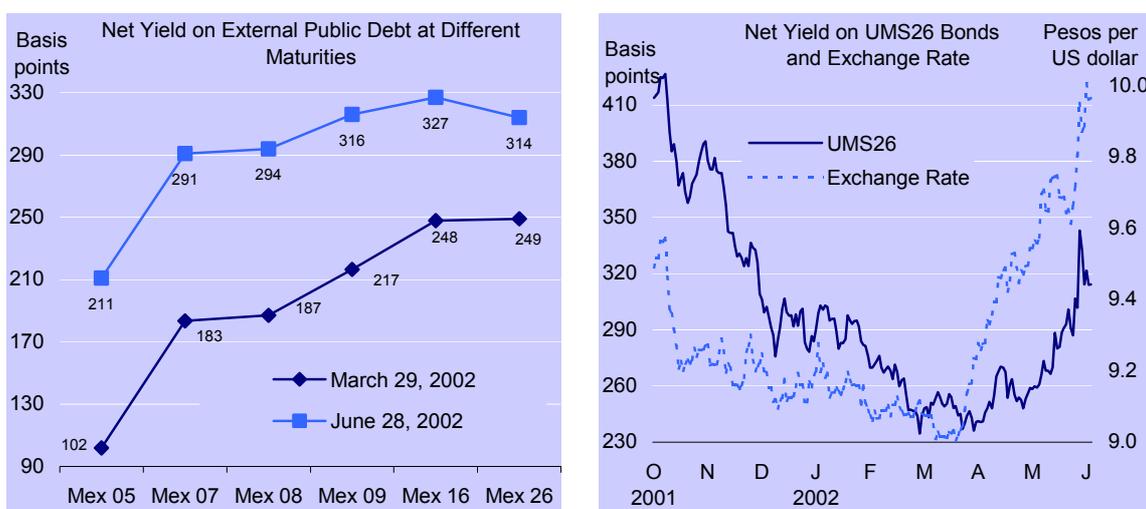
The peso depreciated during the second quarter. This was partly brought about by the deterioration of Mexico's country risk perception (Graph 16). Furthermore, the peso registered a positive correlation with US dollar/euro fluctuations (Graph 17). This correlation may respond to several factors:

- (a) The depreciation of the US dollar vis-à-vis the euro reflects a contraction in the supply of resources to the United States, therefore raising the cost of investment financing in that country. Since nearly 80 percent of FDI in Mexico comes from the United States, it is likely that it will be reduced, therefore having a negative impact on economic growth and limiting the sources of long-term financing for Mexico's current account;
- (b) A sharp decline in capital flows to North America would tend to cause a real depreciation of all the region's currencies. However, due to the apparent low sensitivity of Mexico's trade account to movements in the exchange rate, it is likely that the depreciation of the peso necessary to compensate for the aforementioned shock to the capital account could be greater than that of the US dollar; and
- (c) Financial market participants occasionally carry out operations based on rules of thumb built on casuistic observations. When this practice is adopted by a significant number of economic agents, their influence

validates the assumptions sustaining such rules. This occurred in 2000 when the price of the peso maintained a close relationship with movements in the NASDAQ index. However, the relationship eventually ceased and has not reoccurred since. The correlation between peso/US dollar and US dollar/euro prices has served as a detonator of the exchange rate depreciation. Once adjustments have taken place, this link could probably weaken and eventually vanish.

Weakening optimism regarding economic recovery in the United States and the perception that progress in the pending structural reforms agenda in Mexico will be slower than previously assumed had a direct impact on the exchange rate and an indirect impact on country risk perception. Both influences stem from the adverse incidence that the aforementioned factors have on Mexico's potential growth. If an economy grows less over the long term, this leads to a more depreciated equilibrium real exchange rate.

**Graph 16 Country Risk Indicators and Exchange Rate**



Source: Bloomberg and Banco de México.  
 Note: The net yield on the UMS26 bond is the difference between its gross yield and that of a United States government bond with similar maturity.

Graph 17

## Peso/US dollar and US dollar/Euro Exchange Rate: 2001-2002



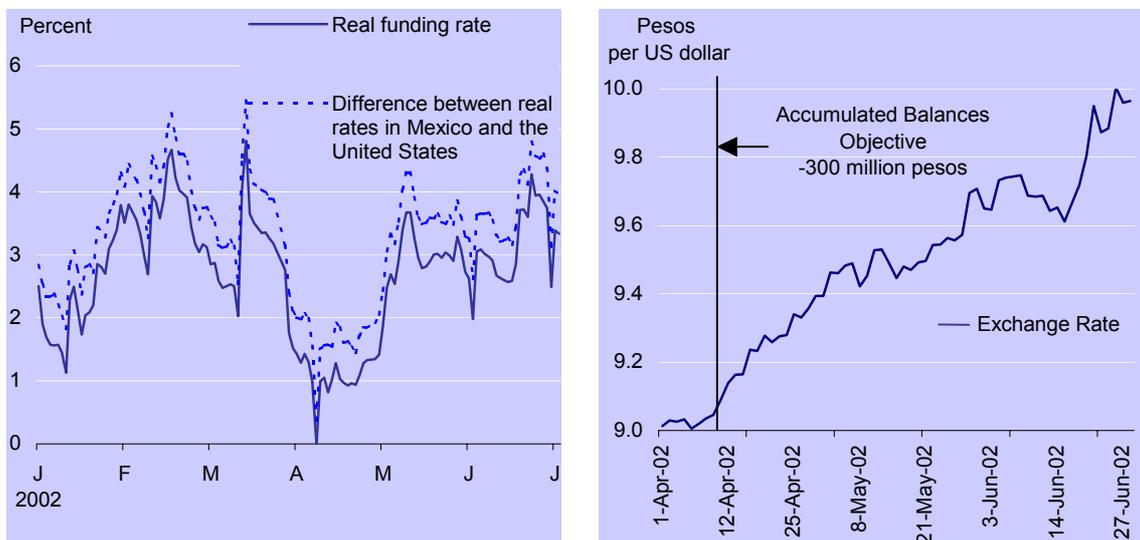
Source: REUTERS.

It has been mentioned in some circles that the depreciation of the peso originated from the reduction of the “short” implemented in April. One mechanism that might have led to this result was lower domestic interest rates as well as a narrower spread between them and external rates. However, since the second half of April interest rates have moved precisely in the opposite direction. Both domestic interest rates and the spread between them and external rates increased. Furthermore, the peso began to fluctuate even before the aforementioned monetary policy action was undertaken (Graph 18).

Graph 18

**Real Funding Rate, Real Federal Funds Rate, Exchange Rate and Accumulated Balances Objective (“Short”)**

Monthly percentage change



Source: Banco de México, INFOSEL and Bloomberg.

**II.2.5. Prices Administered or Regulated by the Public Sector**

By the end of the second quarter, the annual increase in the subindex of prices administered or regulated by the public sector was 6.9 percent. The upward movement in the annual inflation of this subindex was largely determined by rising prices of administered goods, particularly those of domestic gas. In April, May and June the monthly inflation of the subindex of prices administered or regulated by the public sector<sup>12</sup> was 0.66, -0.21 and 0.50 percent, respectively. It is worth pointing out that the monthly increases of this subindex are well above those observed during the same months of 2001.<sup>13</sup>

Products whose prices are administered by the public sector registered monthly variations of 0.95, -0.85 and 0.92 percent in April, May and June, respectively. Meanwhile, the prices of

<sup>12</sup> The basket of the subindex of prices administered by the public sector includes gasoline, domestic gas and electricity. Products whose prices are regulated by the public sector are international long distance phone calls, taxi fares, city bus fares, subway or electric transportation fares, inter-city bus services, parking lots, automobile ownership taxes, local phone services, highway tolls, domestic long distance phone calls, phone line installation and service fees, oil and lubricants, and duties and licences.

<sup>13</sup> Monthly variations were -0.48, -0.98 and 0.18 percent in April, May and June of 2001, respectively.

goods and services regulated by the public sector experienced monthly increases of 0.44, 0.30 and 0.17 percent.

As for goods whose prices are administered, their behavior can be attributed to the substantial increase in domestic gas prices during April and May. In particular, monthly inflation of domestic gas in April, May and June was 5.43, 8.19 and 1.70 percent, respectively. These increases reflected rising international oil prices (a reference for domestic gas). Although the increase in the prices of domestic gas was partly offset by reduced electricity tariffs, the latter's seasonal decrease during the summer was less pronounced than in previous years. The monthly inflation of electricity tariffs was -1.79, -11.03 and 1.11 percent, respectively. Regarding goods whose prices are regulated by the public sector, the highest increases were observed in parking lots, taxi fares and city bus services, which registered monthly increases of 1.73, 0.74 and 0.48 percent, respectively.

#### **II.2.6. Summary**

Annual CPI inflation remained stable in April-May of 2002 while rebounding in June due to increases in the prices of agricultural and livestock products as well as in those administered or regulated by the public sector. Meanwhile, annual core inflation declined considerably. By the end of second quarter it had contributed 2.66 percentage points to overall inflation, of which 0.79 points corresponded to goods and 1.87 to services (Table 10). The incidence of these items at the end of the first quarter had been higher (1.13 and 1.92 percentage points, respectively). The contribution of agricultural and livestock prices to CPI growth went from 0.32 percentage points in March to 0.59 points in June. On the other hand, that of goods whose prices are administered or regulated by the public sector rose from 0.84 to 1.25 points during the same period. Finally, annual inflation of education services remained at a level similar to that observed in the previous quarter.

Table 10

**Contribution of CPI Components to Annual inflation**

Percentage points

	June-2002	March-2002	June-2001
CPI	4.94	4.66	6.57
Core	2.66	3.04	4.28
Goods	0.79	1.13	2.22
Services	1.87	1.92	2.06
Agricultural and Livestock	0.59	0.32	0.28
Education	0.44	0.46	0.45
Administered or Regulated	1.25	0.84	1.56
Administered	0.58	0.11	0.87
Regulated	0.67	0.73	0.69

The behavior of prices in the context of the exchange rate depreciation that took place in the second quarter of 2002 suggests that the pass-through effect from exchange rate fluctuations to prices might have weakened. Thus, the significant disinflationary process in the merchandise sector, whose prices are more sensitive to exchange rate fluctuations, has not slowed. However, to validate this conclusion the evolution of core inflation of goods will need to be monitored over the next few months.

### III. Monetary Policy during the Second Quarter of 2002

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In the following section the reasons which prompted Banco de México to modify its monetary policy stance during April-June will be analyzed. In addition, an assessment of the evolution of inflation expectations and of both nominal and real interest rates is also presented due to their significant role in the public's perception of the inflationary process and of the prevailing monetary conditions in the economy. Finally, the path of the monetary base together with other monetary and credit aggregates will be reviewed.

#### III.1. Monetary Policy Actions

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On April 12th the Board of Governors of Banco de México decided to reduce the "short" from 360 to 300 million pesos, maintaining it at this level for the rest of the quarter.

As mentioned in the previous quarterly Inflation Report, on February 8, 2002 the "short" was raised to 360 million pesos. This measure was adopted to forestall the possible deterioration of inflation expectations, and to prevent any contagion to the price formation process as a result of the inflationary impact stemming from the partial elimination of the electricity subsidy, announced by the Federal Government on January 29<sup>th</sup> and which went into effect on January 8<sup>th</sup>. The reduction of this subsidy had a direct upward impact of 0.37 percentage points on the CPI.

Thus, the increase of the "short" in February was clearly a preventative measure to create the necessary monetary conditions to attain the inflation targets set forth for 2002 and 2003.

Monetary policy actions implemented in February, together with other factors, apparently had the desired effect on the expectations' formation process. This was confirmed by the downward revisions of inflation forecasts during February and March.

Although annual CPI inflation rose as a result of the previously mentioned increases in the subindexes of agricultural and livestock goods and of prices administered or regulated by the

public sector, monthly inflation did not go up. Furthermore, overall inflation fell in March while annual core inflation declined in both February and March.

Another consideration in the decision to reduce the “short” in April was the fact that although annual inflation of services had not slowed noticeably during the first few months of the year several factors such as i) the easing of contractual wage increases in the first quarter compared to their level in 2001, ii) the weakness of economic activity and, iii) the slack in the labor market still pointed towards its moderation. In fact, annual inflation of services declined marginally during the second quarter.

The above factors tend to have a lagged effect on prices, especially in the services sector. First, because wage revisions in a given month of the year are only applied to a fraction of all labor contracts. For example, if the number of contracts and workers affected were distributed uniformly in all months of the year, the last contractual agreement would only determine the wages of one twelfth of the labor force.

