Inflation Report
October – December 2001
and
Monetary Program
for 2002

BANCO DE MEXICO

JANUARY, 2002

BOARD OF GOVERNORS

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

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

Therefore, as of April 2000, the Board of Governors of Banco de México decided to publish Quarterly Inflation Reports in January, April, July and October. These reports contain a detailed description of the evolution of inflation, the main factors that affect it as well as an evaluation of the international environment, which have been the basis for the monetary policy actions implemented to fulfill the Constitutional mandate of maintaining the stability of the national currency's purchasing power. The Inflation Reports corresponding to the first, second and third quarters of 2001 were sent in due time to the President and Congress.

The present document includes both the "Inflation Report: October-December 2001" and the "Monetary Policy Program for 2002." In compliance with Article 51, section I of Banco de México's Law, the aforementioned Program presents a statement on the monetary policy to be conducted throughout the period from January 1 to December 31, 2002.

FOREWARNING

Unless otherwise stated, this document has been prepared using data available as of January 25th, 2002. The figures are preliminary and subject to change.

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

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I. Introduction

Throughout 2001 economic growth in Mexico was severely affected by the slowdown of the United States' economy. Mexican GDP is estimated to have fallen 0.3 percent in real terms last year and the economy suffered its first recession since 1995. Notwithstanding, some positive and important results were obtained. Among these achievements, the reduction of annual inflation from 8.96 percent in December 2000 to 4.40 percent in December 2001 and the substantial fall of both nominal and real interest rates to levels unseen for many years, are noteworthy. Thus, in 2001 the economy experienced (for the first time in the last 25 years) a normal economic cycle in which the slowdown was accompanied by a stable behavior of the main financial variables.

Given the close links between the Mexican and the United States' economy, the performance of exports, output and employment was unfavorable. Nevertheless, unlike episodes in the past where GDP decreased, financial variables in the present have remained stable and inflation has fallen. This suggests that the economy will recover simultaneously with that of the rest of the world. The favorable evolution of Mexico's financial variables is due to the disinflationary effort, prudent fiscal policy, continued foreign investment driven by the structural reforms that were implemented in the past, and the stability of the current account deficit.

As previously mentioned, positive results were obtained in 2001 and the target was met for the third consecutive year. The decline in the growth rate of prices depended on the following factors: the application of a preventive monetary policy in 2000 and at the start of 2001; the weakness of aggregate demand; the stability of the exchange rate; and, finally, the supportive evolution of agricultural and livestock goods' prices and of prices of goods and services provided or regulated by the public sector.

Regarding the above, the recent volatile behavior of these prices suggests that part of overall inflation's recent performance may have been transitory. Thus, core inflation has become a more relevant indicator of inflation trends over the medium run.

In order to consolidate the results obtained and achieve a low and stable inflation, monetary policy will focus on attaining the proposed targets for 2002 and 2003. In response to the changes that the Mexican economy has undergone, monetary policy conduction has moved towards an inflation-targeting regime that was formally adopted last year. This scheme has been successfully applied by several of the world's most important central banks. In the case of Mexico, the results obtained during the convergence period were satisfactory. As in the monetary program for last year, this document describes the main features of this regime and explains the channels through which it increases the effectiveness of monetary policy.

Mexican economic activity is expected to gradually recover during 2002. Nevertheless, the economy could encounter some elements that might hinder high growth rates and the rapid recovery of employment. Among these the following are noteworthy:

(a) The rebound of the United States' economy will probably be gradual and it is not expected to be as vigorous as it was before the current recession;

(b) Increases in unit labor costs in Mexico (derived from wage rises incompatible with foreseeable productivity gains) and the strength of the exchange rate are likely to hamper the recovery of employment; and

(c) Although the Federal Budget and the Federal Revenues Law for 2002 include a series of reforms destined to increase public revenues and improve income tax collection, the public sector still faces high financial requirements and there are still significant structural deficiencies in the public accounts.

The above underlines the importance of decisively advancing the process of structural change in order to increase productivity so that a swift and vigorous expansion of economic activity takes place along with substantial job creation.

In the realm of prices, while some factors that reduce inflationary pressures will still be present (such as the continued stability of financial variables and weak aggregate demand) there are various elements that could foreseeably work in the opposite direction throughout 2002. In particular:

(a) The likely reversion of prices for agricultural and livestock products from the levels observed in 2001;

(b) The downward rigidity of contractual wages;

(c) Inflation expectations for 2002 and 2003 are still above the targets;

(d) The inflationary effect of the recently approved fiscal measures;

(e) Increases in some prices provided or regulated by the public sector; and

(f) Various prices excluded from the core price sub-index posted unusually low increases during some months of 2001, especially when considering the seasonal patterns observed in previous years. Hence, a temporary rebound in the annual inflation of the Consumer Price Index (CPI) during the corresponding months of 2002 is expected.

As a consequence of these influences, annual CPI inflation is expected to be higher in January and February than it was in December 2001. However, core inflation will remain stable or continue to decline during this period. Thus, the rise in annual CPI inflation should not last long and in this way it will not affect medium-term trends. For this reason, over the next few months the monetary authority will carefully analyze available information in order to detect any contamination towards other prices, medium-term inflation expectations or wage revisions. Should there be any suggestion of contagion, the monetary policy stance will be tightened to counter it.

II. Inflation Report: October-December 2001

II.1. Recent Developments in Inflation

Price developments during the fourth quarter of 2001 were generally favorable. This together with the significant decline of annual inflation during the first three quarters allowed compliance with the inflation target for the third consecutive year. Thus, inflation was 4.4 percent at year-end and the target of less than 6.5 percent was comfortably attained. During the quarter covered by this Report, annual inflation was characterized by lower increases in all of the price sub-indexes that make up the Consumer Price Index (CPI). In particular, the following should be mentioned:

(a) While both CPI and core inflation decreased, the former indicator declined more;

(b) Annual core inflation of goods fell more than that of services;

(c) Annual core inflation of services decreased after remaining constant for two quarters;

(d) Annual inflation of the price sub-index for agricultural goods and that of goods and services provided or regulated by the public sector diminished considerably. As a result, prices for these groups of goods and services registered the lowest growth during the year;

(e) The substantial drop in the annual inflation of the price sub-index for agricultural goods as well as that of goods and services provided or regulated by the public sector suggests that a fraction of the decrease in CPI inflation during 2001 may have been transitory. This in light of the likelihood that certain favorable phenomena which prevailed over the year could revert. In this context, core inflation has become a more reliable indicator of inflation trends; and

(f) The annual inflation of the Producer Price Index (PPI) excluding oil and services also posted a significant decline.

II.2. Behavior of Several Inflation Indicators

II.2.1. Annual Inflation of the Consumer Price Index and of the Core Price Index

The CPI annual inflation closed at 4.40 percent in 2001. This represented a 1.74 percentage point decrease from its level at the end of the previous quarter and a 4.56 percentage point decrease from December 2000 (Chart 1).

Annual core inflation was 5.08 percent at year-end. This index declined 0.85 percentage points during the quarter and 2.44 points over the year as a whole (Chart 1). The spread between core and overall inflation has inverted given that annual inflation of some price sub-indexes that are excluded from core index calculations diminished substantially. In this regard, it is important to mention the significant decline of the sub-indexes for agricultural prices and for prices provided or regulated by the public sector (Table 1).

Chart 1 **Consumer Price Index and Core Price Index**

Annual percentage change

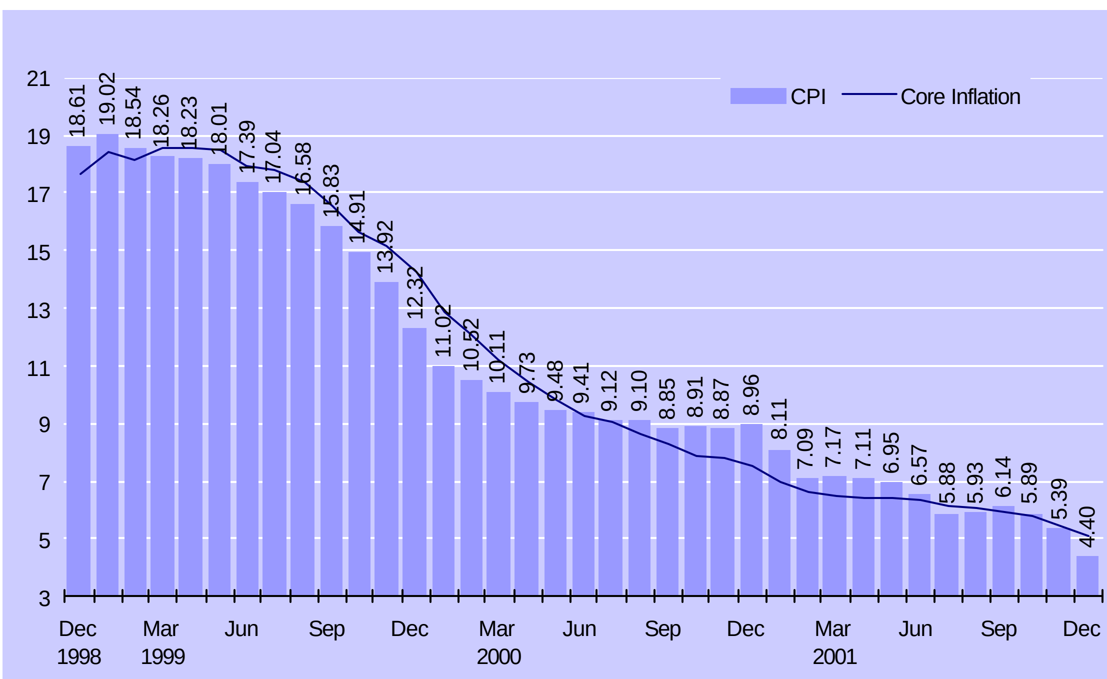


Table 1 **Price Indexes: CPI, Core Inflation, Agricultural and Livestock Products, Education, and Goods and Services Provided or Regulated by the Public Sector**

Percentage change

	Annual Variations			Quarterly Variations		
	Dec 2001 Dec 2000	Sep 2001/ Sep 2000	Dec 2000 Dec 1999	Dec 2001 Sep 2001	Sep 2001/ Jun 2001	Dec 2000 Sep 2000
CPI	4.40	6.14	8.96	0.97	1.27	2.65
Core Inflation	5.08	5.93	7.52	0.78	0.73	1.60
Goods	3.85	4.85	6.68	0.46	0.31	1.42
Services	6.87	7.52	8.77	1.26	1.35	1.87
Agricultural and Livestock Products	1.35	6.63	10.07	0.10	4.99	5.31
Education	14.02	14.06	15.16	0.05	11.78	0.09
Goods and Services Provided or Regulated by the Public Sector	2.21	5.06	12.58	2.45	-1.07	5.31

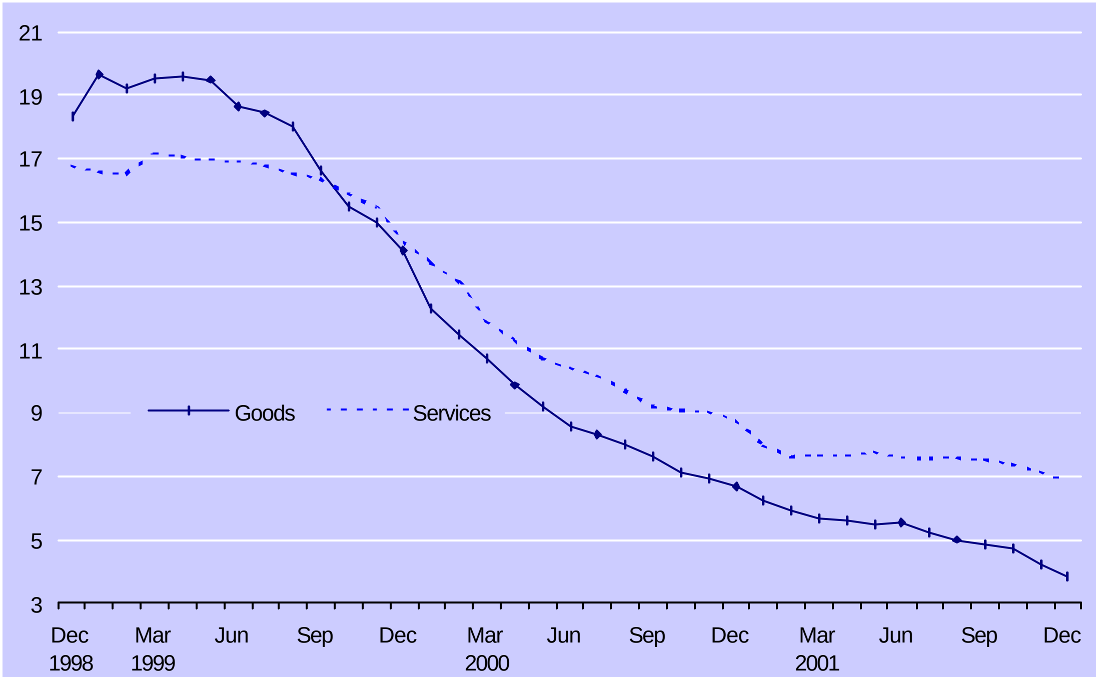
The annual growth rate of the core price sub-index for goods declined rapidly throughout the year. Likewise, after being stable for two quarters, the annual core inflation for services decreased, although this deceleration was less pronounced than that of the sub-index for goods (Chart 2).

The decrease in the growth rate of goods' prices can mainly be attributed to two factors: the appreciation of the exchange rate and the weakness of aggregate demand. The appreciation of the exchange rate curbed increases in tradable goods' prices, while weak domestic demand limited the ability to pass on increased distribution costs to prices. The latter also explains the decline of core inflation for services as service providers also found it difficult to transmit higher costs to final prices. Nonetheless, higher unit labor costs, resulting from real wage rises incompatible with productivity gains, remain an obstacle to further advances in the abatement of inflation[1].

[1] Various studies carried out by Banco de México indicate that wages are a more important determinant of core inflation for services than that for goods. Refer to "Determinantes del Nivel de Precios y la Dinámica Inflacionaria en México", Banco de México, *Documento de Investigación No. 9907*.