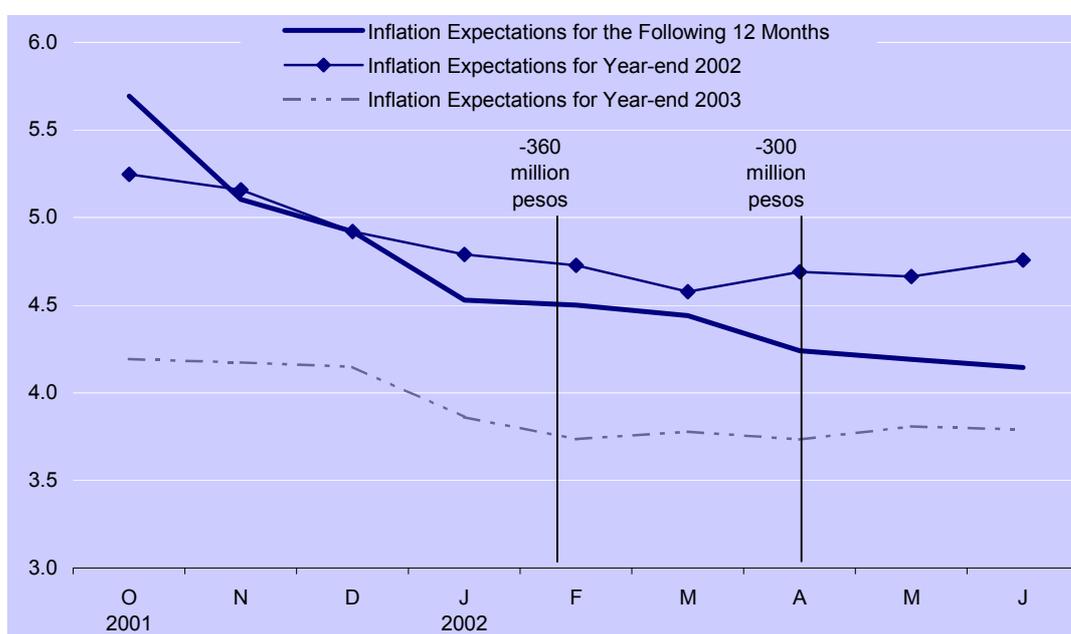
Second, the initial phase of economic downturn is usually accompanied by a reduction in output followed by a weak labor market. This is due to the fact that lay off costs make firms wait in order to evaluate the permanence of unfavorable economic conditions before cutting down their workforce. Finally, there is substantial inertia throughout the year regarding contractual wage settlements as workers in the same sector of production tend to claim for similar increases to those granted by other firms in that sector at the onset of the year, even if the prevailing economic conditions have changed considerably. The latter leads to more significant wage adjustments at certain times of the year, particularly during the early and final months.

Several factors that might have been interpreted as possible causes of further inflationary pressures appeared during the second quarter. Among these were the depreciation of the exchange rate at the beginning of April, higher CPI inflation in June and the rise in inflation expectations for 2002 also in June. Nonetheless, after analyzing the implications of these events it was concluded that these did not necessarily entail future inflationary pressures. As pointed out in this Report, rising inflation during June was brought about by a substantial increase in the prices of agricultural and livestock products. As has been shown, the prices of goods that are excluded from the core inflation subindex are highly volatile. As a result, their behavior is not always a reliable indicator of the medium-term trend of prices. In contrast, core inflation remained

on the same downward path it has been following for many months.

Expected inflation for 2002 rose 4.76 percent in the second quarter, 0.18 percentage points above March forecasts (Graph 19). This is mainly attributable to the larger than anticipated increase in CPI inflation during April and June. However, considering these observed outcomes, expected CPI inflation for the second half of the year has remained unchanged.

**Graph 19** Inflation Expectations and Accumulated Balances Objective ("Short")



Source: Survey of Private Sector Economic Analysts' Expectations, Banco de México.

The transitory nature of the increase in CPI inflation was confirmed by the fact that inflation expectations for the following 12 months diminished considerably, while those for 2003 remained essentially constant.<sup>14</sup> In particular, inflation estimates for the next 12 months were substantially lower in April, therefore suggesting that all the effects from the once-and-for all increase in prices administered or regulated by the public sector on annual inflation will be absorbed by April 2003.

<sup>14</sup> Expected inflation for the following twelve months was 4.15% in June, implying a fall of 0.3 percentage points compared to forecasts made in March. At the end of the quarter, expected inflation for 2003 was 3.79%, representing an increase of 0.01 percentage points since March. The latter forecast has remained practically constant since February of this year.

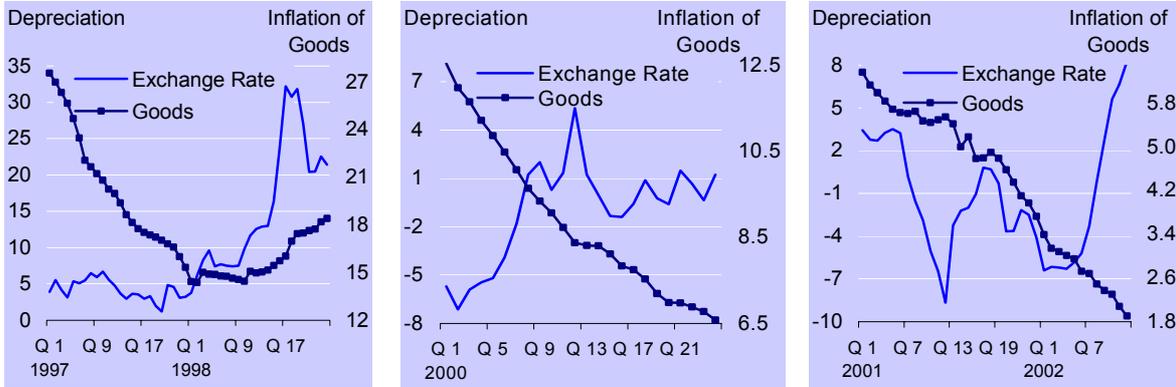
The upward revision of inflation expectations for 2002 apparently did not originate from the depreciation of the exchange rate, as so far there is no evidence confirming that it has been translated into inflationary pressures. In fact, core inflation of goods has continued to fall in spite of depreciation.<sup>15</sup> Likewise, expectations concerning core inflation for the following 12 months have been revised downwards.

Although there has been a high degree of correlation between exchange rate depreciations and inflation in Mexico over the last few decades, the characteristics of the economy have changed considerably. Some of the current features suggest that the pass-through effect of fluctuations in the exchange rate to prices may have dissipated. Among these, the following are noteworthy: a flexible exchange rate regime, lower inflation and reduced volatility of the Mexican economy. To fully understand this phenomenon, it is convenient to review the most recent periods of exchange rate depreciation and the repercussions they have had on inflation. For example, between the eighth and nineteenth half-months of 1998 there was a rapid pass-through effect from exchange rate depreciation to inflation. In that period the exchange rate depreciated 20.5 percent and annual core inflation of goods rose from 14.6 to 17.5 percent. At that time, the pass-through effect was already much lower than those registered in the past. Furthermore, it should be remembered that there was uncertainty then about the macroeconomic environment due to contagion from the crisis in Russia and falling international oil prices. On the other hand, the economy behaved very differently during the depreciation period that took place in the second quarter of 2000. In the six half-months leading up to the federal elections on July 2nd of that year, the exchange rate depreciated 7.2 percent without affecting the speed of the decline in annual core inflation of goods, which decreased from 10.5 to 8.4 percent. Finally, in the second quarter of 2002, the exchange rate depreciated 8.5 percent between the seventh and twelfth half-months of the year, without undermining the disinflation of the prices of goods (Graph 20).

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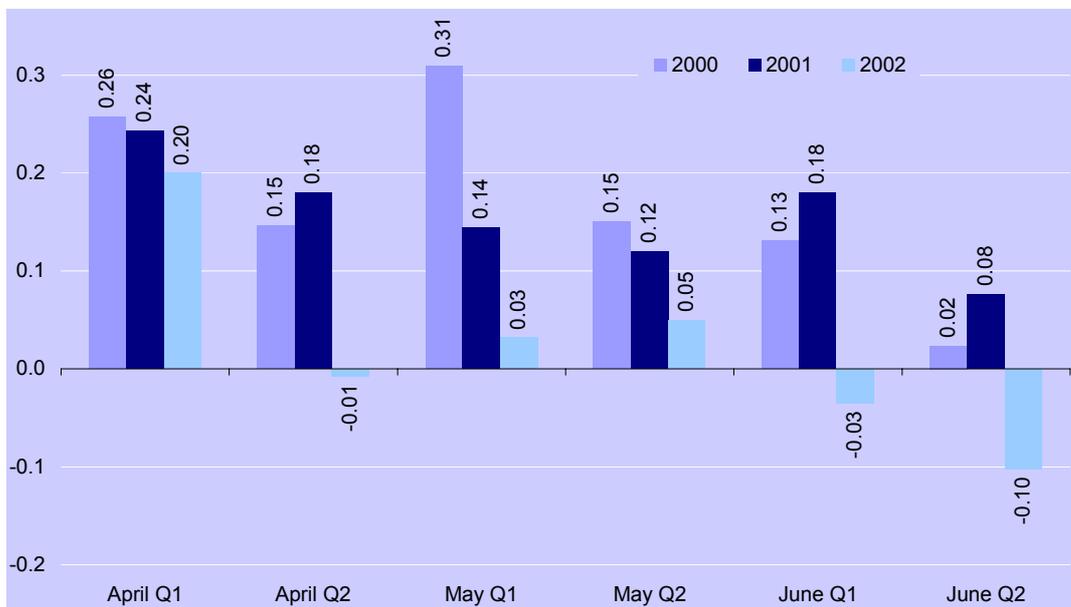
<sup>15</sup> Expected core inflation for 2002 was 4.2% at the end of the quarter.

**Graph 20** **Core Index of Goods and Exchange Rate**  
Annual percentage change



A comparison of half-month variations in the core price subindex of goods throughout the second quarter of 2002 with those of the same period in the previous two years (when the exchange rate was stable) reveals that they were smaller (Graph 21). In fact, these changes were even negative in three half-months of 2002.

**Graph 21** **Core Index of Goods**  
Half-month percentage change



The weakening of the pass-through effect from exchange rate fluctuations to domestic prices may have responded to the following factors:

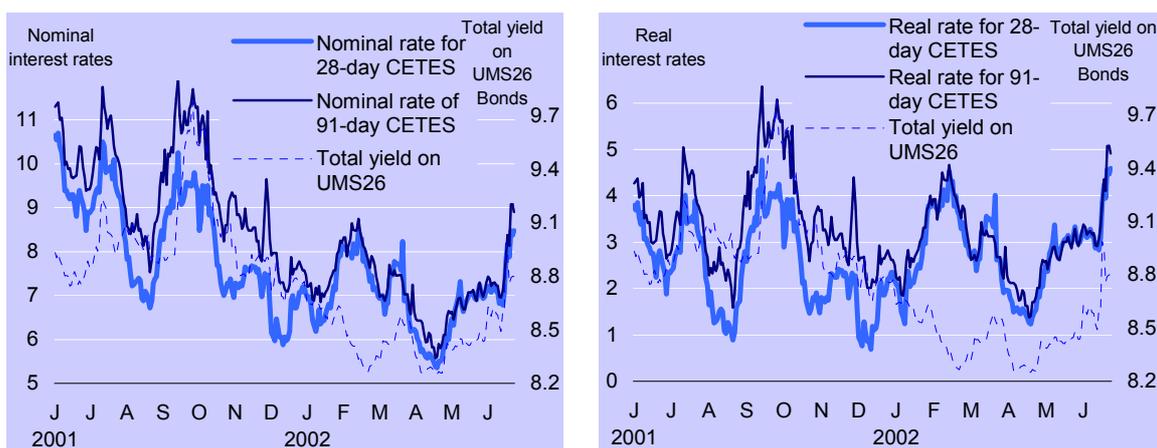
- (a) Economic agents are more cautious today before modifying their prices and do not react immediately to exchange rate fluctuations, as the exchange rate usually experiences downward and upward movements under the current floating regime;
- (b) Weak aggregate demand does not contribute to an environment suited to pass on to consumers the depreciation of the exchange rate. Businesses have apparently confronted this situation by reducing their profit margins;
- (c) Thousands of contracts and prices were set considering a higher rate of depreciation. Thus, the latter seems to have already been included in a large number of prices.
- (d) Interest rates have increased in tandem with the depreciation of the exchange rate; and
- (e) The experience of other countries with a similar degree of trade openness and low levels of inflation—such as New Zealand, Australia and Canada— suggests that as inflation stabilizes the pass-through effect of exchange rate fluctuations to prices becomes sluggish and less intense. This largely responds to the increased credibility of monetary policy regarding the attainment of inflation targets, as has been observed in Chile and Brazil. An inflation-targeting scheme coupled with a firm determination of the monetary authorities to implement the necessary measures to abate inflation has become the new nominal anchor of these economies.

The fact that exchange rate depreciation has not affected the evolution of inflation does not mean that this situation will not occur in the future. Therefore, it is of utmost importance to monitor price behavior until sufficient time has passed to guarantee that this phenomenon will not arise. Furthermore, the factors explaining the weakening of the pass-through effect from fluctuations in the exchange rate to prices also suggest that this influence could appear with a certain lag.

During the quarter covered by this Report the evolution of domestic and external interest rates (both nominal and real) was very similar, except on the dates close to the modification of the

“short” when there was a transitory decline in the yields of assets denominated in pesos (Graph 22).<sup>16</sup>

**Graph 22** **Nominal Interest Rates, Real Interest Rates<sup>1/</sup> and Total Yield on UMS26 Bonds**  
Percent



1/ Nominal interest rates deflated by inflation expectations for the following 12 months.

From May 1<sup>st</sup> on, external interest rates began to rise. This resulted from increased risk aversion in the international financial markets and changing expectations regarding the future growth of the Mexican economy.

The above factors together with the depreciation of the US dollar vis-à-vis the euro and the yen also help to explain the peso/US dollar depreciation during the period. It is important to emphasize that the free adjustment of interest rates allowed by the “short” causes adjustments in prices of national assets resulting from reduced demand to be distributed between interest rates and the exchange rate. Thus, both the depreciation and the volatility of the exchange rate perhaps have been lower than in a context of fixed interest rates or in another where they would respond more slowly.

In short, the preventive increase applied to the “short” in February avoided the unexpected rise in the prices of goods administered by the public sector from causing further inflationary pressures. Subsequently, other factors such as forecasts on an additional fall in core inflation led to the decision to reduce the

<sup>16</sup> The nominal yield on 28-day CETES went down 31 basis points in the five-trading days before and after the reduction of the “short”. The corresponding fall of nominal interest rates on 91-day CETES was 44 basis points. In contrast, the yield on UMS26 bonds only decreased 2 basis points during the same period.

“short” in April. Nonetheless, during the period following the reduction of the “short” several adverse external events arose, leading to a depreciation of the exchange rate and to higher interest rates. At the time of publishing this Report, there was no evidence suggesting that exchange rate adjustments had caused inflationary pressures that could jeopardize the attainment of the target. In any case, Banco de México will carefully monitor any possible inflation pressures to counter them should they arise.

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

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

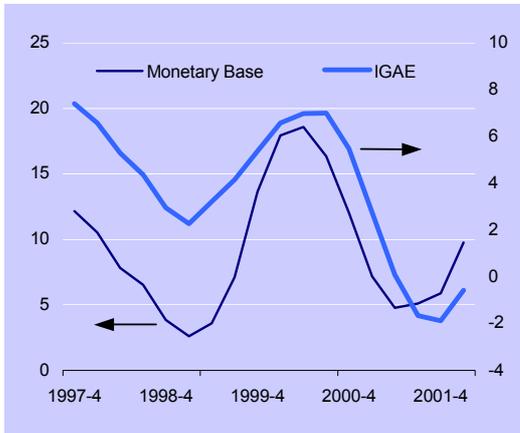
During the second quarter of 2002, the average annual growth rate of the stock of the monetary base was 15.3 percent, higher than that observed in the previous quarter (14 percent). This rate was above that forecasted in the Monetary Program, thus leading to an average deviation of 3.4 percent throughout the quarter and 5.3 percent at the end of the quarter.

The evolution of the monetary base can be explained by stronger than expected economic growth and lower interest rates. The latter implied a reduction of the opportunity cost of holding liquid assets (Graph 23). Moreover, another factor that might have increased the demand for bills and coins was higher bank charges for cash withdrawals from automatic teller machines and for issuing checks. These higher costs have been reflected in a larger amount of the average withdrawal from automatic teller machines, while the number of transactions has decreased (Graph 24).

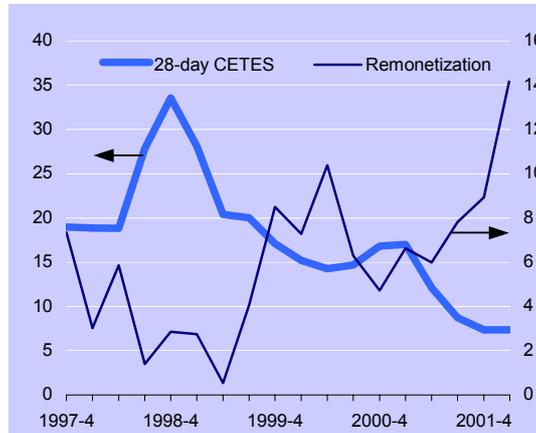
During the first semester of 2002, Banco de México’s net international assets increased 773 million US dollars. It should be remembered that the Central Bank’s main source of foreign exchange is PEMEX and that the main user of these resources is the Federal Government. Thus, during the first half of 2002 the Federal Government purchased foreign currency totaling 3.86 billion US dollars, while PEMEX sold a similar amount of US dollars to Banco de México (3.68 billion).

**Graph 23 Monetary Base**

**a) Monetary Base and Economic Activity**  
Real annual change of trend series



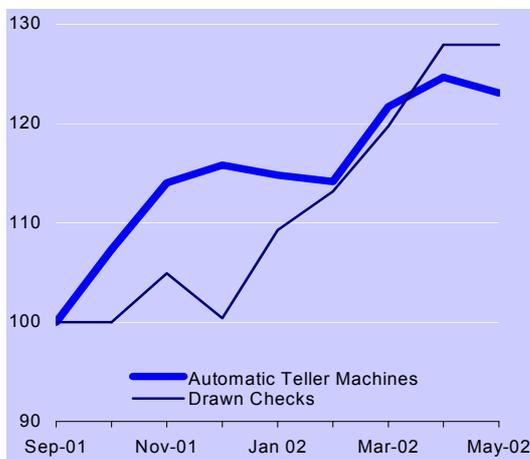
**b) Remonetization <sup>1/</sup> and Interest Rates**  
Percent



<sup>1/</sup> Remonetization is the percentage change of the ratio base money to nominal product.  
Source: INEGI and Banco de México.

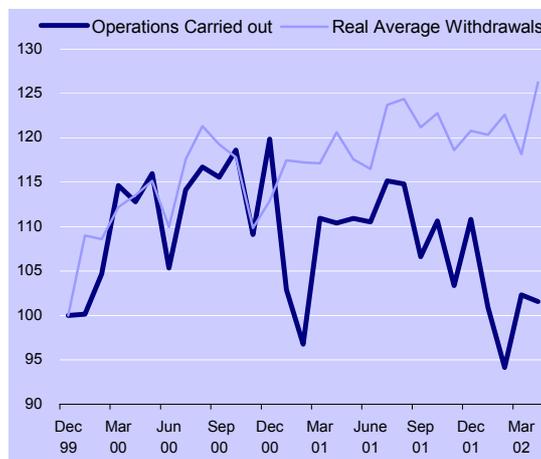
**Graph 24 Average Cost for Cash Withdrawals and Transactions Made in Automatic Teller Machines**

**Average Cost for Cash Withdrawals**  
Index September 2001= 100



Source: National Commission for the Protection and Defense of Financial Services' Users (*Comisión Nacional para la Protección y Defensa de los Usuarios de Servicios Financieros, CONDUSEF*).

**Transactions made in Automatic Teller Machines <sup>1/</sup>**  
Index December 1999 = 100



Source: PROSA.  
<sup>1/</sup> Number of transactions made under the National System of Automatic Teller Machines (*Sistema Red*).

During the first half of 2002 net domestic credit shrank 21.3 thousand million pesos. This can mainly be explained by the seasonal fall in the monetary base and, to a lesser extent, by the accumulation of net international assets. Banco de México's net domestic credit is calculated by subtracting the stock of net

international assets from the monetary base. This credit aggregate measures the Central Bank's financial position vis-à-vis the market.

**Table 11** **Monetary Base, International Assets and Net Domestic Credit**  
Millions

	Stocks		Effective flows January - March	Effective flows April - June	Accumulated effective flows <sup>1/</sup>
	By Dec. 31, 2001	By June 30, 2002	2002	2002	by June 30, 2002
(A) Monetary Base (Pesos)	225,580	211,893	-9,272	-4,416	-13,688
(B) Net International Assets (Pesos) <sup>2/</sup>	411,315	454,325	13,497	-5,838	7,660
Net International Assets (US dollars) <sup>2/</sup>	44,857	45,630	1,453	-680	773
<b>Change in Net International Assets</b>			1,453	-680	773
<i>PEMEX</i>			3,382	302	3,684
<i>Federal Government</i>			-2,004	-1,856	-3,860
<i>Other</i>			75	874	949
(C) Net Domestic Credit (Pesos) [(A)-(B)] <sup>1/</sup>	-185,735	-242,432	-22,769	1,422	-21,347
<b>Memorandum:</b>					
(D) International Reserves (US dollars) <sup>3/</sup>	40,880	42,723	1,349	494	1,843

1/ In the estimation of effective flows in pesos of net international assets, the exchange rate applied is that associated to the transaction giving rise to the flow. The difference between net international asset stocks in pesos does not correspond to the concept of effective flows due to the fact that stocks are valued at the daily exchange rate. This also explains why the differences between net domestic credit stocks do not match the reported effective flows.

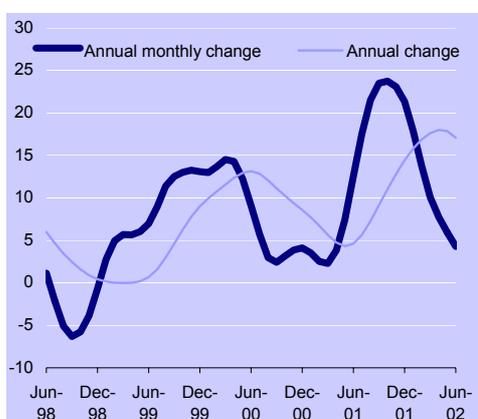
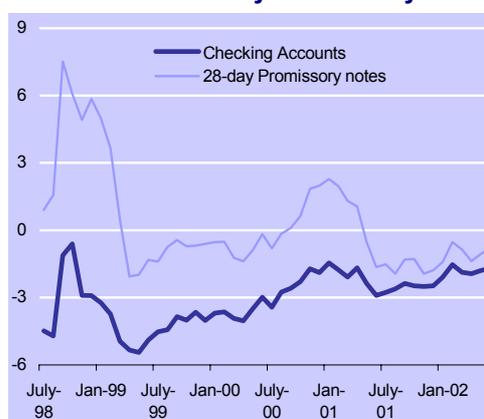
2/ Net international assets are defined as gross reserves plus credit agreements with central banks with more than six months to maturity, minus total liabilities payable to the IMF, and minus credit agreements with central banks with less than six months to maturity.

3/ As defined by Banco de México's Law.

### III.2.2. Monetary Aggregates

The average stock of narrow money (M1) went up 17.5 percent in real terms during the second quarter (13.3 percent its domestic currency components).<sup>17</sup> Increased demand for means of payment is related to the fall of interest rates (the opportunity cost of maintaining liquid assets) and to economic recovery. Regarding the first of these factors it should be mentioned that not only has there been a substantial reduction in overall interest rates on financial instruments but the spread between the yield on time deposits and checking accounts has also narrowed. In general, the aforementioned has led to a greater share of liquid deposits (checking and payroll accounts) in total bank deposits. Finally, an analysis of trend series reveals that the monthly growth of narrow money has been declining since November 2001 (Graph 25).

<sup>17</sup> Real annual variation of narrow money adjusted for the effect of liquid deposits denominated in foreign currency associated with the acquisition of BANAMEX by Citigroup was 12.9 percent in real terms (second quarter average). Meanwhile, checking accounts denominated in foreign currency excluding this effect grew at a real annual rate of 7.1 percent.