Chart 2 **Core Price Indexes for Goods and Services**

Annual percentage change

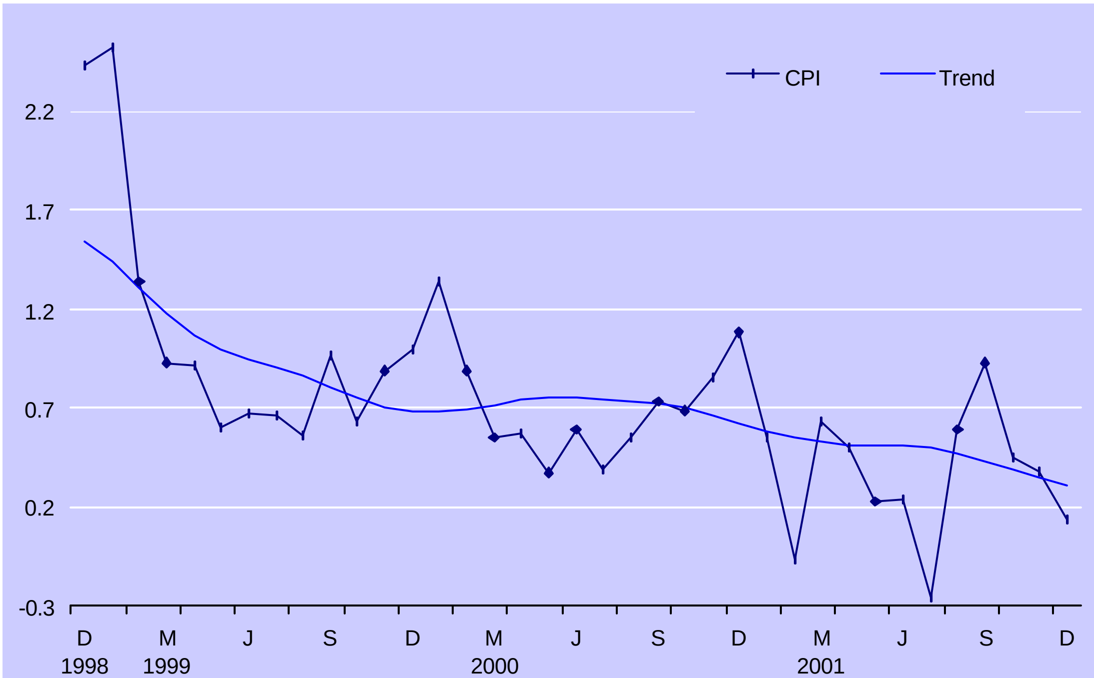


II.2.2. Monthly Inflation of the Consumer Price Index and Core Price Index

Monthly inflation in October, November and December was 0.45, 0.38 and 0.14 percent, respectively. The evolution of monthly inflation during the fourth quarter was different from that observed in other years because the usual seasonal rebound did not take place in 2001. Meanwhile, the statistical trend of monthly inflation fell slightly (Chart 3).

Chart 3 **Consumer Price Index**

Annual percentage change



Due to the low levels registered by monthly inflation during the last quarter, analysts' forecasts for CPI inflation for this period (published at the start of the fourth quarter of 2001) turned out to be much higher than the observed inflation (Table 2).

Table 2 **Expected and Observed Monthly Inflation**

Percentage

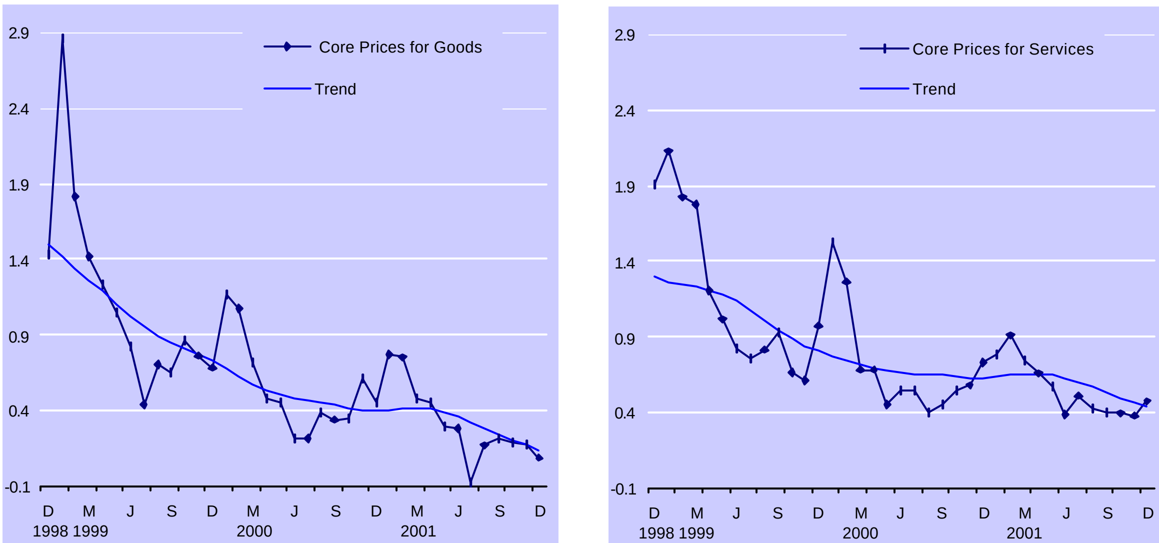
	2001		2000	
	Observed	**Expected 1/**	**Observed**	**Expected 1/**
October	0.45	0.60	0.69	0.60
November	0.38	0.68	0.86	0.77
December	0.14	0.87	1.08	1.05

1/ Expected inflation in September of each year according to the Survey of Private Sector Economic Analysts' Expectations carried out by Banco de México.

The trend series for the monthly inflation of both goods and services declined during the period covered by this Report (Chart 4).

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

Monthly percentage change



II.2.3. Producer Price Index

At year-end 2001, the annual Producer Price Index (PPI) inflation excluding oil and services was 2.61 percent, thus decreasing 2.06 percentage points from its level in the previous quarter and 4.77 percentage points compared to year-end 2000. The substantial fall of PPI inflation resulted from exchange rates' influence on prices that make up this index, which are generally traded internationally. Since variations in the PPI excluding oil and services normally precede those of the core prices sub-index for goods, its recent performance suggests that inflation of consumer goods over the medium term could also decrease.

II.3. Main Determinants of Inflation

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

II.3.1. International Environment

Recessive forces continued to affect the world economy during the fourth quarter of 2001. The persistent downward adjustments of some economic variables in the United States had repercussions in most countries. However, towards the end of the year, indicators for economic activity in the United States were better than forecasted. This contrasted sharply with the less favorable situation in the rest of the world's economies. The prospect of a recovery in world economic growth, driven by the end of the recession in the United States, dominated the scene towards the end of the year (Table 3).

Table 3

International Monetary Fund (IMF) Forecast for GDP Growth

Percentage change

	October* 2001	December 2001
World	2.6	2.4
Industrialized Economies	1.3	1.1
U.S.A	1.3	1.0
Japan	-0.5	-0.4
Germany	0.8	0.5
France	2.0	2.1
Italy	1.8	1.8
United Kingdom	2.0	2.3
Canada	2.0	1.4
Rest of the world	1.9	1.5
Euro Zone	1.8	1.5
Asian RIE 1/	1.0	0.4
Latin America	1.7	1.0

Source: World Economic Outlook, December 2001. IMF.
* Forecasts corresponding to October do not include the effects of September 11th.
1/ Recently Industrialized Economies.

Although the outlook for a swift recovery improved, the behaviour of the external variables that influence the Mexican economy remained unfavorable during the October-December quarter. The price of the Mexican crude oil export mix decreased compared to the previous quarter, reaching its lowest level for the last two years. Moreover, the recession in the United States continued to have an adverse impact on the expansion of Mexican manufacturing exports. Finally, one favorable issue worth mentioning is that once the uncertainty over the effects of the terrorist attacks on the United States' economy dissipated there was an improvement in the country risk perceptions for Mexico. This derived in lower net yields on Mexican government bonds placed on the international market, thus contribuiting to a favorable performance of the country's financial variables.

II.3.2. Oil Prices

During the fourth quarter of 2001, the average international price of oil[2] was 20.52 dollars per barrel, 6.22 dollars lower than in July-September. The forces depressing this price, caused by the global economic downturn, were reinforced by the high temperatures at the beginning of winter that led to lower demand. The uncertainty generated by the possibility that the conflict in Afghanistan would spread to other oil producing countries in addition to the intensified hostilities between Israel and Palestine, apparently did not reverse the downward trend of international oil prices. Such trend was interrupted in the second week of November by the likelihood that Russia would take part in the OPEC members' decision to cut production. Due to the initial negative reaction of the aforementioned country to participate, international oil prices fell sharply, reaching a level less than 18 dollars per barrel, the lowest for the last two years[3]. In order to raise the price at levels within the band set by its members (between 22 and 28 dollars per barrel), on December 28th OPEC agreed to cut down production to 1.5 million barrels daily starting January 2002. Although this led to a recovery of international oil prices, at the time of publishing this Report it still remains below 22 dollars per barrel.

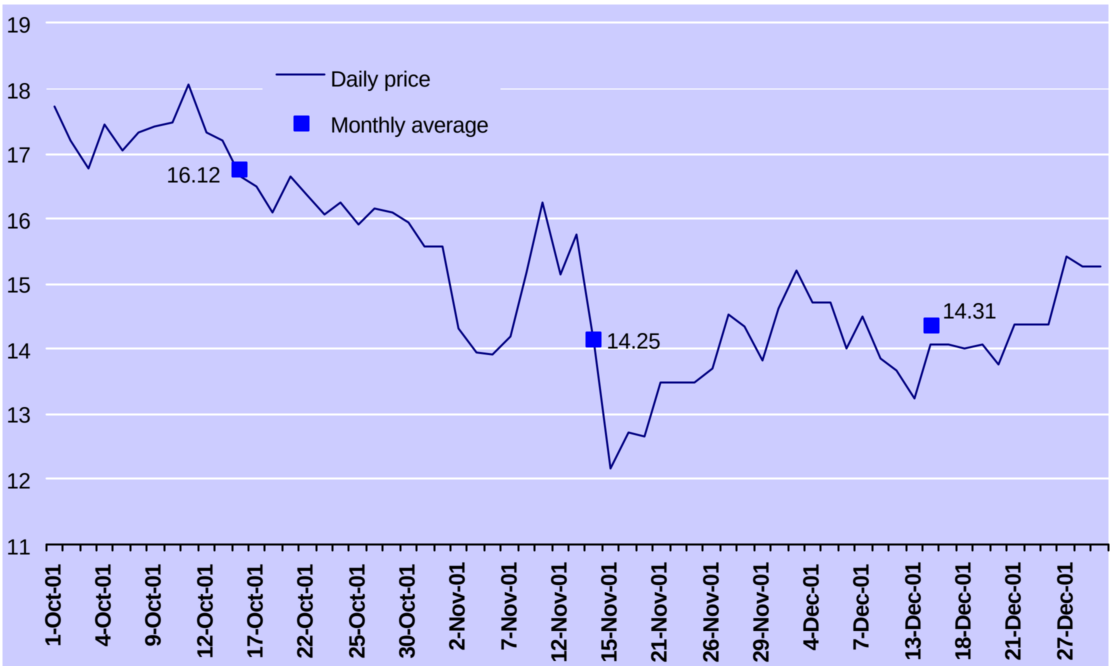
In the October-December quarter of 2001, the average price of the Mexican crude oil export mix was 14.92 dollars per barrel, 5 dollars less than in the previous quarter. The price of the Mexican mix during the last quarter of the year was lower than the implicit price of the corresponding futures prices in September. Therefore, the price of Mexican crude oil remained at its lowest level for the last two years. The spread between the Mexican mix and the WTI, remained at an interval between 4.40 and 6.20 dollars per barrel throughout the quarter (Chart 5).

[2] West Texas Intermediate (WTI).

[3] During the last week of the year Russia decided to cut production in line with the OPEC members' decision.

Chart 5 **Price of Mexico's Crude Oil Export Mix**

Dollars per barrel



Source: REUTERS

II.3.3. Developments in the United States' Economy

During the third quarter, the United States' annual growth rate of GDP was –1.3 percent[4], the first quarterly contraction for the last seven years. Weak economic activity continued during the fourth quarter, prompting the National Bureau of Economic Research to recognize in November that this country had been in recession since March of 2001.

The slowdown of economic activity in the United States was intensified by the terrorist attacks on September 11th. The immediate impact of these events was confirmed by the behavior of several indicators in September and October:

(a) During September consumer confidence indicators fell to their lowest level in seven years;

(b) In September private consumption declined 1.7 percent compared to its level in August, the biggest drop for the last thirteen years;

4 This figure refers to the variation registered in the third quarter of 2001 at an annualized rate.

(c) In October, the National Association of Purchasing Managers Index (NAPM), a leading indicator of industrial production, registered a 39.8 level (its lowest figure for the last seven years); and

(d) The monthly industrial output index declined 0.91 percent in October. This was the indicator's thirteenth consecutive fall and the most pronounced during the year.

Although the terrorist attacks on September 11th severely affected some sectors of the United States' economy, their negative impact was not as severe as feared. As a result, certain macroeconomic variables in the months after the attacks recovered:

(a) Private consumption grew 2.9 percent in October. This was due to attractive credit plans and unprecedented automobile sales, which more than compensated for their fall in September. However, this favorable effect weakened in November;

(b) Construction spending rose in November for the second month running. Moreover, during the same month sales of used and new homes increased 6.4 and 0.6 percent, respectively. This is partly attributable to the high temperatures prevailing at the beginning of winter that allowed interrumpted construction projects to continue;

(c) Purchase orders for capital goods that were not associated with national defense programs increased for the second consecutive month in November;

(d) The industrial output index declined only 0.3 percent in November, its lowest fall for the last three months;

(e) Unemployment claims decreased in December due to the less severe deterioration of the industrial sector. Thus, the 4-week moving average for these applications reached 410 thousand, its lowest level since mid September;

(f) The unemployment rate rose to 5.8 percent in December. Nevertheless, during the same month, the fall in the non-agricultural wage bill was considerably lower than that observed in each of the previous two months; in addition the working hours index stabilized after registering consecutive falls in all the previous six months; and

(g) Consumer confidence indicators recovered during December.

The United States' recession has been mainly characterized by worsening conditions in the industrial sector. In contrast, consumption growth has weakened more gradually. However, the industrial sector's deceleration has raised the unemployment rate, hence meaning that the lack of industrial expansion in that sector will most likely lead to further reductions in the growth of private consumption. This likelihood is one of the main risk factors that could extend the stagnation of economic activity in the United States.

Building on evidence pointing to a less pronounced deceleration of aggregate demand than what had been expected, analysts' opinion at the time of publishing this Report is that the United States' economy probably contracted 1.8 percent in the fourth quarter of 2001. The latter would imply a 1 percent growth for 2001 as a whole (Table 4). This projection represents an improvement over that prevailing immediately after the tragic events.

Faced with the persistence of the economic downturn in the United States as well as uncertainty over the impact of the terrorist attacks on economic activity, the Federal Reserve (in its meeting of October 5th) announced a 50 basis points cut in its federal funds rate objective. This measure was followed by an additional 25 basis points cut announced at its meeting on December 6th. Thus, during 2001 the accumulated reduction in the federal funds rate was 475 basis points, ending the year at 1.75 percent.

Table 4 **Growth Forecasts for the United States**

Annual percentage change

	After September 11th 2001		Jan-02	
	IV 01	**2001**	**IV 01**	**2001**
Consensus Forecasts	-0.8	1.1	-1.3	1.0
Deutsche Bank	-2.6	1.0	-2.0	1.0
Goldman Sachs	-2.5	1.0	-1.5	1.0
JP Morgan	-1.5	0.8	-2.0	1.0
Average*	**-2.2**	**0.9**	**-1.8**	**1.0**

*Average from Deutsche Bank, Goldman Sachs and JP Morgan.

The easing of the monetary policy stance, intensified in response to the events of September 11th, was accompanied by a fiscal program designed to finance emergency expenditures as well as increased military spending. However, The United States Congress has not approved the additional fiscal stimulus because of the loss of fiscal revenues caused by lower tax collection from firms, and the economy's weakness.