**Graph 25****Narrow Money (M1) and Yield on Bank Deposits****a) M1 Trend Series in Real Terms****b) Real Interest Rate on Checking Accounts and 28-day Promissory Notes<sup>1/</sup>**

1/ Ex-ante real interest rate. Over-the-counter gross rate for 28-day promissory notes.

The broad monetary aggregate (M4) expanded at an average real annual rate of 9.3 percent. From January to June total financial saving rose by 112.9 thousand million pesos, 57.3 thousand million of which came from the Retirement Savings System (SAR, which includes SIEFORES, housing funds and other retirement funds). In fact, if the latter is excluded from the real annual variation of M4, it decreased to 6.5 percent during the second quarter (Table 12).

**Table 12****Monetary Aggregates**

Real annual percentage change of the average stock

	2001		2002
	Oct-Dec	Jan-Mar	Apr-Jun
<b>M1</b>	<b>13.32</b>	<b>16.81</b>	<b>17.50</b>
Bills and Coins held by the Public	4.88	10.46	12.52
Checking Accounts (Pesos)	8.13	11.14	11.31
Checking Accounts (Foreign Currency)	64.22	59.64	58.46
Current Account Deposits	16.67	22.49	23.29
<b>M4</b>	<b>10.41</b>	<b>9.62</b>	<b>9.28</b>
Bank Deposits	1.10	-3.66	-6.12
Public Securities <sup>1/2/</sup>	24.98	25.54	27.95
Private Securities <sup>2/</sup>	10.57	26.21	20.42
Other Housing and Retirement Funds <sup>3/</sup>	13.75	12.60	11.60
<b>Memorandum:</b>			
M4 excluding SAR	7.42	6.53	6.49

1/ Including Federal Government securities, BPAS and BREMS.

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

3/ Including housing funds and retirement funds held by Banco de México.

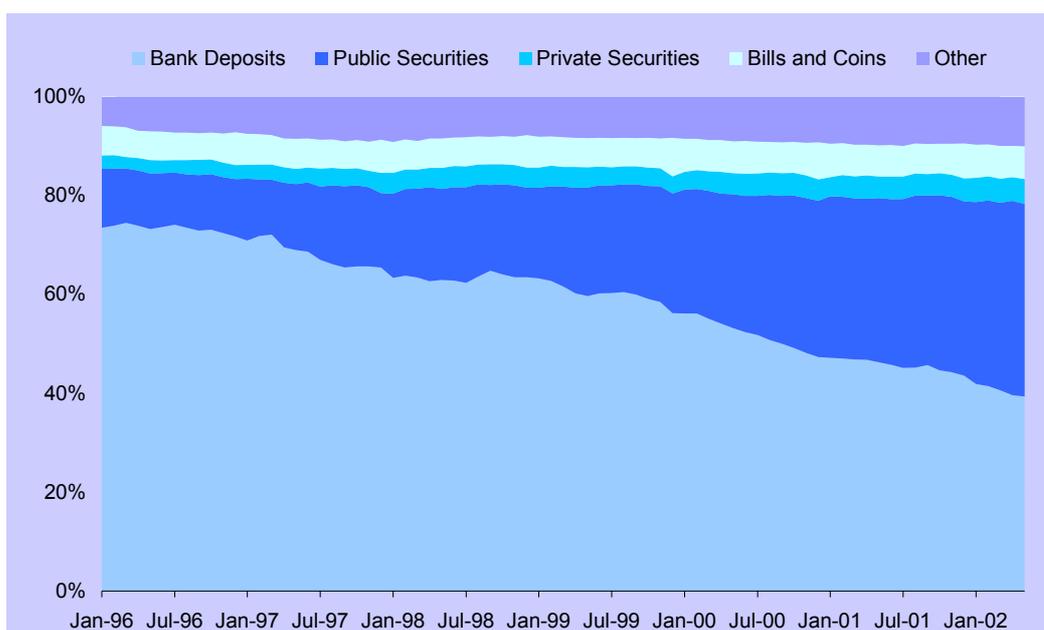
The structure of financial saving has undergone substantial changes in recent years. In particular, the relative weight of bank deposits has fallen significantly (Graph 26). Thus,

during the present quarter this item recorded a negative average real annual variation of 6.1 percent. The change in the structure of M4 has been accompanied by reduced financing to the private sector via the banking sector and with higher levels of financing through public sector securities. The latter accounted for 38 percent of the stock of domestic financial saving in June.

**Graph 26**

**Broad Monetary Aggregate (M4)**

Percentage distribution by financial instrument

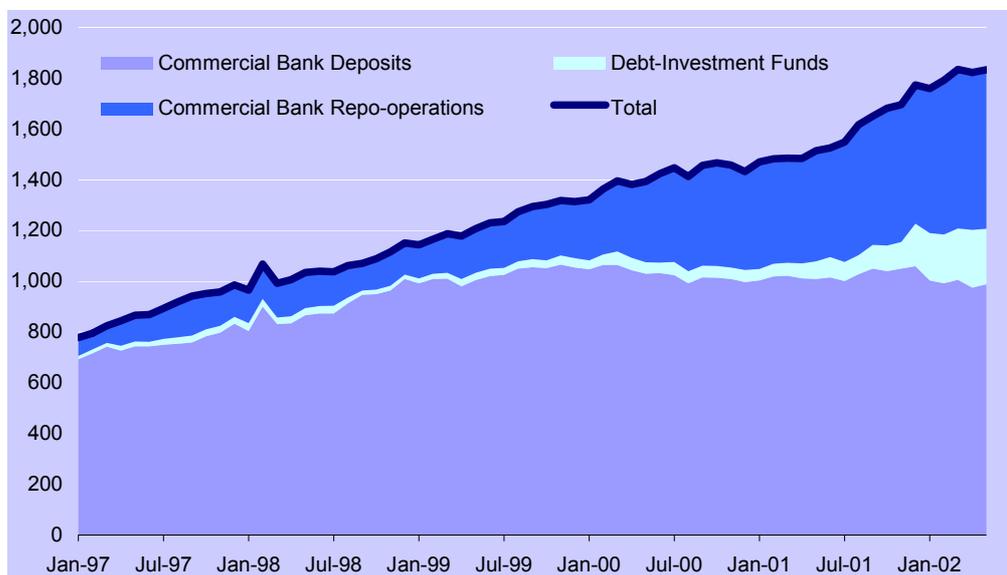


The fall in bank deposits does not imply that the banking sector is not the main intermediary of domestic saving. This becomes evident when repo sales by commercial banks and deposits in investment funds of financial groups are added to traditional bank deposits (Graph 27).

Graph 27

**Commercial Banks and Investment Funds Intermediation**

Thousand million pesos

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

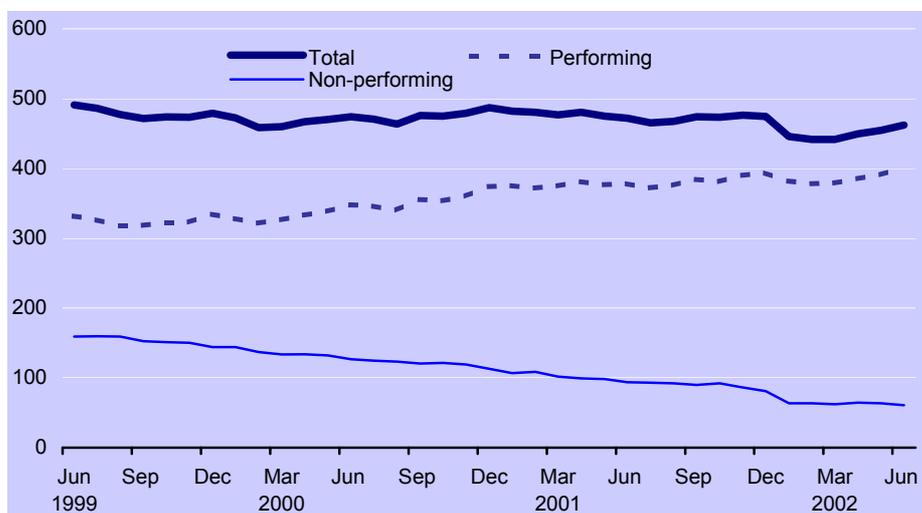
Data as of June 2002 indicates that although direct credit granted by commercial banks to the private sector remains depressed, during the second quarter it expanded vis-à-vis the first. This was attributable to the rise in performing loans,<sup>18</sup> as their stock at the end of the month turned out to be 22.3 thousand million pesos higher than in March (Graph 28).

<sup>18</sup> Figures for performing loans in this section exclude the portfolio associated with debtor support and bank rescue programs (promissory notes IPAB-FOBAPROA and CETES-UDIs).

Graph 28

## Credit Granted by Commercial Banks to the Private Sector

Stocks in thousand million pesos



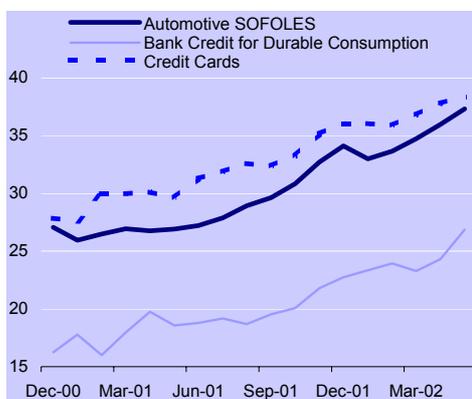
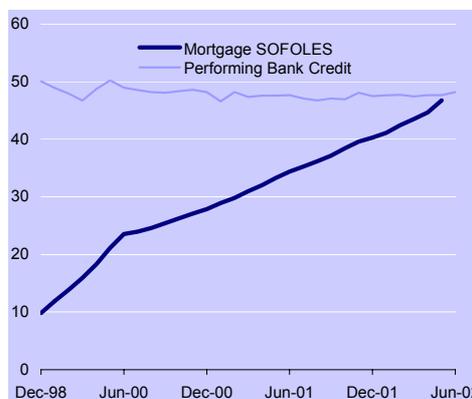
The evolution of performing bank credit to the private sector basically responded to the expansion of consumer credit, whose stock increased at a real annual rate of 32.9 percent in June. In May, credit cards accounted for 58.8 percent of consumer credit, being the most vigorous component of bank credit (Graph 29a). Although bank credit channeled to durable goods' purchases has gone up, that granted by Automotive SOFOLES has expanded the most (over 30 percent in real terms) and is approximately 40 percent higher than the former (Graph 29a).

Mortgage lending granted by SOFOLES amounted to 46.7 thousand million pesos in May (real annual growth of 34.3 percent). However, despite new credit plans for housing offered recently by banks, this item remains in a slump as performing credit contracted at an annual rate of 3.7 percent in June (Graph 29b).

Graph 29

**Credit for Consumption and Housing Granted by Commercial Banks and SOFOLES<sup>1/</sup>**

Nominal stocks in thousands of million pesos

**a) Credit for Consumption****b) Credit for Housing**

1/ SOFOLES information corresponds to net credit portfolio registered by Mexico's Association of Financing Companies with Limited Responsibility (*Asociación Mexicana de Sociedades Financieras de Objeto Limitado, AMSOFOL*).

Regarding financing granted to firms and individuals with a business activity, the flow of resources channeled through non-bank financing is noteworthy. In June, the stock of private securities<sup>19</sup> placed on the Mexican Stock Exchange reached 150.7 thousand million pesos, 20.5 percent higher in real terms than in the same period of the previous year. The stock of this type of financing is extremely vigorous and accounts for 56.2 percent of performing credit granted to firms by commercial banks. The latter recorded a real annual contraction of 4.3 percent in June (Graph 30a).

One factor that explains the growth of financing through private securities is the substantial decrease in associated interest rates. In particular, interest rates on commercial paper (securities placed for an average of 47 days) and those on stock certificates (recently created instruments with an average maturity of 1,710 days) were below 11 percent during the first quarter of 2002 (Graph 30b). Finally, it is important to mention that due to their versatility, stock certificates have become especially popular among firms (20.7 thousand million pesos were issued in this type of instruments during the present quarter).

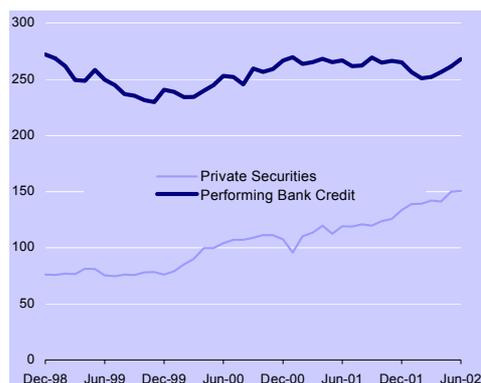
<sup>19</sup> Including commercial paper, medium-term promissory notes, stock certificates, ordinary participation certificates and bonds.