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

After posting a 0.1 percent growth in the third quarter, the economy of the Euro zone continued to weaken during the October-December period. Like in the United States, the deceleration of economic activity in Europe has resulted from a contraction in the industrial sector. Figures for inflation have shown a downward trend during the quarter, which allowed the European Central Bank (ECB) to cut its reference interest rate by 50 basis points. This was the fourth adjustment of the year and meant an accumulated 150 basis points reduction of the reference interest rate. Inflation closed the year at the 2 percent target established by the ECB. Although November's figures point towards a contraction of the economy in the fourth quarter of 2001, the improvement shown in December by industrial sector figures in some countries could possibly be an indicator of economic recovery. GDP is expected to contract during the fourth quarter of 2001, hence implying a yearly growth of 1.5 percent.

In the United Kingdom the drop in manufacturing output led to a rise in unemployment during October and November. However, the deterioration of activity caused by the adverse international environment was offset by increased spending due to easier monetary policy. The country's central bank cut its reference interest rate on two occasions during the fourth quarter, reaching 4 percent at the end of the period.

In Japan the fall in corporate profits led to a 23 percent reduction in purchase orders for machinery and equipment in September and October. Private consumption also dropped due to the fall in compensations caused by higher unemployment. The aforementioned has meant that growth expectations for this country's economy have remained unchanged with a projected contraction of 0.4 percent. As for the emerging economies of Asia, the decline in the rate of expansion of exports apparently has reached its bottom, therefore leading to a recovery of the industrial sector in some countries, especially in Korea, where improvements in domestic demand have partially offset the persistently adverse international environment.

Argentina's Fiscal Crisis

In the second half of the last decade a fiscal crisis emerged in Argentina. This crisis stemmed from a series of pressures (especially those connected with budgeted and non-budgeted expenditure) which surpassed the tax raising potential of the fiscal measures adopted during this period (such as the increase in the VAT rate from 18 to 21 percent). Among these pressures the following should be mentioned:

1) Increased revenue sharing with provincial governments as a result of higher tax collection and the diverse changes made to rules concerning the distribution of these revenues;

2) The sharp rise in the cost of public sector's debt servicing as a consequence of gradual increases in interest rates faced by the government, as well as the almost continual increase of the stock of the public debt;

3) High non-budgeted expenditure that accounts for most of the difference between the annual variation of the debt's stock and the deficit. (Table 1). These expenditures included absorption of liabilities, capitalizing certain interest and compensation payments to individuals and firms that had won court cases against the government; and

4) The deterioration of social security contributions due to the creation of private capitalized pension schemes that came into being after the reform, which made Argentina a mixed system (public/private). The foregoing developments were worsened by an employment contraction stemming from the recession and by the reductions in employer's contributions introduced in an attempt to combat unemployment.

During the entire period, the debt's trajectory was explosive and the primary balances were insufficient to stabilize the debt-GDP ratio (Table 1). Since 1998, for example, a primary balance amounting to 1.3 percent of GDP would had been enough to stabilize the federal debt at 35 percent of GDP, assuming a real interest rate of 8 percent, a real economic growth rate of 4 percent and the elimination of non-budgeted expenditures. However, the primary balance never surpassed 1 percent of GDP, economic growth was low or even negative and non-budgeted expenditures continued. As a result, the level of indebtedness grew to unsustainable levels.

Table 1
Argentina: Federal Government Finances
Percentage of GDP

	1995	1996	1997	1998	1999	2000
Revenues:	18.6	17.6	18.5	19.0	19.4	19.6
taxes	12.0	12.2	13.1	13.5	13.6	14.3
social security	5.3	4.4	4.2	4.0	3.8	3.7
Primary expenditure:	18.0	18.4	18.1	18.1	19.1	18.6
Pensions	6.1	6.2	5.9	5.9	6.2	6.1
Revenue Sharings	5.6	5.8	6.0	6.1	6.3	6.3
Interest payments	1.6	1.7	2.0	2.2	2.9	3.4
Balance	-0.9	-2.5	-1.6	-1.3	-2.5	-2.4
Note:						
Federal government debt		35.6	34.5	37.5	43.0	44.9

Source: IMF reports on Argentina.

The fiscal disorder apparently reached its peak in 1999. That year, the federal and provincial governments' election expenditures contributed to a substantial increase in the total consolidated public sector deficit. Most of the time, political expenditure adopted certain practices difficult to reverse, such as increases in the number of public sector employees in the provinces (Table 2). Towards the end of 1999, and partly due to the events of that year, Congress approved a fiscal solvency law designed to force the government to gradually reduce its deficit and finally eliminate it in 2003. In line with this proposal, the federal government implemented a tax package and coordinated an adjustment program for the provincial governments.

Table 2
Argentina: Provincial Government's Finances[1/]
Percentage of GDP

	1995	1996	1997	1998	1999	2000
Total Revenues	10.1	10.3	10.7	10.9	11.2	11.3
Primary Expendure:	11.2	10.7	10.8	11.3	12.3	11.8
Wages	5.9	5.4	5.3	5.6	6.4	6.5
Interest Payments	0.3	0.4	0.4	0.4	0.5	0.7
Balance	-1.4	-0.7	-0.5	-0.8	-1.6	-1.1
Note:						
Number of Provincial Employees			1,240,651	1,270,986	1,324,613	1,359,602

Source: Argentin Minitry of Economics and IMF reports on Argentina.
1/ Includes the municipalty of Buenos Aires.

Nevertheless, as the year 2000 went on, it became evident that demands set out in the fiscal solvency law in 2001 would be difficult to fulfill as continued fiscal consolidation was hindered by the economic environment. When the governmental coalition broke off, the Executive was left without Congress' support, limiting its ability to take action. However, the greatest difficulty arose from economic stagnation. Real GDP diminished 3.4 percent in 1999 and it was to fall a further 0.8 percent in 2000. Meanwhile, one sector of public opinion believed that the tax measures adopted at the start of 2000 had contributed to extend the recession. Argentina faced a great dilemma: it needed a fiscal adjustment in order to preserve solvency and generate confidence, but such a policy threatened to weaken economic activity even further.

Problems in the public sector debt soon added to those of the public debt due to the large amount of amortizations programmed for 2001 (more than 14 billion dollars) and the following two years (around 19 billion dollars in 2002 and 2003). This combination of factors threatened to unleash a crisis by the end of 2000 when Argentina lost its access to private debt markets. Crisis was avoided by the negotiation of a rescue package centered on increased resources from the IMF. Among other elements, the package included changes to the fiscal solvency law that implied the setting of more modest fiscal objectives for 2001 and the postponement of the deficit elimination until 2005. These measures were implemented to prevent a more restrictive stance of fiscal policy that would contribute to extend the recession . The positive impact of this package allowed Argentina to return to the capital markets in January of 2001 .

The final stage of the Argentinian crisis was triggered by the announcement of January and February's fiscal results, which showed that the government would not achieve its deficit objectives. The main problem, which would worsen in the following months, was the deterioration of the most important tax revenues due to the deepening recession as well as problems in the administration of the tax system. Once more, the early derailment of the fiscal program prevented Argentina's access to capital markets.

Beginning in April 2001, the government introduced more complex measures in an attempt to improve the fiscal balance, to reduce financing requirements and to stimulate economic activity. Among these measures the following are noteworthy: the creation of a tax on bank's debts and credits, the public debt swap in June of 2001 and the reduction of benefits paid to pensioners. The most problematic policy was possibly the decision to postpone revenue sharing payments, which implied transferring part of the federal deficit to the provinces and contributed to the proliferation of *quasi currencies* issued by provincial governments to pay wages and other expenses. This combination of measures was incongruent as the government tried to win back the confidence of financial markets by attacking its fiscal problems at the same time it attempted to reactivate the economy with selective fiscal stimuli.

Despite all these measures, preliminary figures for November of 2001 (released by the Ministry of Economics before the critical month of December) indicated that the federal government's deficit was over 7.6 billion Argentinian pesos, 17 percent more than anticipated for the year. Furthermore, at the end of the third quarter the provincial deficit reached 2.45 billion, 90 percent of the total amount expected for the year as a whole. Meanwhile, available information suggests that the recession deepened in 2001. Finally, the downward spiral of economic activity and public revenues led to the suspension of federal public debt payments on December 24th of 2001. From that date onwards, several provincial governments demonstrated that they also wanted to defer. At the moment that payments were suspended, the consolidated provincial and federal government debt (mostly denominated in United States' currency) was close to 160 billion dollars.

In Latin America, the economic recession in the United States and the weakness of raw materials' prices have continued to have an unfavorable effect on exports. Although there was increased uncertainty over the situation in Argentina, its impact on capital flows towards the rest of the countries in the region was less adverse than had been feared. Nevertheless, the IMF's growth forecast for the zone in 2001 decreased from 1.7 percent in October to 1 percent in December.

In Argentina, the vicious circle of economic recession coupled with the deterioration in public sector revenues led again to periods of uncertainty in the October-December quarter. The federal government's announcement of a series of measures designed to reactivate the economy were perceived as a confirmation that it was unable to reach a fiscal agreement with provincial governments[5]. In turn, risk perception implicit in Argentina's bond yields reached 2,100 basis points at the end of October, surpassing their historic maximum registered in 1995. In an attempt to obtain savings in the service of its debt, the Argentinian government implemented a package (mostly directed towards domestic investors) swaping public debt and announced its intention to exchange debt held by foreigners in the short term. Soon after, a special exchange-rate regime for foreign trade and restrictions on bank account withdrawals was implemented. The purpose of these measures was to stem the loss of international reserves. These actions exacerbated the discontent caused by rising unemployment, thus generating an environment of social unrest. The inability to meet the country's fiscal objectives brought about the postponement of the disbursement programmed by the IMF for December.

The above added more pressures to the government and ended with the resignation of the minister for the economy

[5] These measures included fiscal incentives to stimulate investment like the elimination of taxes on interest and the reduction of firms' pension contributions as of 2003. Moreover, these measures allowed companies to capitalize pending tax payments.

followed by that of president De la Rúa on December 20th. Ten days later, faced with continued street protests, his successor, Rodríguez Sáa, also resigned. The political crisis found a breathing space on January 3rd with the designation of president Duhalde. However, the abandonment of convertibility, the establishment of a dual exchange-rate regime, the lack of clarity regarding the freezing of bank deposits and delays in the presentation of the budget for 2002 have meant that social discontent and economic uncertainty have persisted.

In Argentina, the deterioration of industrial activity in the third quarter continued during the fourth posting negative monthly variations of 2.2 and 2 percent in October and November. The aforementioned caused an increase in the unemployment rate, which reached nearly 20 percent in December. In the third quarter of 2001, the annual variation of GDP in Argentina was –4.9 percent and the IMF's forecast for the year as a whole was approximately –2.7 percent. Analysts' expectations for 2002 have been continually modified and at present they estimate a decline of at least 8 percent in the annual rate of growth.

The Brazilian economy continued to experience the negative effects of the global downturn. During the third quarter, its GDP only grew 0.3 percent at an annual rate. While the recession in the United States was reflected in a slower rate of growth of Brazilian exports, the profile of the external accounts improved during the fourth quarter of 2001 as a consequence of reduced imports. The latter resulted from a decrease in spending brought about by persistently high domestic interest rates due to a restrictive monetary policy stance. The perception of viability regarding Brazil's external accounts led to a disassociation from the uncertainty surrounding Argentina. This was evident in the improvement in country risk perception during November and December, which led to a 14.1 percent appreciation of the exchange rate during the last quarter of the year. Although the appreciation of the *Real* helped to curb inflation, the latter was still above the target set by the central bank at the start of the year. The Brazilian economy is expected to have grown 1.8 percent during 2001.

II.3.5. Compensations, Wages and Employment

The Mexican labor market deteriorated substantially throughout 2001. Employment contracted significantly mainly as a result of world's economic slowdown, particularly that of the United States. However, the behavior of compensations and wages also contributed (although to a lesser extent) to this deterioration. As Banco de México has reiterated, the nominal growth of these variables has not been compatible with sustainable gains in productivity and with expected inflation.

II.3.5.1. Compensations

In October 2001, in those sectors of the Mexican economy for which information is available, nominal remunarations rose between 5.1 and 14.7 percent on an annual basis. Thus, in the first 10 months of the year, remunerations registered average increases between 5.9 and 17.6 percent at annual rates. Excluding the commerce sector, nominal remunerations grew at average annual rates above 12.7 percent during the same period. This implied a real average increase of more than 5.6 percent in three out of the four analyzed sectors (Table 5).

Table 5 **Compensations per Worker**

Annual percentage change

	Nominal Change								Real Change							
	2001							Average	2001							Average
	Apr	May	Jun	Jul	Aug	Sep	Oct	Jan-Oct	Apr	May	Jun	Jul	Aug	Sep	Oct	Jan-Oct
Manufacturing Industry	10.5	12.9	13.3	13.5	10.3	12.7	13.6	12.7	3.2	5.5	6.3	7.2	4.1	6.2	7.3	5.6
In-Bond Industry	15.1	15.5	13.6	13.1	15.1	13.7	14.7	14.2	7.5	8.0	6.6	6.8	8.7	7.1	8.4	7.0
Construction Industry	19.0	20.9	20.5	17.6	9.0	n.d.	n.d.	17.6*	11.2	13.0	13.1	11.1	2.9	n.d.	n.d.	10.0*
Commerce	4.5	4.4	4.9	6.5	7.1	5.0	5.1	5.9	-2.5	-2.4	-1.6	0.5	1.1	-1.1	-0.7	-0.7

*Data up to August 2001.
Source: Prepared with information from INEGI.

The substantial recovery of real remunerations during 2001 was accompanied by an equally significant slowdown in productivity growth. The highest average productivity growth from January to October was observed in the manufacturing industry (0.5 per cent), while productivity fell in the remaining sectors. The foregoing developments led to higher unit labor costs. On average, unit costs during the first 10 months of the year went up by at least 5.1 percent, the construction industry being the most adversely affected (Table 6).

Table 6 **Output per Worker and Unit Labor Costs**

Annual percentage change

	Output per Worker								Unit Labor Costs							
	2001							Average	2001							Average
	Apr	May	Jun	Jul	Aug	Sep	Oct	Jan-Oct	Apr	May	Jun	Jul	Aug	Sep	Oct	Jan-Oct
Manufacturing Industry	0.1	0.7	0.5	0.9	0.2	-0.1	2.2	0.5	3.1	4.7	5.8	6.2	3.8	6.4	5.0	5.1
In-Bond Industry	-5.3	0.5	-0.5	-1.5	-1.4	-0.5	0.2	-1.2	13.5	7.5	7.1	8.4	10.3	7.7	8.2	8.4
Construction Industry	-3.6	-2.8	-6.3	-4.1	-5.5	n.d.	n.d.	-3.9 *	15.4	16.3	20.7	15.8	8.9	n.d.	n.d.	14.5 *
Commerce Sector	-5.2	-7.6	-9.4	-10.7	-10.6	-11.8	-10.1	-7.8	2.9	5.6	8.6	12.6	13.1	12.1	10.5	7.7

*Data up to August 2001
Source: Prepared with information from INEGI

Unit labor costs are a determining factor for competitiveness in all production sectors. When competitiveness declines, the perspectives for job creation worsen, thus limiting the recovery of employment.

The Inflation Report for the previous quarter included a study that estimated the impact of real wage increases in the manufacturing industry on employment. This analysis concluded that 27 percent of the fall in employment was due to the rise in real wages, while 61 percent was associated with the slowdown of production. The adverse effect of unit labor costs on employment is evident, as employment has fallen considerably in those sectors where costs have risen the most. Furthermore, employment has contracted to such an extent that despite high increases in real remunerations the total wage bill has decreased. As a result, total labor income has fallen.

In line with the above, from January to August, employment and the total wage bill in the construction industry experienced average variations of -24 and –16.9 percent, respectively. Meanwhile, in September, the corresponding annual variations for the in-bond export sector were –15.9 and –8.9 percent (Chart 6).

Chart 6 **Total Wage Bill, Employment and Unit Labor Costs**

Annual percentage change

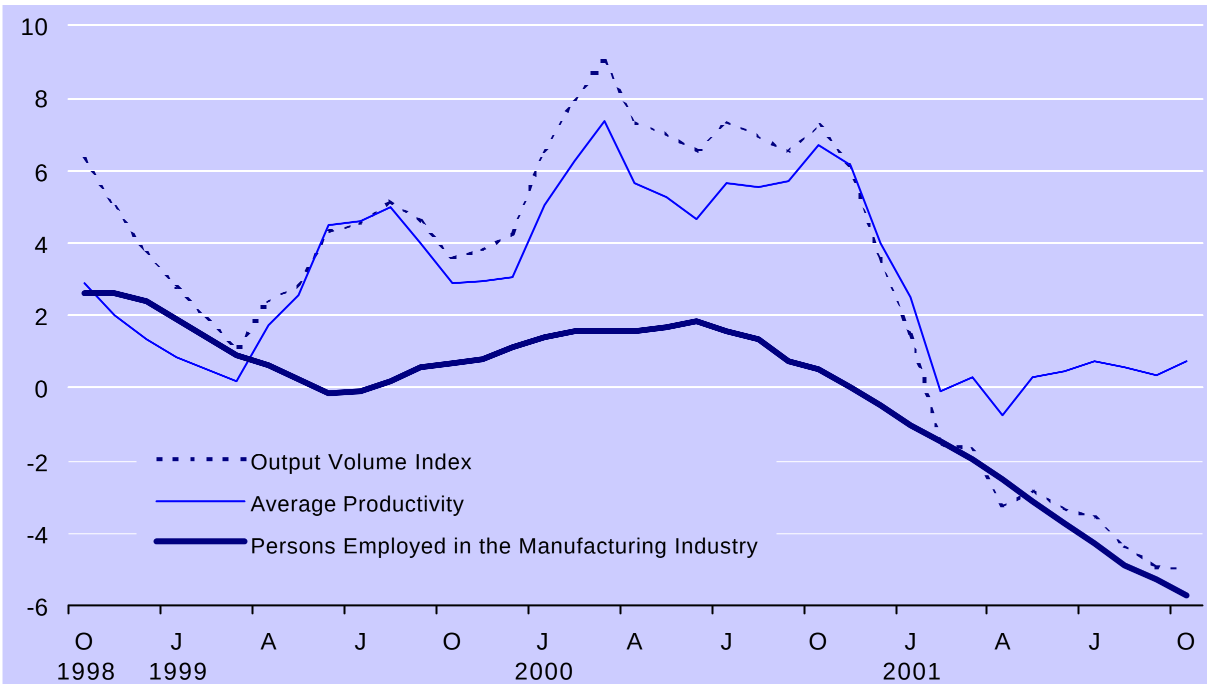
Source: Banco de México and INEGI

During periods of economic deceleration productivity declines in response to firms' lagged workforce adjustments. However, job reductions in certain sectors have recently taken place in a very rapid manner. For example, in the non in-bond manufacturing sector job losses have been in line with the fall in output. As a result, from March 2001 productivity growth stabilized. Thus, although productivity in this sector has risen at positive rates, it has mainly been due to the substantial deterioration of employment (Chart 7).

In the present economic environment firms have faced lower demand for their products coupled with competitiveness loss brought about by increased unit labor costs. In response, they have made the neccesary adjustments to continue operations. Firstly, they have reduced output by working fewer hours and limiting job creation. Secondly, they have cut the number of employees on their payroll. As has been stated in this section, this process has taken place swiftly in several production sectors.

Chart 7 **Output and Average Output in the Non In-Bond Manufacturing Industry**

Annual percentage variation of the 3 month moving average



Source: Prepared with information from INEGI.

In line with the above, the deterioration of labor market conditions has been so significant that despite the substantial increase of real wages, the total wage bill has contracted in several sectors. Thus, total labor income has fallen. The latter has serious medium-term implications. In particular, this could be a factor that might weaken the domestic market, hindering the future rebound of aggregate demand and thereby restricting the speed of economic recovery. Moreover, rises in unit labor costs could curb the economy's potential growth in the upward stage of the economic cycle due to their adverse impact on competitiveness. On the other hand, it is very likely that the first stages of economic recovery will not be accompanied by significant employment growth. The aforementioned is partly due to firms' unused capacity. Thus, the current economic situation requires a more flexible labor market in which real wages' growth is more in line with productivity gains. This theory responds to dual purpose: to rapidly recover jobs lost in 2001 and to generate the necessary employment in order to accommodate the newcomers to the labor force.

II.3.5.2. Contractual Wages

In the quarter covered by the Report, the average increase of nominal contractual wages was 6.90 percent. Thus, wage pressures eased significantly during the period. Nonetheless, the behavior of contractual wages in October was particularly influenced by the wage revision undertaken by the Mexican Social Security Institute (*Instituto Mexicano del Seguro Social*, IMSS). If that outcome is excluded, an average of 8.9 percent is obtained. Furthermore, in November and December the average increase of contractual wages was 6.7 and 7.4 percent, respectively.

The most important private companies (with 250 or more employees) granted substantial wage increases of 8.9, 9.2 and 5.2 percent, in October, November and December, respectively.

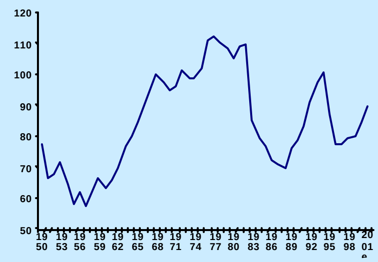
In 2001, the average gap between contractual wages and expected inflation for the following twelve months was around 2.9 percent. This gap widened during the first three quarters, but levelled off in the fourth to an average of around 1.7 percent (Chart 8).

In the last quarter of 2001, nominal contractual wage increases granted in the manufacturing industry and other sectors were different due to the incidence of some specific revisions (Table 7). For example, the differential observed in November is explained, to a great extent, by the wage revision in the sugar and alcohol industry, while that of December by the revision in the rubber industry.

Evolution of Real Wages in Mexico: 1950-2001

Two different stages in the evolution of real wages in Mexico can be clearly identified in the 1950-2001 period (Chart 1).[1] In the first, from 1950 to 1970, real wages rose continually and significantly. In the second, from 1970 onwards, the evolution of real wages was erratic, reflecting the boom-bust cycles of the Mexican economy in that period. The sequence has historically been as follows: after an expansion and its subsequent crisis, wages have fallen to lower levels than those prevailing before the expansion. As a consequence, real wages are currently below those observed in 1970.

Chart 1
Real Wages in the Manufacturing Industry*
1968 = 100

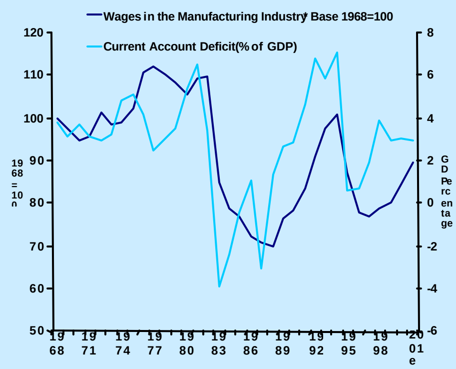


*Average Income in the Manufacturing Industry, including wages, compensations and paid benefits
e:2001 estimated

The level of real wages that is sustainable in the long-run is determined by productivity, that is to say, the value added by labor to the production of goods and services. Moreover, this value depends on the level of education as well as on the health of the worker, on the quality and amount of available capital and on the quality of the technology that is used.

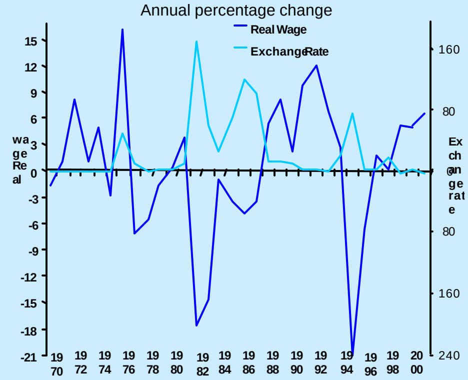
Nevertheless, real wages can deviate from their long-term path for several reasons. In the last 30 years there have been stages where wages have surpassed their trajectory when the economy has expanded at unsustainable levels due to availability of external credit. For example, during the seventies, the government financed a high fiscal deficit with external credit. In the early nineties foreign credit increased substantially but this time it was for financing private expenditure. In both cases, the excess of expenditure over income allowed the real wage to increase temporarily above sustainable levels. This situation persisted until the foreign capital inflows reverted generating a balance of payments crisis as well as a devaluation. These two phenomena translated into a contraction of real GDP and increased inflation, causing a sharp reduction of real wages (Chart 2). Thus sudden devaluations produce drastic falls in real wages (Chart 3).

Chart 2
Real Wages in the Manufacturing Industry and the Current Account Deficit



*Average income in the manufacturing industry, including compensations, wages and paid benefits.
e: 2001estimated

Chart 3
Real Wage and Exchange Rate
Annual percentage change



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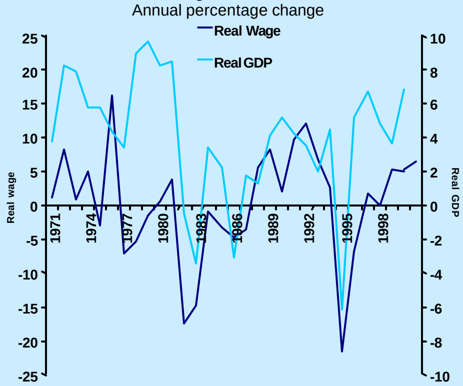
[1] The series for real wages in the industrial sector from 1951 to 1967 was based on a projection that used data available from 1951, 1960 and 1968. The results are compatible with increases in the real minimum wage during that period.

The above underlines the fact that sustainable rises in the purchasing power of wages can only occur as productivity increases within a stable macroeconomic environment. It is clear that when real GDP has fallen and inflation has risen, real wages have declined (Charts 4 and 5).

During the 1957-2001 period, in the years when annual inflation was more than one digit, the average annual variation of real wages was negative (0.8 percent). Meanwhile, in years when there was annual inflation of one digit, the average annual growth of real wages was 5.3 percent, a similar rate to that registered for average labor productivity.

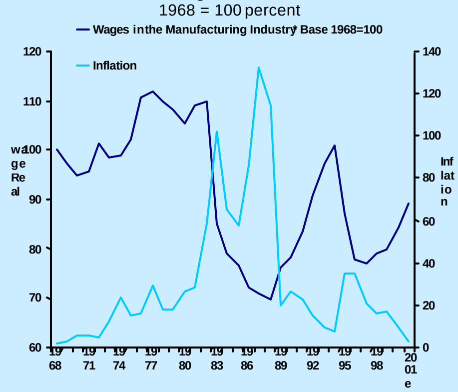
Chart 4
Real Wage and Real GDP
Annual percentage change



In light of the above, Banco de México has reiterated the advantages of a low and stable inflation environment that allows continual increases in real wages.

Finally, the growth of nominal wages above their long-term trajectory, i.e. above inflation and foreseeable productivity gains, is a leading indicator of pressures on the external accounts and of their unsustainability. Thus, it is important that wage negotiations use the inflation target and feasible productivity gains as benchmarks. Likewise, a sound fiscal stance and a monetary policy focused on the abatement of inflation are necessary. This is essential to create the ideal conditions for rapid growth without fluctuations that will translate into a general improvement of Mexico's standard of living.

Chart 5
Real Wages and Inflation
1968 = 100 percent



*Average income in the manufacturing industry, including compensations, wages and paid benefits.
e: 2001 estimated

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

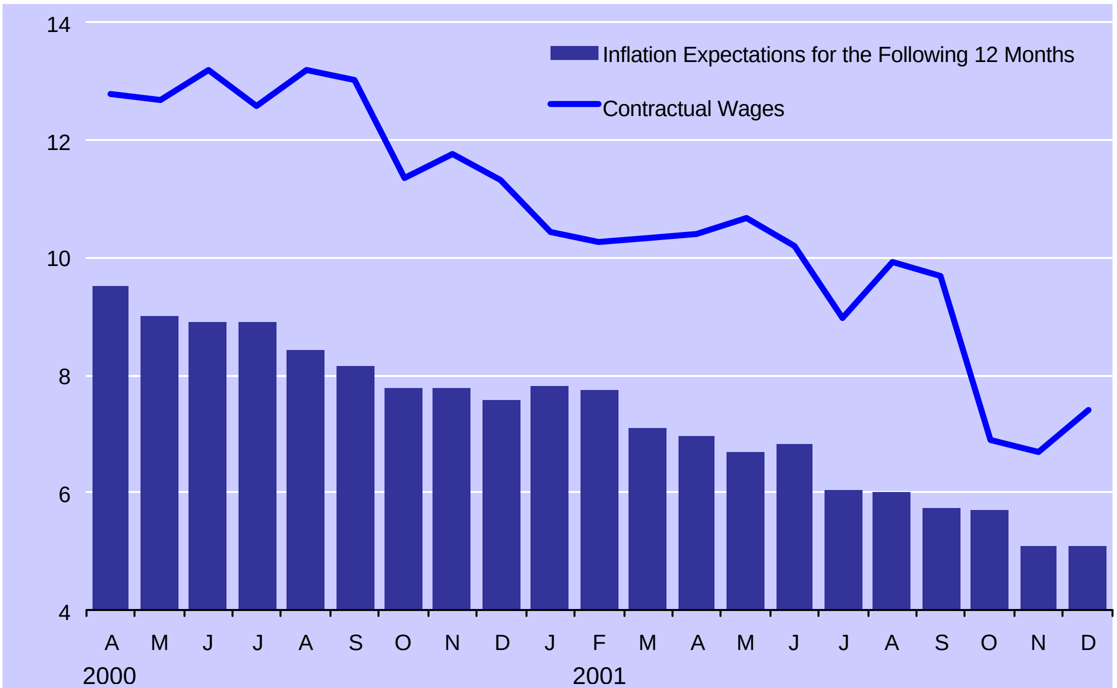
	2001								
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Manufacturing	10.9	10.9	10.2	9.0	10.1	10.1	9.1	6.3	6.8
Other Sectors	10.3	10.5	10.1	9.0	9.9	9.1	6.7	7.3	9.3

Source: Prepared with data from the Ministry of Labor.

The moderation of contractual wage increases during the last quarter of 2001 was mainly due to revisions granted to public sector employees and firms. Wage rises in the private sector have yet to ease. In particular, increases granted so far are still high when compared to the sum of expected inflation and foreseeable productivity gains in 2002. This situation could push production costs upward thus hindering rapid job creation in 2002 and eventually passing on this effect to consumer prices. The latter can be attested by the sluggish decline of inflation in the services sector.