**Graph 30**

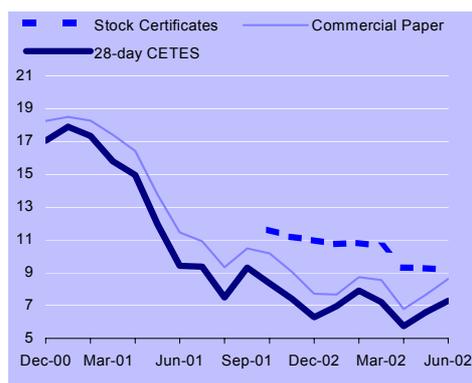
**Financing to the Private Sector and Interest Rates**

Stocks in thousand million pesos

**a) Financing to the Private Sector**  
Stocks in thousand million pesos



**b) Interest Rates on Commercial Paper, Stock-market Certificates <sup>1/</sup> and 28-Day Promissory Notes**  
Annual percentage



1/ Weighted average of interest rates on issues denominated in domestic currency.

Lending rates for the different credits granted by commercial banks remained practically constant in the first two quarters of the year, still showing a wide spread between them and borrowing rates (Table 13).

**Table 13**

**Lending and Borrowing Interest Rates**

Annual percentage

	2000	2001	2002	
	December	December	March	June
<b>Lending Rates</b>				
Credit Cards	44.88	35.64	35.77	35.21
Fixed-rate Mortgage	n.a.	18.43	17.83	16.58
Commercial Paper	18.26	7.73	8.57	8.62
MXA-1 Rating	18.22	7.83	8.33	8.41
MXA-2 /3 Rating	19.35	9.88	10.33	10.47
<b>Borrowing Rates</b>				
CCP (Pesos)	15.55	6.49	6.54	6.15
28-day CETES	9.44	3.08	3.44	3.25
Checking Accounts	5.53	2.38	2.42	2.34
<b>Memorandum</b>				
28-day CETES	17.05	6.29	7.23	7.30

Source: Banco de México and INFOSEL.

## IV. Private Sector Outlook for 2002<sup>20</sup>

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During April-June of 2002, economic analysts' forecasts of the main macroeconomic variables for the present year remained practically unchanged.

### IV.1. Forecasts of the Main Determinants of Inflation

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Private sector analysts expect the international environment to be slightly more favorable than that foreseen in the previous Inflation Report. In this regard, the following are worth mentioning:

- (a) Estimates for economic growth in the United States in 2002 went from 2 percent in March to 2.6 percent in June. Meanwhile, the average forecast of U.S. analysts for economic expansion in that country was 2.8 percent.<sup>21</sup> Average GDP growth forecasts from three brokerage firms<sup>22</sup> at the time of publishing this Report was 2.8 percent (Table 14). Likewise, these institutions estimate economic expansion will be between 2 and 3 percent during the second quarter of 2002. However, this group of investment banks responded to economic data published in May and June by undertaking downward revisions to their growth forecasts for the second quarter. As a result, expected growth for the year as a whole also declined. U.S. analysts revised their forecasts for the industrial output volume index in that country upwards for 2002 from -0.6 percent in March to 0.3 percent in May. Nonetheless, this revision was corrected from 0.2 percent in June to 0.1 percent in July,<sup>23</sup> and
- (b) According to both national and foreign analysts of Mexico's economy, the average price of the Mexican oil

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<sup>20</sup> Unless otherwise stated, all forecasts reported in this section are drawn from the Survey on Private Sector Economic Analysts' Expectations undertaken each month by Banco de México.

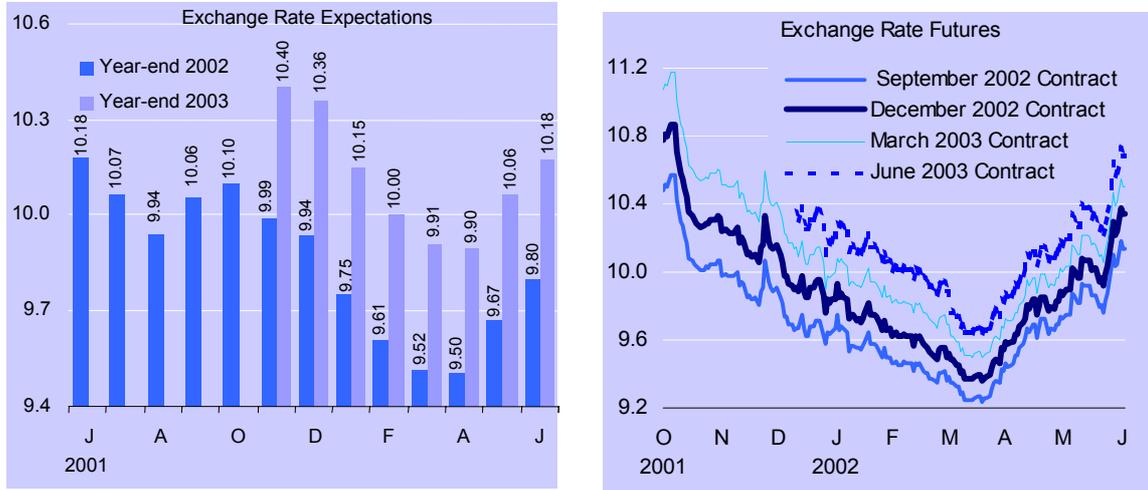
<sup>21</sup> Source: Consensus Forecasts, June 10th 2002.

<sup>22</sup> Goldman Sachs, JP Morgan and Deutsche Bank.

<sup>23</sup> Consensus Forecasts in March, May, June and July 2002.



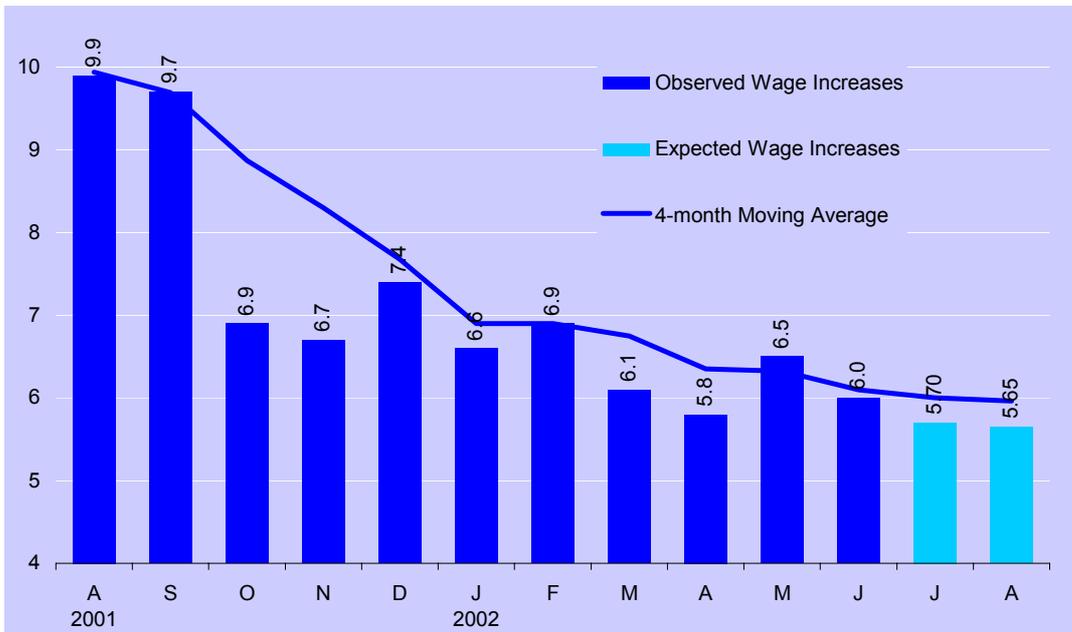
**Graph 31** Exchange Rate Expectations and Exchange Rate Futures for Year-end 2002 and 2003  
Pesos per US dollar



Source: Bloomberg and Survey of Private Sector Economic Analysts' Expectations, Banco de México.

Analysts estimate nominal increases in contractual wages during July and August will be 5.70 and 5.65 percent, respectively (Graph 32).

**Graph 32** Contractual Wages  
Percentage

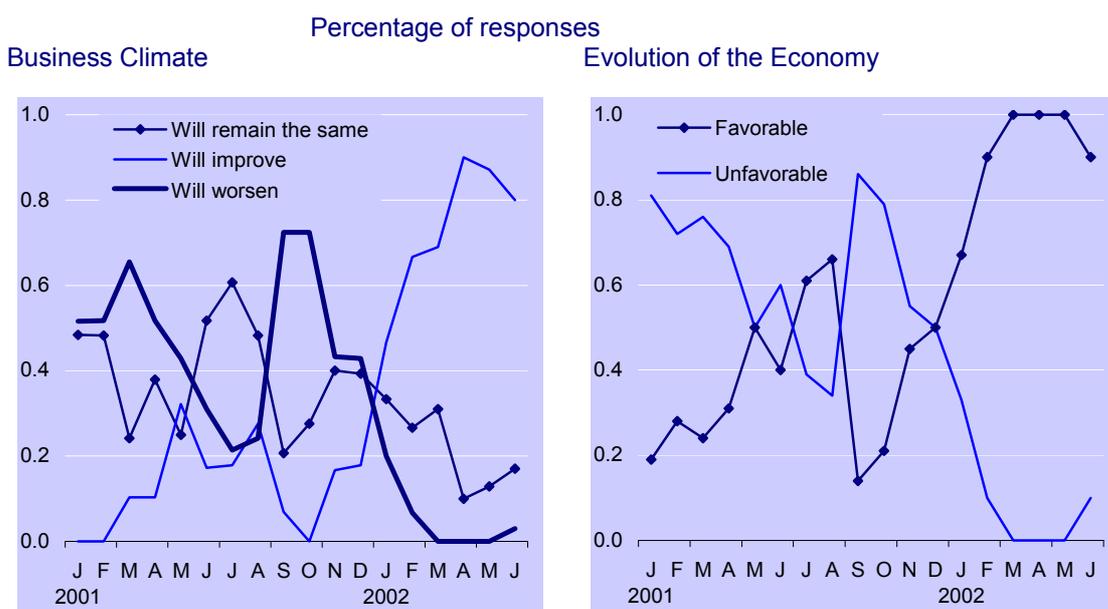


Source: Ministry of Labor. For July and August 2002, data on private sector's forecasts were drawn from the Survey of Private Sector Economic Analysts' Expectations conducted by Banco de México on June 2002.

Private sector analysts' forecasts of real GDP growth for 2002 remained practically unchanged, rising slightly from 1.57 percent in March to 1.60 percent in June. Meanwhile, estimates for annual GDP growth for 2003 are set to 3.99 percent. The trade and current account deficits for year-end 2002 are foreseen to end at 10.44 and 18.98 billion US dollars, respectively. Expectations on annual FDI inflows were revised downwards, from 14.15 billion US dollars in March to 13.6 billion US dollars in June.

Indicators of the business climate, private sector activity and confidence levels displayed a significant improvement compared to March. Thus, 80 percent of the analysts surveyed were of the opinion that the business climate for the next semester will improve, while 16.7 percent mentioned that it would remain unchanged and only one analyst believed it would deteriorate. Nonetheless, several confidence indicators worsened slightly in June (Graph 33).

**Graph 33** Expectations on the Business Climate and the Evolution of the Economy for the Following Six Months



According to analysts, the main factors that could hinder economic growth over the next six months are the weakness of external markets and of the world economy (22 percent of responses); the weakness of the domestic market and international financial instability (13 percent of responses); domestic political uncertainty (10 percent); and the availability of domestic financing (8 percent).

## IV.2. Inflation Expectations

According to the survey conducted in June, analysts' monthly inflation expectations for July, August and September of 2002 were 0.22, 0.32 and 0.50 percent, respectively. These forecasts imply that annual inflation will fall from 4.94 percent in June to 4.71 percent in September.