Chart 8 **Contractual Wages and Inflation Expectations for the Following 12 Months**

Annual percentage change



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

II.3.5.3. Employment

Employment in Mexico fell substantially throughout 2001 and the upward trend in the number of permanent employees affiliated to the IMSS that had begun in 1996 reverted during the year. This is mainly attributable to the slowdown of the Mexican economy and the decline of world economic growth.

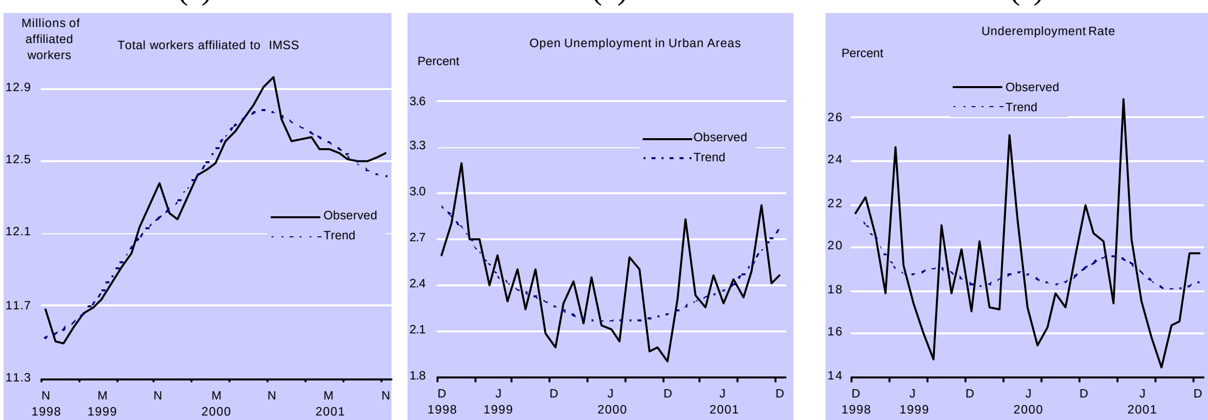
By the end of December, the number of workers affiliated to the IMSS (permanent and temporary urban employees) was 12,163,637, nearly 382.6 thousand less than at year-end 2000 (Chart 9a). This implied a 3 percent reduction in formal employment. During 2001, the affiliation of industrial sector workers contracted by approximately 539 thousand (8.9 percent). In this sector manufacturing was worse hit as affiliation dropped by 476.5 thousand people. In contrast, in the service and agricultural sectors, employment increased nearly 136 thousand (2.1 percent) and 39 thousand persons (6.1 percent), respectively.

The main unemployment indicators deteriorated significantly in 2001. The open unemployment rate was 2.46 percent, while it had been 2.21 percent in 2000 (Graph 9b). Likewise, the trend series for the open unemployment rate rose continually during the year. The underemployment rate in 2001 was also slightly higher on average than in 2000. In August, September and October of 2001 this variable fell substantially leading to a decrease in its trend series during the second quarter of the year (Chart 9c). However, it began to recover significantly from November onwards.

Chart 9 **Employment and Unemployment Indicators**

Trend Series

(a) (b) (c)



SOURCE: IMSS and INEGI.

There was a higher level of unemployment for men than for women. In 2001 the rate of unemployment among men registered an average increase of 0.31 percentage points, while for women it was up only 0.15 percentage points. Regarding the level of education, people with elementary, medium-high and higher education suffered the highest unemployment rate increases during the period. Finally, the duration of unemployment registered a moderate rise. The percentage of people unemployed for more than five weeks increased from a 39.6 percent average in 2000 to 40.5 percent in 2001.

Employment in the informal sector rose slightly in 2001. One indirect way of measuring employment in this sector is via the percentage of the Economically Active Population[6] that does not receive any kind of benefits. In 2000 this indicator was 46.2 percent on average, while from January to December of the previous year it had been 47 percent. Furthermore, there was a rebound in figures relating to the Economically Inactive Population.[7] The latter moved from 43.7 percent of the labor force[8] in 2000 to 44.4 percent during 2001, which indicates that a greater number of workers, faced with a worsening employment outlook, decided not to seek work.

The high degree of integration between the Mexican, American and Canadian economies has meant their economic cycles have become more synchronized in the upturns and downturns. This is reflected in the parallel output decrease (especially in the manufacturing sector) observed in all three countries. The economic slowdown in the zone has also led to a sharp fall in employment, which has worsened in Mexico due to downward rigidity of wage rises. The fact that these compensations have failed to adjust to the country's economic situation has brought about substantial increases in unit labor costs for most sectors, thus deteriorating the existing labor market conditions even further.

In sum, it is important to create the necessary conditions in Mexico for a more flexible labor market as it is crucial that real wage increases are brought into line with productivity gains in order to stave off future inflationary pressures. The objective is to recover job losses and to stimulate the creation of new sources of employment for labor market entrants.

II.3.6. Aggregate Supply and Demand

During the third quarter of 2001, aggregate supply and demand decreased 3.2 percent. This was the first drop of these variables at an annual rate since the first quarter of 1996. In the case of aggregate supply, the decline derived from falls in GDP (1.6 percent) and goods and services' imports (7.2 percent). Meanwhile, the contraction of aggregate demand stemmed from a 1.5 percent annual growth in private consumption coupled with 9.1, 8.2 and 3.8 percent falls in investment, exports and public sector

[6] The Economically Active Population (EAP) is the population aged 12 or more that is employed or unemployed but has been actively seeking work for the last three weeks.

[7] The Economically Inactive Population is composed of everyone over the age of 12 that did not perform any economic activities in the reference week or actively sought work in the two preceding months.

[8] The labor force is composed of all people over 12 years of age.

consumption. The decline of GDP during the third quarter of 2001 resulted from the fact that the positive contribution of private consumption was offset by the sharp fall in investment (measured at constant prices), and to a lesser extent, in public sector consumption, together with a slight deterioration of the balance of goods and services (exports less imports of goods and services) (Table 8).

Table 8 **Aggregate Supply and Demand in 2000 and 2001**

Real annual percentage change

	2000					2001		
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.	Annual	I Qtr.	II Qtr.	III Qtr.
Aggregate Supply	11.7	11.2	11.4	8.0	10.5	3.0	0.4	-3.2
GDP	7.7	7.6	7.3	5.1	6.9	1.9	0.0	-1.6
Imports	24.9	22.3	23.2	16.1	21.4	6.3	1.5	-7.2
Aggregate Demand	11.7	11.2	11.4	8.0	10.5	3.0	0.4	-3.2
Total Consumption	8.9	9.4	10.0	6.6	8.7	5.3	3.0	1.0
Private	9.6	10.2	10.5	7.6	9.5	6.5	3.8	1.5
Public	3.9	4.6	6.1	0.6	3.5	-3.0	-2.2	-3.8
Total Investment	10.9	10.5	11.1	7.6	10.0	0.4	-5.5	-9.1
Private	12.8	8.9	10.8	8.2	10.2	-0.7	-5.3	-4.9
Public	-4.5	26.0	13.1	5.3	8.6	11.3	-6.8	-38.1
Exports	17.3	15.8	16.9	14.1	16.0	4.7	-0.4	-8.2

Household consumption increased 1.5 percent in the third quarter, its lowest annual variation since the second quarter of 1996. The acquisition of non-durable goods and services (such as personal and home care products, electricity, gas and water, transport services, communications and entertainment) expanded 1.9 percent during the same period. In contrast, consumer spending on durables decreased 2.9 percent, due to a decline in purchases of vehicles, metallic furniture as well as electronic and electrical appliances, among others. In the third quarter of 2001 public sector consumption fell 3.8 percent compared to its level in the corresponding quarter of 2000. As a result, total consumption increased 1 percent during the period.

In the third quarter of the year, gross capital formation fell at an annual rate of 9.1 percent. Both the imported and the domestic components of investment declined 14.9 and 5.9 percent, respectively. The latter figure resulted from a 4.1 percent reduction in construction and a 10.2 percent decrease in the domestic production of machinery and equipment. Divided by sectors, private capital formation diminished 4.9 percent while public investment decreased at an annual rate of 38.1 percent.

Figures relating to aggregate supply and demand show that in the third quarter of 2001 domestic spending decreased at an annual rate of 1.4 percent, representing the first fall in these variables since the second quarter of 1996. This decline was very similar to the 1.6 percent fall registered by GDP during the third quarter. As a result, the trade deficit was not as large as expected.

During the third quarter, exports of goods and services measured at constant prices decreased at an annual rate of 8.2 percent. Within this aggregate, exports of the in-bond, manufacturing, mining and crude-oil industries diminished. Imports of goods and services also fell, despite the increase in purchases of consumer goods on the external market.

In order to properly understand the recent movements in these variables' trends, it is necessary to study the quarterly growth of seasonally adjusted figures, which are more informative than annual rates. Based on seasonally adjusted figures, consumption remained unchanged during the third quarter of 2001, in contrast with its level in the previous quarter. Regarding the components of this variable, private consumption increased slightly by 0.1 percent, while that of the public sector declined 0.9 percent. Capital formation contracted 2.4 percent compared to its level in the previous quarter. This was a reflection of higher private sector investment, while that of the public sector decreased 34.7 percent. It is important to mention that aggregate supply and demand declined 1.2 percent compared to their level in the second quarter of the year.

During the fourth quarter of 2001, the weakness of all the main components of aggregate demand and output persisted. Although there is only preliminary and incomplete information concerning the behavior of the main components of aggregate supply and demand at this time, available data indicates the following:

(a) In November 2001 wholesale sales posted an annual contraction of 12.1 percent in real terms, while retail sales increased slightly (0.2 percent). Thus, wholesale sales declined for the tenth consecutive month. The latter's seasonally adjusted figures also registered a monthly decline of 0.6 percent;

(b) During the fourth quarter total sales reported by members of the National Association of Self Service and Department Stores (*Asociación Nacional de Tiendas de Autoservicio y Departamentales*, ANTAD) grew 6.5

percent in real terms compared to their level in the same quarter of 2000. The annual rate of expansion of these sales was lower than the 8.5, 8.2 and 7.2 percent figures registered in the first, second and third quarters. The sales of ANTAD members represent 20 percent of total retail sales. Due to the solid growth of these stores' sales over the last few years, their market share has increased and they continue to expand even while figures from INEGI indicate that retail sales are dropping;

(c) The annual rate of expansion of consumer goods' imports fell from 18.1 percent during the third quarter to 8.9 percent in the fourth. During the same period, the annual variation of imports of capital goods moved from –15.1 percent to –15.2 percent;

(d) The annual growth rate of gross fixed investment was –9.4 percent in October;

(e) The annual contraction of the construction sector moved from 4.1 percent in the third quarter to 4.4 percent in the October-November period;

(f) In October-December the annual rate of growth of exports registered its most substantial fall during the year (11.7 percent), while oil and non-oil exports decreased 34.3 and 9.5 percent, respectively, compared with their level during the same period of the previous year;

(g) In November, The Global Indicator of Economic Activity (*Indicador Global de la Actividad Económica*, IGAE) fell at an annual rate of 1.4 percent. Meanwhile, industrial output contracted 4.1 percent in the October-November period. It is worth pointing out, that with seasonally adjusted figures for November, industrial output registered a monthly growth of 1.2 percent. Although it is still early to draw any firm conclusion based on this result, the favorable expectations for this sector in the United States, might be considered as a first indication of recovery in the Mexican industrial sector;

(h) Formal employment contracted 1.3 percent during the third quarter of 2001 (0.6 percent with seasonally adjusted data); and

(i) Data relating to November show that the fall in revenues and expenditures from international tourists has continued. Revenues decreased at an annual rate of 9.5

percent, less than the 16.6 percent drop observed in the previous month. Meanwhile, expenditures declined at an annual rate of 12.2 percent, more pronounced than the figure of 10.8 percent for the previous month.

The above information suggests that the weakness of aggregate demand's main components persisted during the fourth quarter. As for consumption, data from INEGI and ANTAD show lower growth rates than in the third quarter. As a result, an additional fall in its rate of expansion is expected during the fourth quarter. In the case of investment, the significant decline in October together with the economy's general weakness suggest that it is likely to have fallen slightly more during the fourth quarter of 2001 than in the third.

Finally, the IGAE decrease in the October-November period, together with weak consumption and investment, indicates that GDP contracted at an annual rate of 1.4 percent during the fourth quarter of 2001, a slightly less pronounced fall than in the third quarter.

Table 9 **Estimated Growth of the Main Macroeconomic Aggregates in 2001**

Real annual percentage change

	Fourth Quarter	Year
GDP	-1.4	-0.3
Total Consumption	0.7	2.4
Total Investment	-10.1	-6.2
Domestic Demand	-1.0	0.2
Exports	-11.4	-4.2
Imports	-9.6	-2.7

II.3.7. Balance of Payments, Capital Flows and Exchange Rate

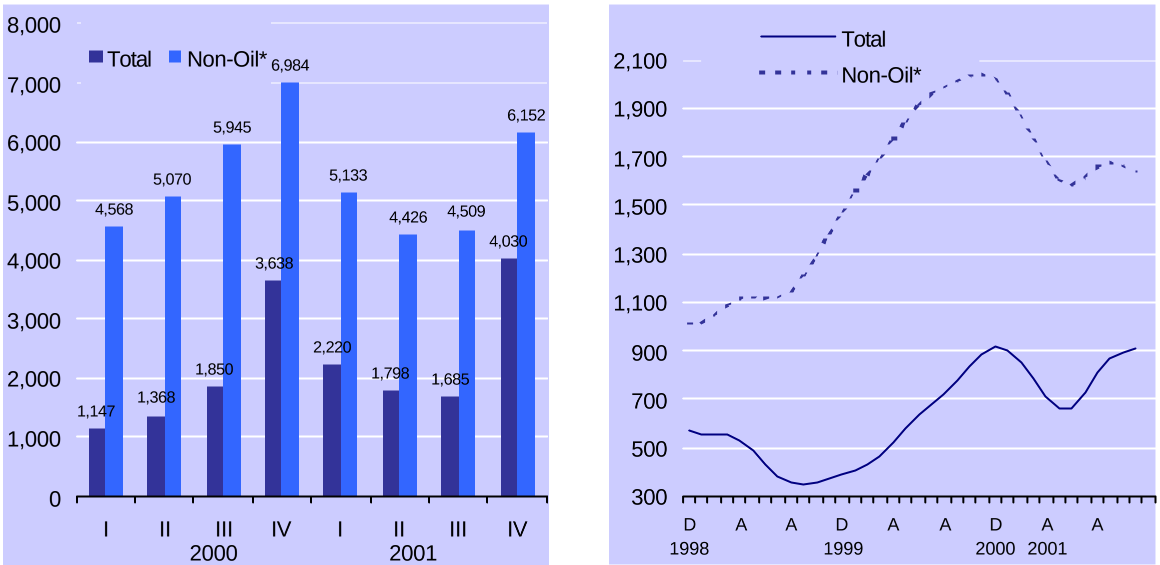
The synchronization of Mexico's economic cycle with that of the United States led to a rapid contraction of domestic demand in response to a fall in the demand for Mexico's exports. In light of this, it is not surprising that imports behaved similarly to exports. Thus, although the total accumulated trade deficit was 21.6 percent higher in 2001 than in 2000, the non-oil deficit decreased 10.4 percent. Furthermore, in the second quarter of the year, the non-oil trade deficit was less than that observed during the same period of 2000. Moreover, the trade and current account deficits were significantly lower at year-end 2001 than the forecasts at the onset of the year. This outcome reduced Mexico's demand for external resources and contributed to exchange rate stability, lower domestic interest rates and falling inflation (Chart 10).