Annual inflation estimates for year-end 2002 were modified upwards from 4.58 percent in March to 4.76 percent in June. On the other hand, estimates for annual core inflation fell from 4.47 percent in March to 4.20 percent in June. Inflation expectations for the following twelve months went down from 4.44 percent in March to 4.15 percent in June. Finally, those for 2003 remained relatively unchanged, from 3.78 percent in March to 3.79 percent in June (Graph 34). The upward revision of CPI inflation expected for 2002 reflected its increase during the quarter and does not imply any modification in medium-term CPI inflation expectations. This is confirmed by the fall in core inflation and overall inflation estimates for the next twelve months as well as by the stability of inflation expectations for year-end 2003.

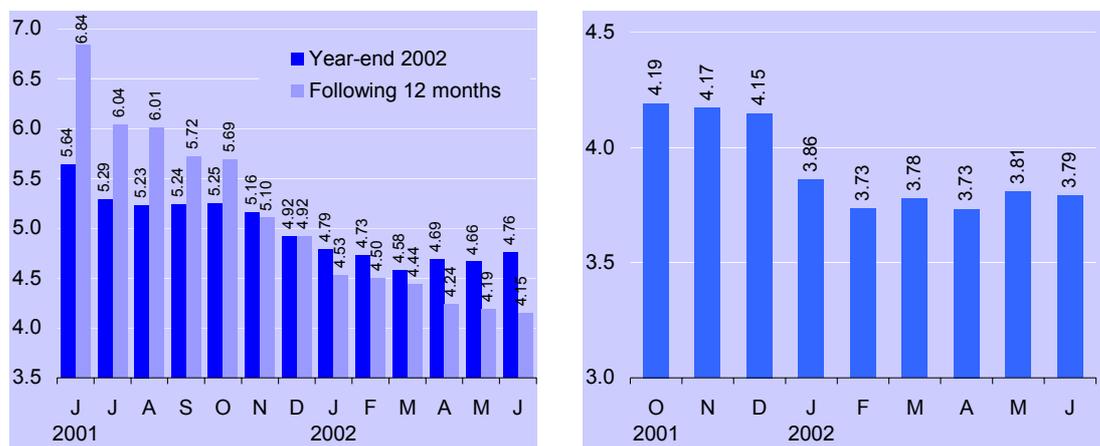
Graph 34

### Evolution of Inflation Expectations

Annual percentage change

Year-end 2002 and Following 12 months

Year-end 2003



SOURCE: Survey of Private Sector Economic Analysts' Expectations, Banco de México.

## V. Long-term Inflation Objective

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Over the past few years, Banco de México's monetary policy has evolved towards an inflation-targeting regime. The formal adoption of this framework was announced in the Monetary Program for 2001. The setting of medium and long-term inflation targets and timely communication of the central bank with society are fundamental elements of an inflation targeting scheme.

The Board of Governors of Banco de México harbors the conviction that, since monetary policy actions have a lagged incidence on inflation, any appropriate strategy for abating it and ensuring that it will remain at low and stable levels must transcend the immediate horizon. Therefore, the fundamental element of such a strategy must be the setting of medium and long-term objectives to guide monetary policy actions and, at the same time, provide the public with the necessary references to understand and evaluate all actions undertaken by the Central Bank. Furthermore, medium and long-term inflation targets serve society as a guide for the future behavior of the nominal variables, hence facilitating saving-investment decisions of the economic agents, as well as the determination of prices and wages.

Moreover, the adoption of medium and long-term inflation targets as well as Banco de México's commitment to attain them, provide economic agents with a reference on which to base their expectations for the future path of inflation, helping to bring price and wage adjustments more in line with these objectives. This framework allows the targets to be met with a minimum cost to society and at the same time prevents inflation expectations from being contaminated by rising prices stemming from transitory shocks.

Inflation targets provide a nominal anchor for the system. When temporary deviations occur, the nominal anchor allows inflation to return to a path that is compatible with the attainment of the inflation objectives in as short a time as possible. The Central Bank uses monetary policy and its firm commitment to the target to ensure this result.

Based on the above considerations, in January of 1999 the Board of Governors of Banco de México set forth as a medium-

term target the convergence with the inflation prevailing in the economies of Mexico's main trading partners by year-end 2003.

Later, in September 1999, it also specified in its Monetary Program for 2000 as a target an annual CPI inflation that would not exceed 10 percent. This, in view of the need to establish short-term references along the path towards price stability. Likewise, in October of 2000, the Central Bank adopted the objective of an annual inflation that would not exceed 6.5 percent for 2001 and announced its commitment to attain an annual CPI inflation of 3 percent by December of 2003. At the same time, it also established an inflation objective for 2002 of around 4.5 percent. More recently, in the Monetary Program for 2002, Banco de México reiterated its commitment to attain an inflation rate of less than 4.5 percent in 2002 and of approximately 3 percent by year-end 2003.

In this section, both the inflation target for 2003 and the inflation objectives that will guide monetary policy actions in the following years (the long-term inflation objective) are defined.

The attainment of inflation targets as well as timely and clear explanations of the causes behind any temporary deviations from this target by central banks are fundamental to ensure the credibility of the targets among society. Through this practice inflation objectives become a useful mean for effectively obtaining the aforementioned benefits. In recent years, the successful compliance with the inflation objectives by Banco de México has been essential in strengthening the credibility of the new scheme among the public (Graph 35).

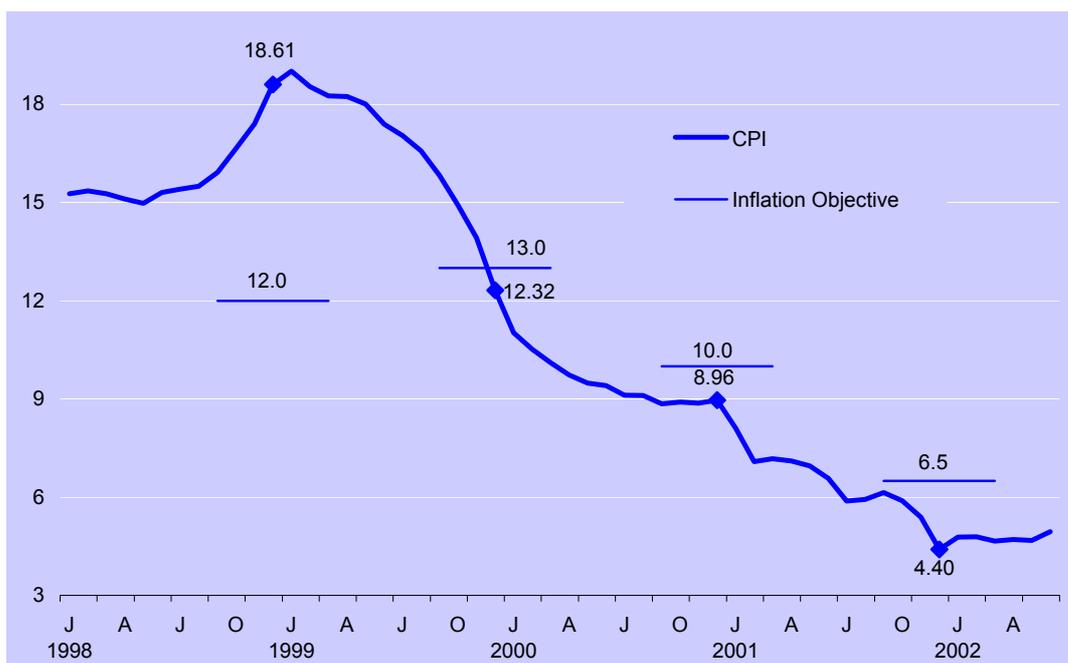
After having met the inflation targets for three consecutive years, the Board of Governors of Banco de México considered appropriate to formally specify the inflation target for December 2003 and for the long-term.

Based on a careful analysis, the Board of Governors of Banco de México decided that monetary policy would be geared to achieve by December 2003 an annual CPI inflation of 3 percent, and maintain it permanently around that level.

Although monetary policy is aimed to comply with the objectives, the attainment of the latter is subject to a certain degree of uncertainty. This follows from the many shocks that the economy and the price formation process are exposed to, as well as from the imprecise relationship between monetary policy actions and the results obtained in the realm of inflation. Consequently, the Board of Governors decided to establish a "variability interval" of

plus/minus one percentage point around the inflation objective for both December 2003 and the long term. This interval was determined looking at past experience. In other words, during periods of stability the volatility of CPI inflation has fallen in that interval.

**Graph 35 Consumer Price Index and Inflation Objective**  
Annual percentage change



As can be seen, inflation targets for year-end 2003 and for the long-term are coincident. Thus, a target for annual CPI inflation of 3 percent, with a variability interval of plus/minus one percent, has been formally established for December 2003 and future years.

The following sections will discuss the main factors considered by the Board of Governors concerning the specification of the reference price index for the long-term inflation objective, the level of the objective, and the variability interval.

## **V.1. Specification of the Reference Index for the Long-term Inflation Objective**

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The Board of Governors defined the long-term inflation objective in reference to the CPI. The reasons behind this decision were as follows:

- (a) The CPI is the best-known price indicator and the most widely used by the general public to measure the cost of living for Mexican households;
- (b) The use of CPI inflation as a reference in countless contracts and negotiations is deeply entrenched in Mexican society; and
- (c) The CPI is published in a timely manner at regular intervals. Moreover, this index is not subject to revisions and represents the best estimate of the general price level in Mexico and, therefore, of the purchasing power of the national currency. It is the most representative index of the average cost of urban residents' consumption basket.

One alternative reference that has been used by countries operating under an inflation-targeting regime is to define the objective in terms of core inflation. Although this index is more representative of medium-term inflationary trends, it has less coverage and does not provide accurate estimations of the purchasing power of the national currency. Therefore, this index was not considered the best option. Nonetheless, it continues to be a very important indicator of medium-term inflationary pressures and extremely useful for the conduction of monetary policy.

## **V.2. Specification of the Long-term Inflation Objective**

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The main elements considered by the Board of Governors of Banco de México in determining the 3 percent level for the long-term inflation objective are listed next:

- (a) Research indicates that because of measuring biases price indexes tend to overestimate inflation.<sup>26</sup> These are caused

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<sup>26</sup> For the United States see Boskin, M., E. Dulberger, R. Gordon, Z. Griliches and D. Jorgenson (1996), "Toward a More Accurate Measure of the Cost of Living. Final Report to the Senate Finance Committee from the Advisory Commission to Study the Consumer Price Index", Social Security Administration Reports and Studies; and for Spain: Ruiz-Castillo, J., E. Ley and M. Izquierdo (1999), "Measuring Inflation in Spain", Collection of Studies and Reports, number 17, Caja de Ahorros y Pensiones de Barcelona.

by the following factors: i) price indexes do not reflect improvements in the quality of products coming to the market or the continual introduction of new goods and services over time; ii) the weights used to calculate price indexes remain constant for long periods and indexes do not reflect modifications in households' patterns of consumption in response to changes in the relative prices of the goods and services they purchase; iii) price indexes do not take into account that consumers alter their purchasing patterns in favor of those establishments that offer the lowest-priced goods; and iv) the use of an arithmetic instead of a geometric mean to calculate average price increases of specific goods that make up the generic categories included in the price survey, hence leading to slightly overestimated price increases.<sup>27</sup> The adoption of a very low long-term inflation objective could even imply a negative variation of prices;

- (b) A 3 percent inflation target allows the needed relative price adjustments in the economy to take place smoothly, even when some prices and wages exhibit downward nominal rigidities. Relative prices in the economy must respond to any shocks to the supply and demand of goods and services. To achieve these changes certain prices need to rise more than the objective, while others grow less (or even fall). A very low inflation target implies that deflations should take place in some markets. However, sometimes institutional rigidities do not allow some prices to fall. Under such circumstances, the necessary movements in relative prices will not fully take place, causing inefficiencies in the use of resources in the economy;
- (c) Since nominal interest rates have a natural zero limit, an overly ambitious low inflation target could narrow the margin for monetary policy to induce significant interest rate reductions in a scenario of deflation;<sup>28</sup> and

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<sup>27</sup> It is worth mentioning that one of the improvements introduced when changing the CPI's base is the use of a geometric mean to obtain the average increase in the prices of generic products that include specific products from the food subindex. As a reference, see the Consumer Price Index Guide on Banco de México's web site. A detailed discussion on the different options for calculating aggregations of price increases of different goods is found in Diewert, E. (1995), "Axiomatic and Economic Approaches to Elementary Price Indexes", Working Paper No. 5104, May, National Bureau of Economic Research.