Chart 10 **Trade Deficit: Total and Excluding Oil**

Millions of dollars

Quarterly

Monthly: Trend Series



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

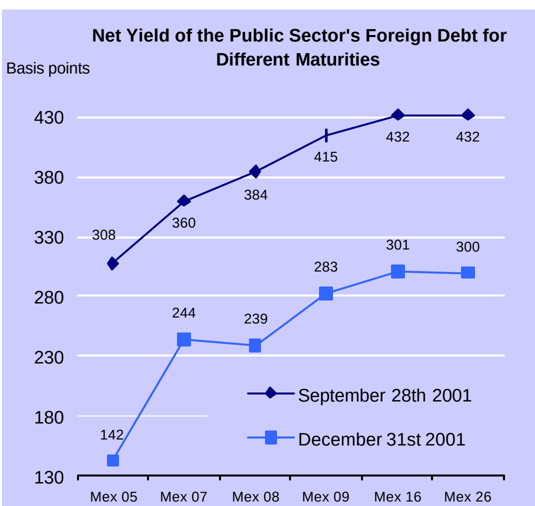
The supply of external resources also behaved in a way to support exchange rate's appreciation and the decline of interest rates. In the first nine months of the year, the surplus in the capital account amounted to 16.27 billion dollars, its highest level in this period for the past seven years. Among the capital inflows registered in the third quarter, direct foreign investment totaling 22.37 billion dollars is noteworthy. This figure can be explained by the Banamex-Citigroup transaction that generated Foreign Direct Investment (FDI) of 12.44 billion dollars. Preliminary information regarding portfolio investment during the fourth quarter reveals that it amounted to 2.39 billion dollars.

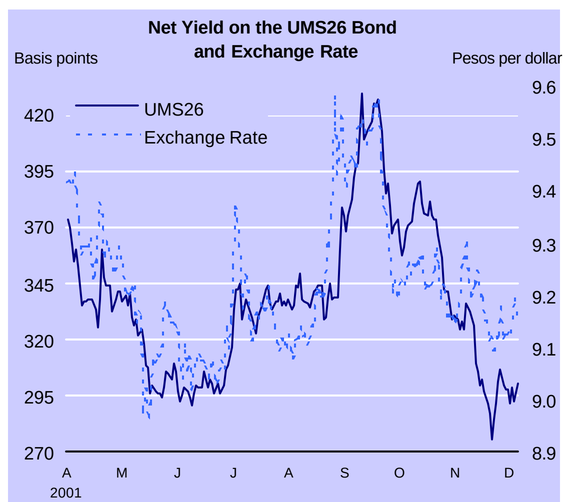
Estimates based on available information suggest a current account deficit of 5.9 billion dollars and a capital account surplus of around 7.3 billion (including errors and omissions) for the fourth quarter of 2001.

Reduced demand for external resources together with their abundant supply meant that from October onwards (once the uncertainty caused by the terrorist attacks in the United States had dissipated) the net yields on Mexican government bonds issued on international markets fell substantially. The general improvement in country risk perception was temporarily interrupted towards the end of that month due to the uncertainty created by the economic situation in Argentina. In this respect, the absence of any significant impact of the Argentinian crisis on Mexico and on the majority of countries in the region is worth emphasizing. Thus, the net yield on the UMS26 bond decreased 132 basis points during the quarter, reaching a level of 300 basis points at year-end (Chart 11).

During the October-December quarter, the slowdown of the United States' economy led to more pronounced falls in both exports and imports. As a result, Mexico's trade deficit widened only slightly. This situation together with an increased supply of external capital – from Citigroup's acquisition of Banacci as well as favorable expectations on the future of the Mexican economy– contributed to a simultaneous fall in domestic interest rates and to an appreciation of the exchange rate. At the end of December 2001, the nominal exchange rate was 9.16 pesos per dollar, implying a 3.8 percent appreciation when compared to its level at the end of the previous quarter.

Chart 11 Country Risk Indicators and Exchange Rate





SOURCE: Bloomberg and Banco de México.
Note: The net yield of the UMS26 bond is the difference between its gross yield and that of a U.S. government bond of similar maturity.

II.3.8. Prices Regulated or Provided by the Public Sector

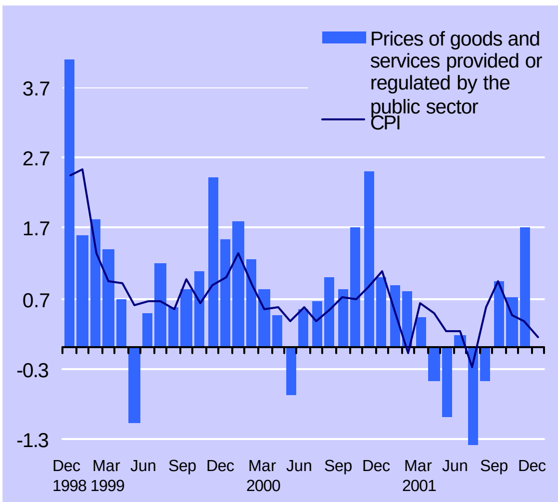
During 2001, the evolution of the sub-index of prices for goods provided or regulated by the public sector[9] was extremely

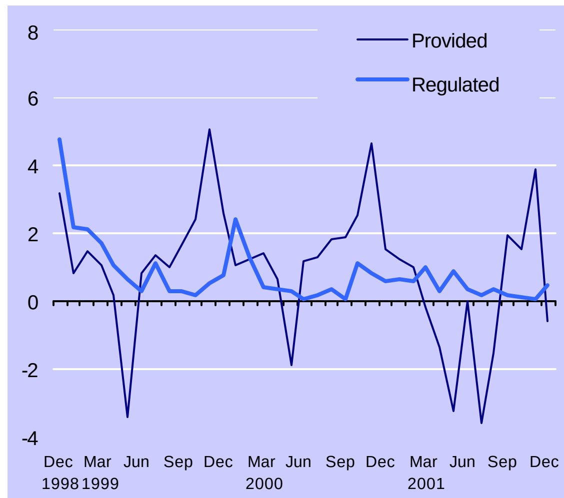
[9] The basket considered in the sub-index for goods and services provided by the public sector includes: gasoline, domestic gas and electricity. Product prices regulated by the public sector are: international long distance telephone calls, taxi fares, city bus fares,

favorable compared to its behavior during the same months of 2000. In October, November and December of 2001 the monthly inflation of this sub-index was 0.72, 1.72 and 0.0 percent, respectively (Chart 12)[10]. As a result, at the end of the quarter its annual growth was 2.21 percent, representing a substantial fall in relation to the 12.58 percent increase at year-end 2000.

Chart 12 **Price Index for Goods and Services Provided or Regulated by the Public Sector and CPI**

Annual percentage change





The evolution of the sub-index of prices provided or regulated by the public sector during the October-December period was mainly due to the behavior of prices for goods provided by the public sector. In October, November and December these prices registered monthly variations of 1.52, 3.88 and –0.61 percent, respectively. These changes were lower than in the corresponding months of 2000 and reflect the moderate price growth in gas for residential use and gasoline (to a lesser extent). Meanwhile, the sub-index of prices regulated by the public sector posted the following increases during the same months: 0.12, 0.06 and 0.49 percent. The fact that these increases were also lower than during the corresponding months of 2000 is noteworthy.

subway or electric transport fares, inter-city bus services, parking lots, automobile ownership taxes, local telephone services, highway tolls, domestic long distance telephone calls, telephone line installation and service fees, oil and lubricants, and duties and licences.

[10] Increases were 1.71, 2.51 and 0.99 percent in October, November and December of 2000.

II.3.9. Transitory Factors that Affected Inflation

In the October-December quarter of 2001 the accumulated growth of the sub-index of prices for agricultural products amounted to 0.10 percent, 0.87 percentage points below that of the CPI, and 5.21 percentage points lower than that observed in the same quarter of 2000. As a result, the annual inflation of this sub-index decreased from 6.63 percent in September to 1.35 percent in December of 2001. The products whose prices diminished the most in the period were oranges (43.15 percent), avocados (21.84 percent), zucchini (20.61 percent), and lettuce (18.39 percent). However, although the accumulated inflation of this index was extremely low, the prices of some other products included in this sub-index rose significantly during the quarter; for example, onions (37.80 percent), lemon (20.16 percent) and green tomatoes (18.67 percent).

II.3.10. Summary

Annual CPI inflation declined from 6.14 percent in September to 4.40 percent in December. In the same period, annual core inflation decreased from 5.93 to 5.08 percent. The sharp fall of CPI inflation during the quarter was sustained by significant decreases in the annual growth rates of prices for agricultural goods and prices provided or regulated by the public sector. As has been mentioned, it is highly likely that these phenomena will turn out to be transitory. Hence, in the present situation, core inflation has become a better indicator of inflation trends.

The significant decline of core inflation during the fourth quarter reflected decreases in the annual growth rates of its two components: goods and services. The lower annual inflation of the sub-index for services could be considered as a positive sign as it had remained practically constant from March to September. Meanwhile, the annual inflation of the sub-index for goods remained on the downward trend shown throughout the year.

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

II.4. Monetary Policy during the Fourth Quarter of 2001

In the following section the reasons which led Banco de México to maintain its accumulated balances objective as well as its monetary policy stance unaltered during the October-December quarter are analyzed. A complementary assessment of the evolution of inflation expectations and interest rates is also presented as they play an important role in the public's perception of the inflationary process and prevailing monetary conditions in the economy. Finally, the path of the monetary base and of other wider monetary and credit aggregates is reported.

II.4.1. Monetary Policy Actions

During the fourth quarter of 2001 the level of the "short" was not modified. This differed from the two previous quarters when the Board of Governors of Banco de México took the decision to reduce the "short". During the fourth quarter of the year, the convergence of inflation with the corresponding target made it clear that the objective set for 2001 would most likely be attained. Therefore, the decision to maintain the monetary policy stance was motivated by the determination to create the necessary conditions to reach an inflation lower than 4.5 percent in 2002. In this regard, the behavior of real remunerations and contractual wage increases led to expect that inflationary pressures incompatible with the inflation target could arise in 2002.

At year-end 2001 inflation was below the target set for 2002. Although there are several factors that might weaken additional inflationary pressures during the current year, the possible reversion of transitory factors that contributed to a sharper decline of inflation during 2001 -as well as the existence of other sources of inflationary pressures- led the Board of Governors of Banco de México to keep the "short" unchanged.

The factors that could foreseeably help stave off inflationary pressures in 2002 are:

(a) Aggregate demand's weakness. This will make it more difficult for producers of non-tradable goods to increase their prices; and

(b) Expectations of continued financial markets stability in 2002. For this reason, it is possible to anticipate that there will not be any sudden movements in the exchange rate that would translate into significant price increases in the tradable goods' sector. Besides, in an environment of low inflation, financial stability and a flexible exchange rate, it is reasonable to assume that the pass-through effect of changes in the exchange rate to domestic prices has weakened.

Among the factors that could hamper the attainment of the inflation target, the following are noteworthy:

(a) In contrast to what happened in 2000, the evolution of prices for agricultural goods and goods provided or regulated by the public sector made a substantial contribution to the decline of overall inflation in 2001. However, regarding the possible behavior of prices for these goods in 2002 the following should be considered:

i) The slight increase in agricultural goods' prices, during 2001 partly stemmed from favorable weather conditions and from the decline of international prices. Such behavior may not be repeated in 2002.

ii) As to inflation of goods provided or regulated by the public sector, in 2001 the Federal Government fulfilled its commitment and raised these prices in line with the inflation target. Likewise, the favorable behavior of the price of domestic gas, which has been in line with international energy prices, is also worth mentioning. In the latter case as well as in that of agricultural goods, it should be pointed that their prices display high volatility as a consequence of climatic factors or the unpredictability of international prices. Therefore, there is a possibility that the annual growth rate of these prices will temporarily rebound in 2002.

iii) Furthermore, the recently approved changes to several indirect taxes will necessarily have an upward impact on some specific prices.

(b) The increases in inflation that agricultural goods and goods provided or regulated by the public sector may possibly experience, as well as the impact of tax increases, could foreseeably lead to a temporary rise in overall inflation. By the end of the year the annual inflation of these goods is expected to be in line with the medium-term inflation objective and, ideally, their behavior should not drastically alter the downward path of inflation for other goods. However, the fact that these developments could contaminate the evolution of other prices and even of inflation expectations must not be ignored.

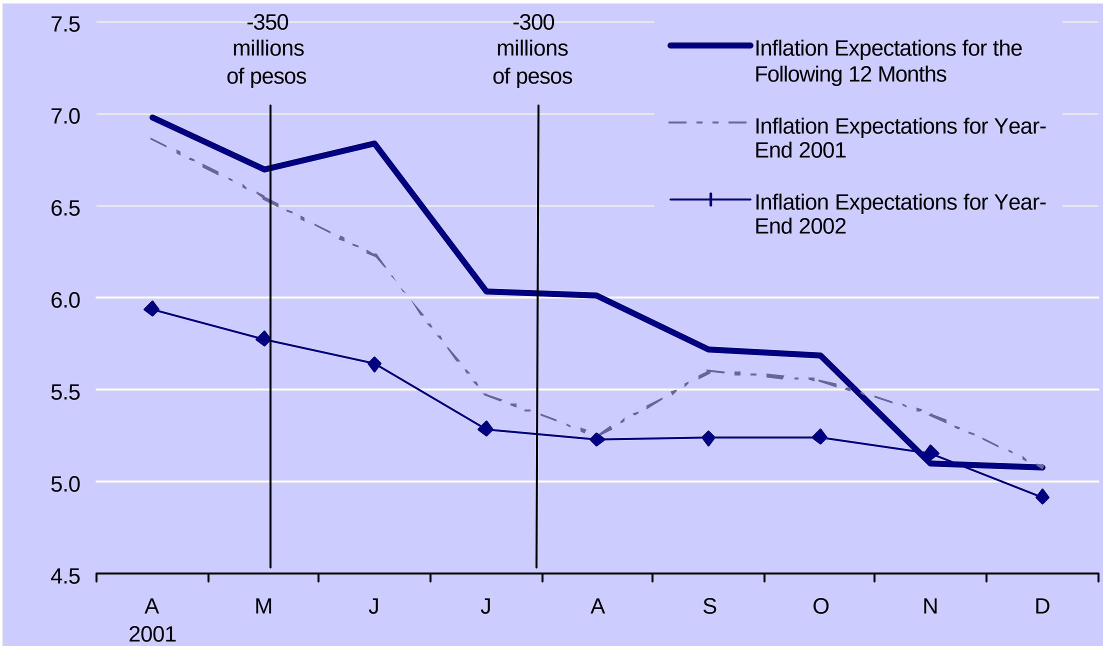
(c) As has been mentioned in previous Reports, nominal contractual wage rises have remained above the sum of foreseeable labor productivity gains and the inflation target. Expectations that the substantial fall in employment during the year would cause a downward movement in contractual wage revisions did not fully materialize in 2001. In the absence of this result, there have been increases in unit labor costs that could endanger the attainment of the inflation target in 2002.

(d) Expected inflation influences the determination of all kinds of economic contracts, including wages. Hence, although the spread between the inflation forecasted for 2002 and the target has been the smallest since November 2000, it remained practically constant from July to November of 2001, narrowing only slightly in December (Chart 13).