<sup>28</sup> See International Monetary Fund (2002), "World Economic Outlook", April, pp. 93-95. Although it is unlikely that the Mexican economy could face difficulties due to extremely low inflation, it should be remembered that some countries similar to Mexico have registered extremely low inflation levels in recession periods. Such is the case of Peru,

- (d) International experience indicates that most developing countries that have adopted an inflation-targeting scheme have chosen long-term inflation objectives that are slightly above those in developed countries. In general, inflation targets in emerging economies are set around 3 percent (Table 15). This decision probably responds to the fact that relative prices are more volatile in emerging economies, perhaps due to greater variability in productivity and the terms of trade. Furthermore, these countries may also have a larger number of administered prices that could be freed at any time.<sup>29</sup> Thus, although Banco de México's long-term strategy was announced as the convergence with the inflation levels of Mexico's main trading partners, in our case (as in other developing countries) a long-term inflation objective slightly above those established in developed nations is advisable.

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which posted negative price growth during the last quarter of 2001 and in the first month of this year. Likewise, Chile experienced inflation levels very close to 2 percent at the onset of 2002.

<sup>29</sup> For further information on the adoption of inflation targeting schemes in emerging economies, see International Monetary Fund (2001), "World Economic Outlook", May, pp. 132-133; Schaechter, A., M. Stone and M. Zelmer (2000), "Adopting Inflation Targeting: Practical Issues for Emerging Market Countries", IMF Occasional Paper No. 202, International Monetary Fund; and Mishkin, F. (2002), "Inflation Targets in Emerging Economies", *Economics Gazette*, Special Edition, March, Instituto Tecnológico Autónomo de México.

Table 15

**Long-term Inflation Objectives**

## Annual percentage change

Country	Long-term Objective	Index
Australia <sup>1/</sup>	2 - 3%	CPI
European Central Bank <sup>2/</sup>	0 - 2%	CPI
Brazil <sup>3/</sup>	3.75% (+, - 2.5%)	CPI
Canada	2% (+, - 1%)	CPI
Chile	2 - 4%	CPI
Colombia <sup>4/</sup>	6%	CPI
Spain <sup>5/</sup>	2%	CPI
Finland <sup>5/</sup>	2%	Core
Israel	1 - 3%	CPI
New Zealand <sup>6/</sup>	0 - 3%	CPI
Peru	2.5% (+, -1%)	CPI
Poland <sup>7/</sup>	4%	CPI
United Kingdom <sup>8/</sup>	2.5%	CPI
Czech Republic	2 - 4%	CPI
South Korea <sup>9/</sup>	2.5%	Core
South Africa <sup>10/</sup>	3 - 5%	CPI
Sweden	2% (+, - 1%)	CPI
Switzerland	0 - 2%	CPI
Tailand <sup>11/</sup>	0 - 3.5%	Core

1/ Objective for the quarterly average inflation throughout the business cycle. CPI used in calculations does not include interest charges.

2/ An upper limit of 2%.

3/ Objective for 2004. The objective for 2003 is 4% (+/- 2.5%).

4/ Objective for 2002.

5/ Before the European Monetary Union went into effect.

6/ CPI used in calculations does not include interest charges.

7/ Objective for 2003. The objective for 2002 is 5% (+/- 1%).

8/ CPI used in calculations does not include interest charges on mortgages.

9/ Objective for 2003. The objective for 2002 is 3% (+/- 1%).

10/ CPI used in calculations does not include interest charges on mortgages.

11/ The objective is set according to the quarterly average inflation.

### V.3. Variability Interval Around the Inflation Objectives

The first section announced the decision of the Board of Governors to establish a variability interval of plus/minus one percentage point around the inflation targets for December 2003 and subsequent years. This decision is based on the following considerations:

- (a) Monetary policy influences price behavior through different indirect channels known as the monetary policy transmission mechanisms. Thus, when a central bank modifies the stance of monetary policy it affects the evolution of interest rates and the prices of financial assets. These movements have an impact on the exchange rate, credit conditions and aggregate demand, which in turn affect the determination of prices and wages in the economy. This mechanism is subject to considerable lags

and indeterminacy, therefore representing a fundamental source of uncertainty in the relationship between monetary policy actions and prices in the economy;<sup>30</sup>

- (b) The determination of certain prices does not depend as much on the transmission mechanism because they are less influenced by monetary policy and experience high volatility (mainly the prices of agricultural and livestock products as well as those administered or regulated by the public sector). Therefore such prices are volatile and typically undergo unpredictable changes; and
- (c) Unanticipated changes in wages and in the exchange rate also affect inflation. Given the lags under which the transmission mechanism operates, monetary policy can only revert these effects after a relatively long period.

Thus, even when monetary policy is continually oriented towards the attainment of the inflation objectives, occasional deviations from these targets must be expected as a result of, for example, unanticipated changes in administered prices or indirect taxes. Nonetheless, average inflation must be similar to the objective in the long run.

In order to communicate as clearly as possible to the public the uncertainty surrounding the attainment of the inflation targets, the Board of Governors of Banco de México decided to establish the variability interval of plus/minus one percent around the 3 percent objective. This interval is considered sufficient to cover, in most cases, the variability of annual CPI inflation.

In the international scenario, inherent uncertainty regarding the attainment of inflation targets is reflected in the fact that most central banks with an inflation targeting regime have specified their long term objectives in terms of an interval around them (Table 15).

It should be emphasized that the interval around the inflation objective is not an indifference or tolerance margin for the monetary authority. It is only meant to represent the imprecision that necessarily surrounds the point attainment of the inflation target due to the different shocks CPI inflation is exposed to. In other words, economic agents should keep in mind that Banco de México's monetary policy actions are, at all times, focused on attaining the 3 percent objective for inflation. Nevertheless, as the

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<sup>30</sup> A detailed explanation of the monetary policy transmission mechanism in Mexico can be found in the Inflation Report for April-June 2000, p. 40.

volatility of CPI inflation may inevitably lead to transitory deviations from the target, it can generally be assumed that these will occur within an interval of plus/minus one percentage point.

The interval was determined based on historical experience regarding the irregularity of core index inflation and those CPI subindexes that are not included in the core index. However, it is important to mention that non-core inflation subindexes occasionally experience unusual movements that cause significant variations in the CPI and in some cases these adjustments lead to inflation levels temporarily outside the variability interval.

It is important to remember that during 1998 prices of fruits and vegetables recorded unusual increases as a result of the climatic phenomenon known as “El Niño”. During that year annual inflation of agricultural prices was 24.3 percent, 6.6 percentage points higher than core inflation. As a result, CPI inflation rose 0.9 percentage points ending above core inflation. Furthermore, during 2001 agricultural prices contributed with 0.5 percentage points to reducing CPI inflation below core inflation, out of a total gap of 0.7 percentage points (Graph 36).

**Graph 36** **CPI, Core Price Index and Agricultural and Livestock Goods’ Price Index**

Annual percentage change



The evaluation concerning the attainment of the adopted long-term inflation objective will be undertaken frequently, not just on a single-month (December) as has been done to date. Given the variability interval, Banco de México's monetary policy will therefore be conducted with the aim of maintaining a CPI inflation of 3 percent, and providing periodical accountability of the Central Bank to society.

Banco de México will continue to thoroughly explain to the public on a quarterly basis the path of inflation and any deviations from the long-term objective. Furthermore, should there be deviations outside the specified interval, the Central Bank will provide a clear and detailed explanation of the reasons. When these movements respond to transitory factors such as increases in the prices of agricultural and livestock products, monetary policy actions are not required to bring inflation to comply with the objective. Nonetheless, there are other cases where deviations could stem from more permanent causes. In these circumstances, Banco de México will report the monetary policy actions taken to bring inflation back into line with the target. Moreover, it will also estimate the impact of such actions and the time it will take for inflation to return to the path originally forecasted. Thus, information will be released periodically and not just at the end of the year. This practice represents an important stride in the accountability of Banco de México with society and in the transparency of its monetary policy.

Banco de México's adoption of a long-term inflation objective as from December 2003, whose compliance will be evaluated periodically, has the following advantages:

- (a) It will strengthen Banco de México's commitment to ensure overall price stability;
- (b) It will offer society a useful reference regarding the future path of inflation; and
- (c) It will contribute to more uniformly distributed price and wage adjustments throughout the year.

Should disturbances occur that might cause inflation to deviate from the variability interval and Banco de México attempted to correct this deviation in the short term, it would need to induce an opposite movement in the rest of the prices of the economy great enough to completely stave off the inflationary impact of the aforementioned shocks. Nonetheless, due to the

downward rigidity of most prices, such an adjustment would be extremely costly.

Under this scenario, Banco de México, following the practices of most of the world's central banks, would not totally compensate the direct inflationary effect derived from the shocks, allowing inflation to deviate temporarily from its objective. As mentioned previously, sometimes shocks to inflation are transitory and do not require any modifications in the monetary policy stance to make price growth comply with the target. However, if permanent shocks take place, Banco de México would need to tighten monetary policy to the extent that is necessary to prevent any second-round effects on inflation and on inflation expectations. This would prevent disturbances from having any medium-term impact on inflation so it can return to levels within the interval as soon as possible.

Under these circumstances, the long-term inflation objective will become the nominal anchor of the system. This stems from the fact that although the monetary authority recognizes, on the one hand, that the target cannot be met in the short term, at the same time it implements the necessary measures to prevent any second-round effects on inflation or inflation expectations from taking place. The main purpose is to ensure inflation returns to a path compatible with the attainment of the target.

A similar situation might arise if the exchange rate undergoes substantial fluctuations. In the past, the inflationary impact of exchange rate depreciations on prices, wages and inflation expectations was even more intense than that associated with increases in agricultural and livestock prices and prices administered or regulated by the public sector. This was due to the fact that the pass-through effect of fluctuations in the exchange rate to prices and medium-term inflation expectations was intense and swift. As a result, exchange rate adjustments called for drastic monetary policy restriction. However, unlike variations in prices administered or regulated by the public sector, the depreciation of the real exchange rate does not have a direct pass-through effect to the price index because distributors of final goods and services will have to decide whether to pass increases in tradable goods' prices on to consumers. The experience of countries that have adopted an inflation-targeting scheme and have attained price stability indicates that under this regime the pass-through effect of changes in the exchange rate tends to weaken considerably. Therefore, as inflation in Mexico stabilizes at around 3 percent, movements in the exchange rate should not have a significant impact on inflation.

As mentioned in this Report, during the recent depreciation of the exchange rate this phenomenon did not occur.

There is the possibility that several shocks could take place simultaneously and that their combined repercussions could have a greater impact on inflation. This was evident in 1998 when the depreciation of the real exchange rate coincided with increases in the prices of gasoline and diesel as well as in those of agricultural and livestock prices. In a similar event, the combined incidence of such shocks could cause inflation to deviate from the objective way above the variability interval. As a result, monetary policy actions to counter the spreading of inflationary influences and the worsening of inflation expectations would have to be even more stringent.

Although the long-term objective has been specified using CPI inflation as its reference, Banco de México will permanently assess the evolution of core inflation and this indicator will remain a very important input for monetary policy decisions. Since short-term CPI inflation is affected by transitory fluctuations of its most volatile components, core inflation is a more reliable indicator of inflation trends and its future path.

For the above reasons, Banco de México will continue to monitor permanently the evolution of core inflation and this will remain an important element of monetary policy decisions.<sup>31</sup>

According to the Board of Governors, the long-term objective of an annual CPI inflation of 3 percent and the variability interval of plus/minus one percent around it, adequately represent the concept of price stability which, by constitutional mandate, Banco de México should strive for.

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<sup>31</sup> For a detailed explanation of the methodology used for calculating core inflation and its use in monetary policy decisions see the Inflation Report of January–March 2000, pp. 53-59; and the Inflation Report of January–March 2001, p. 31.

In the years to come, Banco de México, in accordance with current practice, will provide to the public, through its Inflation Reports, detailed and timely information on the factors that have influenced the evolution of inflation, as well as the causes that could make it temporarily deviate from the objective.

Likewise, whenever there should be evidence confirming significant deviations in annual CPI inflation from the 3 percent target, Banco de México will explain thoroughly to the public its causes, its views on the evolution of inflation and the monetary actions being undertaken to return to the path consistent with attaining the long-term objective.

## VI. Balance of Risks and Conclusions

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During the second quarter of 2002, the pace of the Mexican economy was mainly influenced by the following factors:

- (a) An increase in real GDP growth in the United States, although smaller than had been expected at the beginning of the quarter. Likewise, the balance of risks that has been taking shape over the past weeks suggests a weaker rebound in economic activity in the second half of the year than assumed in Banco de México's base scenario;
- (b) A real depreciation of the US dollar in relation to the euro and yen;
- (c) A slight upturn of domestic demand; and
- (d) Volatility in the international capital markets, which led to reduced portfolio investment flows to Mexico and to the deterioration of country risk perceptions for Latin America.

In the quarter covered by this Report, the synchronized recovery of the industrial sectors of Mexico and the United States continued. Thus, annualized quarterly growth of industrial activity (seasonally adjusted series) was 4.5 percent in the United States and 4.3 in Mexico. This synchronization has also been associated with a substantial increase in Mexican manufacturing exports (seasonally adjusted figures) and to the fact that the fall in the annual rate of exports during the last few months has moderated. Furthermore, job creation has started to recover in the Mexican industrial sector.

As for domestic demand, available information suggests consumption and investment registered positive growth in both their quarterly seasonally adjusted series and in their annual rates.

Based on the above results, it is estimated that the Mexican economy expanded at an annual rate of around 1.8 percent during the second quarter of 2002, therefore implying a quarterly increase in its seasonally adjusted series. Real GDP expansion has been driven by the favorable evolution of the external accounts as well as the incipient upturn in consumption and investment.

Finally, it is likely that the accumulation of inventories contributed less to economic growth than in the first quarter.

The most important financial markets in Mexico experienced the following movements during the second quarter:

- (a) Country risk, measured by the spread between the yield of the EMBI+ index and a long-term U.S. government bond, increased 72 basis points;
- (b) The funding interest rate rose 81 basis points;
- (c) The exchange rate depreciated 10.6 percent; and
- (d) The Mexican stock market index fell 12.2 percent.

These results were mainly associated with external factors, among which the following are noteworthy:

- (a) Increased risk aversion among investors related to the perception of a weak recovery of the world economy, the uncertain geopolitical situation, the accounting scandals in developed countries and crises and financial problems in some emerging economies; and
- (b) The US dollar depreciation vis-à-vis the main currencies and the likelihood that the United States will encounter difficulties in financing its current account deficit.

Nonetheless, the impact that present pessimism over pending structural reforms in Mexico could have had on the country's financial variables should not be underestimated.

The influence of these factors on the future evolution of the domestic economy will greatly depend on their duration. As long as volatility in the international financial markets persists, the recovery of Mexico's economy will be less vigorous and more uncertain. As a result, the cost of financing domestic investment projects in Mexico will increase as will uncertainty regarding their profitability. This will adversely impinge upon the incipient rebound in economic activity that most likely began in the second quarter.

As shown in several sections of this document, up to now there is no evidence confirming that exchange rate depreciation has influenced the behavior of prices. In this context, weak aggregate demand has significantly contributed to advance the disinflation process. At the end of the second quarter, annual core inflation had

fallen to below 4 percent. This result is mainly attributed to the downward movement of the annual inflation of the core goods subindex. As for services, annual core inflation went down slightly. However, this reduction is still not completely in line with the downward movements recorded in contractual wage increases during the last six months.

Several factors had an adverse effect on overall inflation. Increases in the annual inflation of agricultural prices and of prices administered or regulated by the public sector are especially noteworthy. Up to now, the rebound of overall inflation does not seem to have had a negative impact on either the formation of medium-term inflation expectations or on the setting of contractual wages. Thus, the upward effects of these phenomena on annual CPI inflation might be transitory.

For the remainder of 2002, developments in Mexico's economy will be conditioned by the previously identified external factors, in particular, by the expansion of real GDP in the United States, by conditions prevailing in international financial markets and by the cost and availability of external financing. Following are the main assumptions that support Banco de México's base scenario regarding the evolution of the international environment during the second half of the year:

- (a) Forecasts of economic growth in the United States in 2002 were revised upwards, from 2.2 percent in the previous Inflation Report to 2.7 percent at present. This could be seen as a positive change. Nonetheless, although it may appear so, modification merely responded to the following factors:
- The updating of real GDP growth figures in the first quarter from a 4.2 percent to 6.1 percent will not affect the future evolution of the Mexican economy.
  - A downward adjustment of estimates for growth in the second quarter, from 3.8 percent in April to 2.3 percent at present.
  - Average expected growth for the last two quarters of the year remained practically constant at 3.3 percent.

Thus, regarding real GDP growth in the United States, forecasts for the second half of the year did not change

significantly. On the other hand, anticipated growth for industrial output in that country during 2002 remained at 0.2 percent;

- (b) Based on WTI futures prices and assuming a similar spread between them and the price of the Mexican oil export mix to that observed during the last few months, the average price of the Mexican mix will be close to 20 US dollars per barrel; and
- (c) Given the difficulties in forecasting the behavior of international financial markets and the absence of domestic factors that could bring about a significant improvement in country risk perception, a conservative assumption is that the conditions that have prevailed during past weeks for access to the international capital markets will continue. Furthermore, the increase in short-term interest rates in the United States will be postponed until the first months of 2003.

Based on these statements and on available information regarding the evolution of the Mexican economy during the second quarter of the year, a forecasting exercise for the main macroeconomic variables for the remainder of 2002 was carried out. The outcome of this exercise was similar to that presented in the previous Inflation Report. The main forecasts are listed next:

**Economic Growth:** The estimate for 2002 is 1.8 percent, as available information suggests growth remained at around that level in the second quarter. Furthermore, the expected evolution of the main determinants of economic expansion has also remained unchanged during the second quarter. Consequently, the average increase of real GDP in the second half of the year is foreseen to be nearly 4 percent.

**Current Account:** Expectations for the current account deficit in 2002 remained constant at around 3 percent of GDP.

**Inflation:** The recent behavior of the overall and core indexes of annual inflation and the current monetary policy stance are consistent with the attainment of this year's target. For the rest of 2002 the main price indexes are expected to behave as follows:

- (a) Annual core inflation will remain stable, considering it already declined further than expected in the first six months of the year. Likewise, core annual inflation of goods has already reached very low levels and during the next few months the evolution of core inflation will

depend on the decline of the services' index. As it is well known, the annual growth rate of the latter has declined slower than that of the core index; and

- (b) Given the relative stability of annual core inflation, the path of CPI inflation will mainly be influenced by the behavior of the subindexes that are excluded from the core measure.

Annual overall inflation is expected to remain volatile and it is quite likely that it will register a further increase in July. This would partly be explained by the statistical effect associated with negative monthly variations in overall inflation in July 2001, which were mainly caused by the deflation in the subindexes of agricultural and livestock prices and of prices administered or regulated by the public sector. If these positive factors are not repeated in July of 2002, annual inflation should increase in that month to above 5 percent and probably resume its downward path by August. Although the current monetary policy stance is compatible with the attainment of the objective, the volatility of the annual inflation of the subindexes for agricultural and livestock prices and prices administered or regulated by the public sector could give rise to sudden fluctuations in the overall inflation index. It should be noted that under the base scenario of Banco de México, annual overall inflation at end-December 2002 would resent the unfavorable influence of the following two factors:

- (a) An annual inflation of the subindex of prices administered or regulated by the public sector above 4.5 percent. This already includes an upward effect of 0.37 percentage points derived from the increase in electricity tariffs that was approved in February and had not been anticipated in the Monetary Program; and
- (b) The inflationary impact of the luxury tax introduced earlier this year.

The base scenario foresees that these adverse factors will be offset by:

- (a) Core inflation below 4.5 percent; and
- (b) Low annual inflation in the subindex of prices of agricultural and livestock goods.

As mentioned in this Report, monetary policy has a considerable lagged effect on the evolution of prices in the economy. Thus, in the second quarter of 2002 the monetary policy

stance should be progressively oriented –as the main factors that will condition the evolution of the economy in 2003 are defined more clearly– towards consolidating a monetary environment consistent with achieving the long-term inflation objective by December 2003. In order to decide on the proper course of action, forecasts on the evolution of the main macroeconomic variables must be relied upon. For this reason, Banco de México extended the horizon of its projections to the following year.

The aforementioned exercise assumes that average real GDP in the United States will grow 3.5 percent while industrial output, 4.2 percent. Meanwhile, the average price of the Mexican oil export mix will be between 16 and 20 US dollars per barrel. Based on the above, Mexico's economy is expected to grow 4 percent in 2003. As for inflation, forecasts indicate that the current stance of monetary policy is consistent with the decline in inflation in 2003 and with achieving the target. However, this task will require considerable efforts in the following areas:

- (a) Regarding core inflation, since additional contributions to the disinflationary effort in future years will come more from the subindex for services (because annual inflation of goods is already at very low levels), a further substantial reduction in nominal wage increases will be required;
- (b) The setting of prices administered or regulated by the public sector needs to be consistent with the long-term inflation objective; and
- (c) The behavior of the subindex of agricultural and livestock prices must be in line with the target. This will occur as long as adverse regional and worldwide climatic phenomena that may affect domestic and external prices of these products do not occur.

The risks implicit in the base scenario for the remainder of 2002 and for 2003 are substantially higher than those envisaged in past quarters. This is mainly attributable to the current high degree of uncertainty concerning the evolution of the global economy and fluctuations in international financial markets.

Among the main external risks foreseen, the following are noteworthy:

- (a) That the United States' economy does not recover during the second half of the year as assumed in the base scenario and that there is a more noticeable deterioration

of that country's financial markets (perhaps deriving from more corporate sector accounting problems);

- (b) That a more pronounced correction of the US dollar/euro exchange rate should take place; and
- (c) That a substantial additional contraction in capital flows to the emerging markets should occur due to stronger contagion from the Brazilian crisis or to higher risk aversion.

The likelihood of the first two risks taking place has increased during the last few weeks in light of the evolution of some economic indicators in the United States and as a result of falling stock markets, which deeply affected consumer confidence. Furthermore, the accounting problems in the corporate sector could have a negative impact on the cost of financing, thereby hindering the expansion of private investment. Thus, perceptions that the United States' economy might suffer another downturn in the second half of the year and return to a path of sluggish growth are gaining ground. The latter is aggravated by the second risk, as significant macroeconomic imbalances remain in the U.S. economy. In particular, the high current account deficit represents an important source of vulnerability. Any sudden corrections of this deficit would severely affect the price of the US dollar and most likely lead to increased volatility in international capital markets.

Furthermore, instability in Brazil and the repercussions of the corporate accounting scandals have also raised the risk for investing in emerging economies and in corporate securities.

The materialization of any of the three scenarios would certainly hinder economic growth in Mexico. In the first case, the effect would be transmitted through the current account via falling exports and output. In the other two cases, the latter effect will be added to a shock to the capital account that would increase external financing costs, domestic interest rates and, therefore, further reduce domestic demand.

Should these scenarios occur their impact on inflation would be ambiguous. On the one hand, slower economic growth would be associated with weaker inflationary pressures. However, under the first scenario the adverse effect on Mexican exports and economic activity could increase the external deficit. Furthermore, the demand for the country's assets would fall in all three

scenarios. In the end, these factors might lead to a depreciation of the exchange rate, bringing about additional inflationary pressures.

The main domestic risks that could alter Banco de México's base scenario are described below:

- (a) As for developments in inflation, the main risk in the following months is that a significant pass-through of exchange rate depreciation to prices, inflation expectations and wage settlements should materialize; and
- (b) The greater deterioration of medium-term growth expectations caused by an unfavorable perception of the future of the country's agenda for structural reforms and by the lack of agreements due to political strains.

Should there be a more intense pass-through from fluctuations of the exchange rate to prices, a more restrictive monetary policy would need to be adopted in order to attain the targets. The move towards a more restrictive stance would also take place if the second risk occurred and a depreciation of the exchange rate together with a contamination of the inflation process should also take place.

On the other hand, the persistence of political disagreements could hinder progress in the pending structural reforms. Regrettably, this would restrain both domestic and foreign investment flows and also induce greater volatility in interest rates and in the exchange rate. These phenomena would further exacerbate the difficulties inherent in a world scenario characterized by uncertainty. In such circumstances, economic growth prospects would be affected adversely, translating into lower productivity gains and less job creation, and also hindering any improvements in real wages. In short, given the complexity of the current economic conditions it is of utmost importance to reach a consensus -in the short term- that will aid in fastening the pace of economic modernization.

Finally, it should be mentioned that even under the base scenario outlined above, the attainment of the long-term inflation target by year-end 2003 is an ambitious goal. In the following months, the Board of Governors of Banco de México will continue assessing the behavior of the main determinants of inflation for the remainder of 2002 and for 2003. Based on the evolution of these factors and, therefore, on the outlook for short and long-term inflationary pressures, the Central Bank will determine the

necessary monetary policy actions to ensure the achievement of the objectives.