The factors mentioned above could hamper the attainment of the inflation objective in 2002. Thus, the most prudent course for the conduction of monetary policy is to maintain the current stance while continually evaluating the following: developments in the main macroeconomic variables, the impact of tax changes and of the evolution of prices of agricultural goods and prices provided or regulated by the public sector on inflation expectations and on prices for goods not directly affected by the aforementioned influences.

Chart 13 **Inflation Expectations and Accumulated Balances Objective ("Short")**

Percent



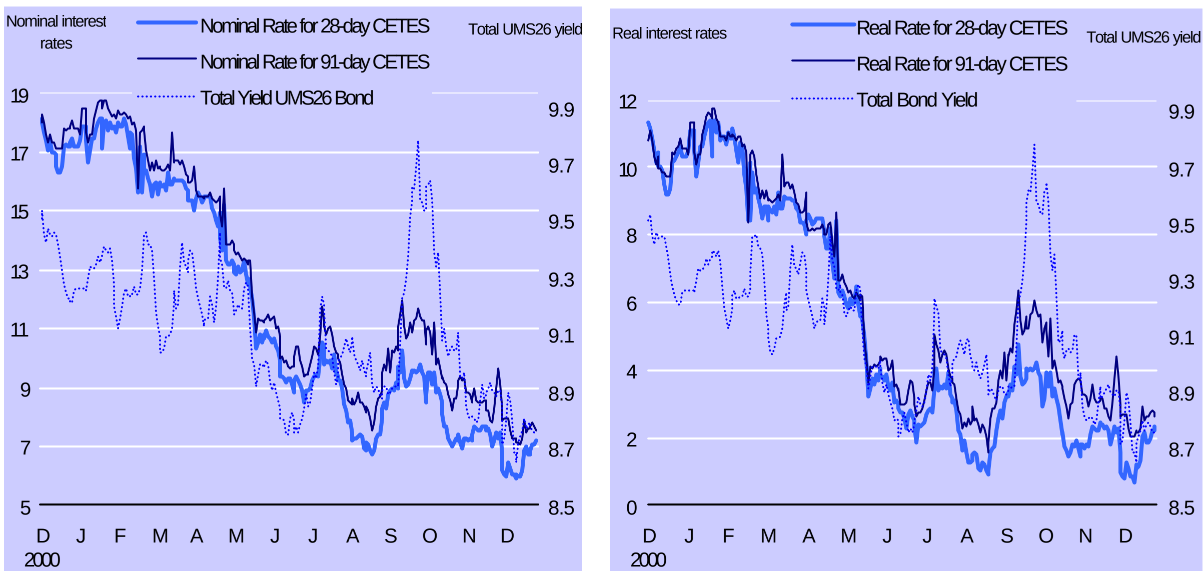
Source: Survey of Private Sector Economic Analyst's Expectations. Banco de México and Ministry of Labor.

Increases in inflation during August and September caused inflation expectations for year-end 2001 to rise. Nevertheless, this reverted slightly in October and much more strongly during the rest of the months in the quarter. This phenomenon was mainly the result of the adverse effect of the prices sub-indexes excluded from core inflation during August and September. Thus, the rebound of inflation was only transitory given the volatile character of the prices included in these sub-indexes. Moreover, although inflation expectations were high in 2001, they were always below the official target and this increase did not affect the corresponding forecasts for 2002. This suggests that analysts consider that the aforementioned rebound was temporary. Thus, despite changes in their short-term expectations, their medium term forecasts remained unchanged. In contrast with this, the fall in inflation expectations for 2001 during the month of December can be explained by the favorable evolution of all price sub-indexes during November and the first two weeks of December. These were seen as permanent movements and led to the downward adjustment of inflation expectations for 2002.

The absence of changes in the stance of monetary policy during the fourth quarter did not curb the decline of interest rates. The behavior of both nominal and real domestic interest rates was very similar to that of external rates in the quarter. They showed a downward adjustment and thereby reversed the increase observed in the August-September period (Chart 14). After falling sharply in October, domestic and external interest rates remained practically constant in November, declining again during December.

Chart 14 **Nominal Interest Rates, Real Interest Rates[1/] and Total Yield on UMS26 Bond**

Percent



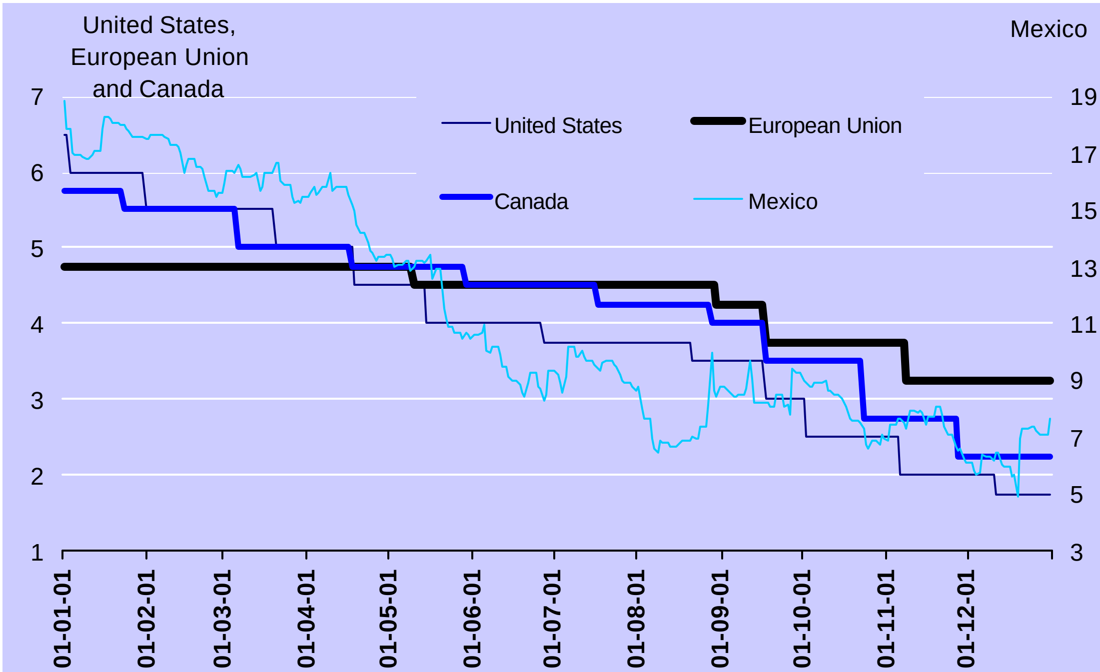
1/ Nominal interest rates adjusted by inflation expectations for the following 12 months.

The behavior of Mexican nominal and real interest rates was similar to that in the rest of the world's economies during 2001. This was mainly due to lower than expected inflationary pressures and a more pronounced economic downturn in most developed countries (Chart 15).

Chart 15

Nominal Interest Rates: United States, European Union, Canada and Mexico

Percent



Source: Bloomberg.

II.5. Monetary and Credit Aggregates

II.5.1. Monetary Base, Net International Assets and Net Domestic Credit

At year-end 2001 the stock of the monetary base was 225,580 million pesos, 11,806 million below estimates. Thus, the monetary base expanded at an average nominal rate of 12.8 percent during the year, lower than that forecasted in the Monetary Program (16 percent). This represented an average deviation of –2.9 percent that can mainly be explained by the unforeseen slowdown of economic activity. Nevertheless, the monetary base measured as a proportion of GDP rose, furthering the process of remonetization that began in 1977 (Chart 16a).

Remonetization at year-end 2001 (3.7 percent)[11] was above that anticipated in the Monetary Program (2.6 percent). This

[11] Calculated as the percent variation of the monetary base (estimated using stocks at the end of the period) above inflation and real GDP growth. Real annual GDP growth of –0.3 percent for 2001 was assumed in the estimate.

was mainly the result of two factors that increased the demand for real money balances: a) the considerable decline of interest rates and b) the rise in real remunerations. Furthermore, in economies with falling inflation, the demand for monetary base as a proportion of income increases[12] due to reduced uncertainty and costs of maintaining liquid assets such as bills and coins (Chart 16b).

The accumulation of net international assets during 2001 amounted to 9.29 billion dollars. In order to preserve the balance between the supply of base money and the public's demand for it, Banco de México sterilized the monetary impact of the aforementioned accumulation by increasing other non-monetary liabilities. The latter led to a 71,517 million peso contraction of net domestic credit.

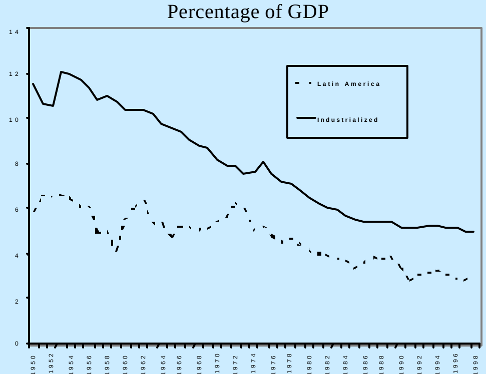
The main source of accumulated international assets were purchases from Pemex in an amount of 8.91 billion dollars, while net sales to the Federal Government totaled 2.55 billion (Table 10). The aforementioned accumulation of international assets included 1.36 billion dollars acquired via the options mechanism, which was suspended as of June 29th 2001.

[12] A more detailed explanation of this issue can be found in the appendix to the document: "Monetary Policy: Program for 2000".

Development of the Financial System, Inflation and the Stock of Money

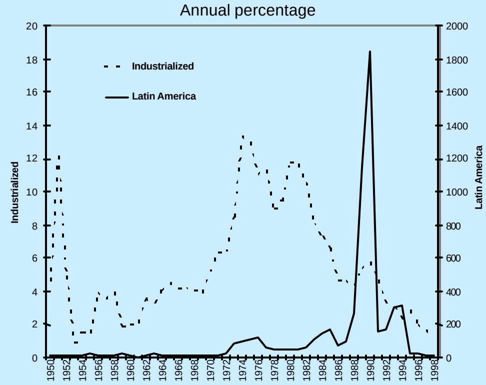
International evidence shows that the monetary base expressed as a percentage of GDP has declined during the last 50 years in a large number of countries. In order to study this subject, two groups of countries were analyzed: Latin American and industrialized countries. In both cases there was a downward trend in this coefficient. This result can mainly be explained by the development of the financial system and, in particular, by the emergence of means of payment other than cash such as checks, credit cards and, more recently, debit cards and electronic wallets (Chart 1).

Chart 1
Monetary Base
Percentage of GDP



However, one difference between the two groups was that in Latin American countries the short-term variations were wider than those in industrialized countries. The reason for this difference can be found in the behavior of average inflation in each group during the same period. Inflation fluctuations in the Latin American group have been much larger than in the industrialized countries (Chart 2). While in the first group annual inflation reached three digits for several years, in the second it never rose above 20 percent. Changes in inflation also represent changes in the opportunity cost of holding cash. Consequently, when inflation rises the public tends to reduce its demand for money. Thus, higher inflation in the Latin American countries is compatible with the fact that the coefficient of the monetary base to GDP was always lower than in the industrialized countries.

Chart 2
Inflation
Annual percentage



It is therefore possible to identify the elements that have a significant influence on the behavior of the quantity of money expressed as a proportion of GDP. The first of these is the development of the financial system that has led to a decline in the relative importance of cash over the long term. The second is variations in inflation which induce decreases in the quantity of money as inflation rises (demonetization) and vice versa (remonetization).

The above leads to believe that the process of remonetization observed in Mexico over the last few years is mainly due to falling inflation. Nevertheless, this does not mean that the use of payment methods other than cash has not increased in Mexico. Presumably what has happened is that the effect of the reduced opportunity cost of holding money has been stronger. In sum, the net variation in the amount of money is the result of two opposite effects.

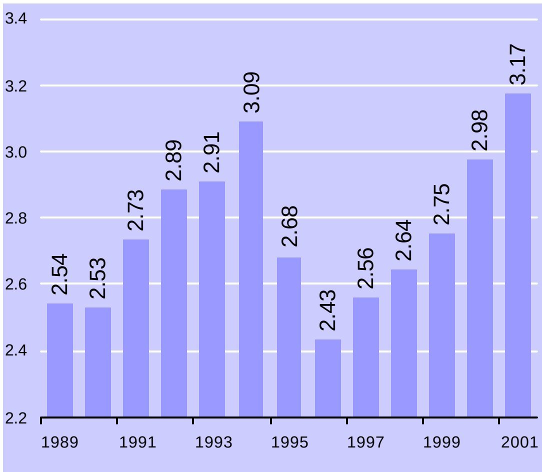
A study carried out by Banco de México found that changes in the amount of money, expressed as a proportion of GDP, are not symmetrical to increases or decreases in the cost of holding money.[1] That is to say that the decline in the amount of money when inflation rises 1 percentage point is different in absolute terms than when inflation falls 1 percentage point. This fact complicates the process of making remonetization forecasts.

It is anticipated that the process of remonetization will continue as inflation declines. Moreover, once inflation stabilizes, the impact of financial innovations is expected to dominate once again. It is therefore reasonable to presume that the monetary base will gradually decline as a proportion of GDP.

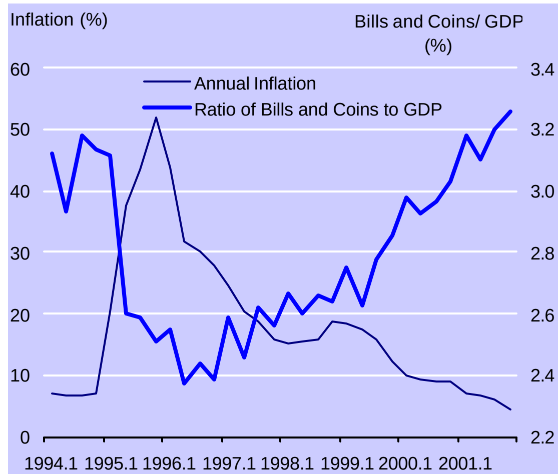
[1] "Monetary Aggregates in Mexico: A return to the Classics?", Documento de Investigación No. 2001-6, Banco de México.

Chart 16 — Bills and Coins in Circulation[1/] as a Proportion of GDP[2/] and Inflation

a) Bills and Coins in Circulation Percentage of GDP



b) Bills and Coins in Circulation (Percentage of GDP) and Inflation



1/ Average daily stock.
2/ Estimated figures for GDP in 2001.

Table 10 — Monetary Base, International Assets and Net Domestic Credit

Millions

	Balances Dec 30th 2000	Balances Dec 31st 2001	Effective flows Jul-Sep 2001	Effective flows Oct-Dec 2001	Accumulated effective flows in the year[1/] to Dec 31st 2001
(A) Monetary Base (Pesos)	208,943	225,580	1,454	43,393	16,637
(B) Net International Assets (Pesos)[2/]	342,386	411,315	19,546	17,769	88,154
Net International Assets (U.S. Dollars)[2/]	35,629	44,857	2,047	1,944	9,228
Variation of Net International Assets			*2,047*	*1,944*	*9,228*
Pemex			*767*	*3,089*	*8,910*
Federal Government			*628*	*-1,188*	*-2,549*
Options Purchases			*0*	*0*	*1,363*
Other[3/]			*652*	*43*	*1,504*
(C) Net Domestic Credit (Pesos) [(A)-(B)][1/]	-133,443	-185,735	-18,092	25,623	-71,517
Note:					
(D) International Reserves[4/] (U.S. Dollars)	33,555	40,880	684	1,465	7,325

1/ In the estimation of effective flows in pesos of net international assets, the exchange rate applied to the operation of each flow is considered. The differential between net international asset stocks in pesos does not correspond to the concept of effective flows, due to the fact that stocks of the former definition are valued at the daily exchange rate. This also explains why the differential between net domestic credit stocks is not the same as the 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/ Mainly composed of dollar sales operations and interest earned on international assets.
4/ As defined by Banco de México's Law.

Impact of the Banamex-Citigroup Operation on Monetary Aggregates

The Banamex-Citigroup operation substantially contributed to the growth of the monetary aggregates (especially the narrow definitions) in 2001. The payment strategy presented to shareholders for the Citigroup purchase of Banamex included a cash settlement of approximately 50 percent of the operation, while the rest would be covered by the exchange of Citigroup shares for those of Banacci. The cash payment was set in dollars, to be made in three ways according to the shareholders' choice: a) deposits abroad; b) deposits in investment funds operated by Banacci-Citigroup and c) trust fund deposits with instructions to exchange dollars to pesos in no less than 20 business days.

Table 1
Amount of the Banamex-Citigroup Operation
Millions of dollars

Total Amount	12,447
Amount in Stocks	6,242
Amount in Cash	6,205
Settlement in Mexican Pesos	38
Deposit (US Dollars)	2,877
Group´s Investment Funds	3,293
INTEGRA 3	3,029
ACCICOR	263

Around half the Banamex shareholders decided to buy shares in investment funds managed by Banacci, mainly Integra 3 (Table 1). As part of its investment portfolio, this fund acquired in August Certificates of Deposit denominated in dollars amounting to 2.027 billion and made bank deposits (mostly in checking accounts) in dollars totalling 835 million. As a result of these operations, Integra's securities portfolio increased by 2.86 billion dollars between July and August (26,628 million pesos).

Table 2
Integra 3 (Hedge Fund for Individuals)
Balances in millions of dollars

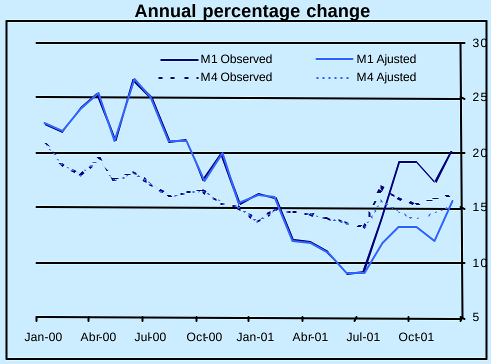
	Jul	Aug	Sep	Oct	Nov	Dec
I. Banks	166	1,001	2,975	2,984	2,695	2,746
Checking Accounts	166	1,001	2,975	2,984	2,695	2,746
II. Investments in Securities	29	2,056	32	26	21	21
Negotiable Securities	29	2,056	32	26	21	19
Cedes	----	2,056	----	----	----	----
Private	29	----	30	24	19	19
Banco de Mexico			2	2	2	2
III. Total Claims (I+II)	195	3,057	3,007	3,010	2,716	2,767

In September, Integra 3 changed the structure of its portfolio of securities, transferring investments in Cedes to checking accounts also denominated in dollars. This transaction meant that the latter instrument accumulated a balance of 2.975 billion dollars, which was mostly maintained for the rest of the year (Table 2).

This led to upward movements in the balance of checking accounts and time deposits held in foreign currency, which in turn caused significant variations in the stocks of the different monetary aggregates, particularly M1.

In order to study the behavior of the monetary aggregates without the effects of the Banamex-Citigroup operation, the balances of the aforementioned mutual fund investments were excluded from the calculations of every component of financial savings. For example, in the case of time deposits the equivalent of 2.05 billion dollars in pesos was subtracted from their balance, while for checking accounts held in foreign currency the equivalent of 1.09, 3.07, 3.09, 2.88 and 2.81 billion dollars in pesos was excluded in August, September, October, November and December, respectively. The rate of growth of the monetary aggregates fell considerably after these adjustments (Chart 1).

Chart 1
Original and Adjusted M1 and M4
Annual percentage change



As to the final destination of the resources related to this operation, the increase in short-term bank liabilities denominated in dollars has mostly been offset by increases in held assets in foreign banks in addition to reduced external liabilities. That is to say, although these resources have been intermediated in the domestic market, their final destination has mainly been outside Mexico.

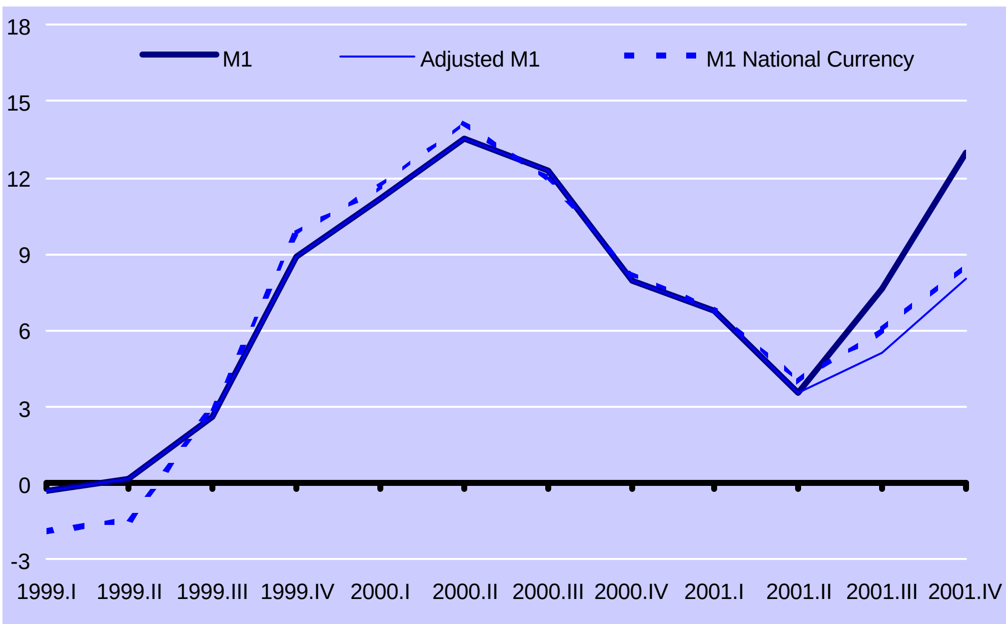
In sum, after the above operations, part of Mexican residents' wealth held in bank shares was converted into financial assets that are included in the monetary aggregate. As long as these resources remain in the domestic financial market the larger stock of the monetary aggregates will most likely tend to persist.

II.5.2. Monetary Aggregates

The real annual average growth rate of the narrow money aggregate (M1) rose slightly from 3.4 to 13.1 percent from the second to the fourth quarter. This resulted mainly from the increase in checking accounts held in foreign currency associated with Citigroup's purchase of Banamex. However, after adjusting for the aforementioned effect it can be seen that narrow money denominated in national currency also grew at a faster rate as from the third quarter on (Chart 17).

Chart 17 **Effect of Citigroups's Purchase of Banamex on M1**

Real annual percentage variation of the average quarterly stock



The demand for the narrow monetary aggregate in national currency is basically determined by two variables: income (GDP) and the opportunity cost of holding liquid assets (interest rates paid by the different financial instruments). Lower GDP growth during the second quarter of the year had a negative effect on the demand for this aggregate. Nonetheless, there were at least two other factors whose influence more than compensated for the reduced GDP growth:

(a) The fall of interest rates in nearly 10 percentage points reduced the cost of holding liquid assets (Chart 18); and

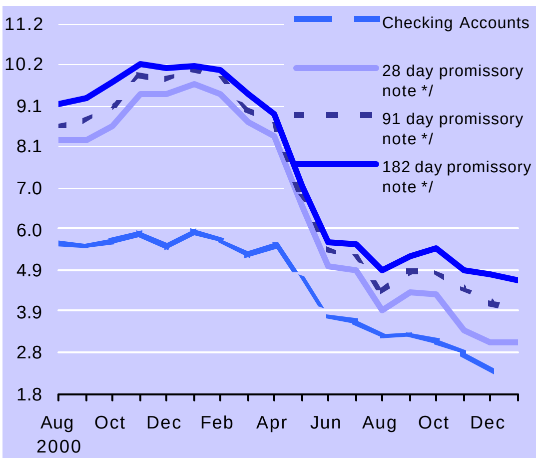
(b) The spread between the interest paid on checking accounts[13] and time deposits widened substantially (Chart

[13] Approximately 60 percent of checking accounts receive some kind of yield.

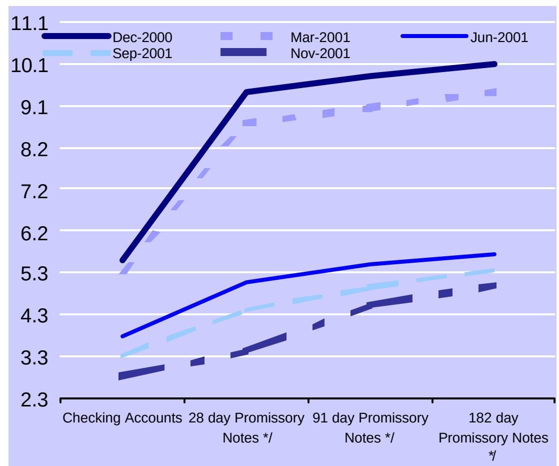
18). These variations in the yields of the different banking instruments have brought about higher demand for more liquid assets.

Chart 18 **Checking Account Yields and Time Deposits**

Interest Rates
Annual percentage



Bank Deposits' Yield Curve in 2001
Annual percentage



* Over the counter rates

There are other institutional aspects besides payment methods that have caused a change in the structure of narrow money. For example, current account deposits (payroll accounts) throughout 2001 increased significantly due to a growing number of account holders[14]. It is likely that this process of bank deepening will continue in the medium term as a natural outcome of the development of the financial system.

The broad monetary aggregate M4 expanded at a real average annual rate of 10 percent in the last quarter of 2001. After adjusting for the effect of Citigroup's purchase of Banamex, the rate fell to 8.9 percent. Much of the growth of the broad monetary aggregate stems from the large quantity of financial savings channelled through the retirement savings system (including SIEFORES, INFONAVIT and other retirement funds). If the aforementioned savings were excluded from the calculations, the real annual growth of M4 would be 5.6 percent (Chart 19).

[14] Based on information up to September 2001, the number of debit cards grew on average 24 percent compared to the previous year. Source: Prosa.

Table 11 **Monetary Aggregates**

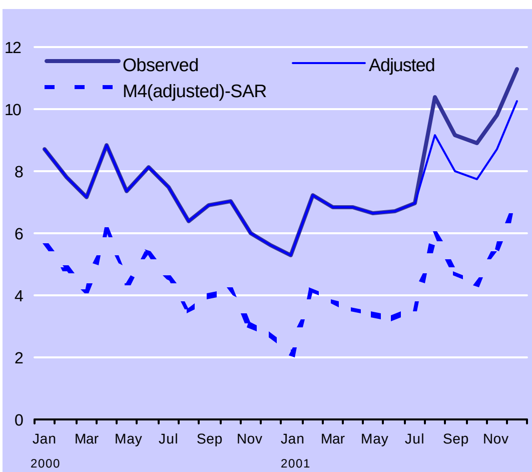
Real annual percentage variation of average stock

	2001			
	jan-mar	apr-jun	jul-sep	oct-dec
M1	6.75	3.43	7.64	13.06
Bills and Coins Held by the Public	7.35	3.13	6.26	4.88
Checking Accounts in Pesos	4.07	2.76	4.20	9.85
Checking Accounts in Foreign Currency	6.46	-1.31	22.02	56.15
Current Account Deposits	17.65	11.45	13.53	13.71
M4	6.44	6.49	8.81	9.99
Bank Deposits	-10.32	-7.33	-3.08	0.89
Public Securities 1/ 2/	37.08	30.39	28.83	25.48
Private Securities 2/	19.99	10.58	5.45	0.33
Retirement Savings Funds (excluding Siefores) 3/	18.26	17.26	14.80	13.75

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 in Banco de México.

Chart 19 **Broad Monetary Aggregate M4**

M4 Adjusted for the Effect of Citigroup's purchase of Banamex
Real annual percentage change



Retirement Savings System, Bank Deposits and Other Securities
Percentage of M4

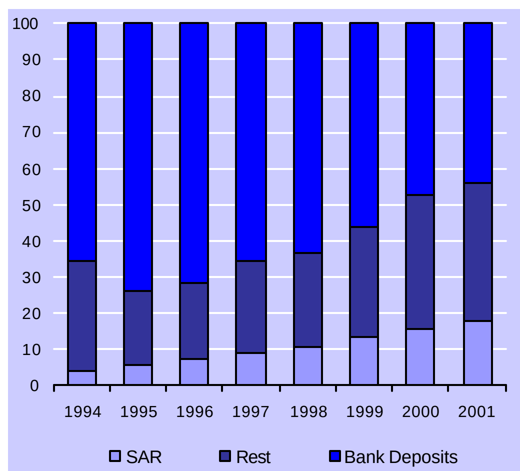


Table 12 shows the M4 variation in each saving's sector and the destination of this saving during 2001. In general, M4 expansion was accompanied by increased international reserves and financing to the public sector, to the IPAB and (to a lesser extent) to the private sector. In particular, the following are worth mentioning:

(a) Residents' savings accounted for 7 percent of GDP, while financial savings by non-residents contracted. Savings generated by SAR accounted for over 30 percent of M4's annual flow;

(b) Close to 18 percent of financial savings were channeled towards accumulating international reserves;

(c) The decrease in commercial banks' lending to the private sector was offset by the rise in credit granted by development banks and by an increased amount of private securities held by Siefores; and

(d) The public sector and the IPAB absorbed a substantial amount of domestic financial resources (more than 50 percent of the M4's annual flow). The relevance of the Siefores in public sector financing is noteworthy.

Table 12 **Broad Monetary Aggregate M4 in 2001**

Effective flows in thousands of millions of pesos and as a percentage of GDP

Sources (M4)			Uses		
	pesos	%		pesos	%
Residents	401.6	7.0	International Reserves [1/]	70.0	1.2
SAR	127.5	2.2	Private Sector	54.4	0.9
Siefores	84.4	1.5	Commercial Banks	-13.3	-0.2
Other funds	43.1	0.8	Development Banks	7.0	0.1
Rest	274.1	4.8	Siefores	13.0	0.2
			Housing Funds	47.7	0.8
Non Residents	-2.7	0.0	Public Sector [2/]	108.7	1.9
			Commercial Banks	6.5	0.1
			Development Banks	-33.2	-0.6
			Siefores	69.5	1.2
			Other	65.8	1.1
			IPAB [3/]	106.1	1.9
			Other Net Concepts	59.7	1.0
Total	398.9	7.0	Total	398.9	7.0

1/ The balancing entry for this figure includes Banco de Mexico's domestic liabilities (mainly the monetary base, BREMS and government securities for monetary regulation, among others).
2/ Includes gross financing (credit and securities) received by the Federal Government, public institutions and companies as well as states and municipalities in the domestic financial market. It excludes those securities placed for monetary regulation purposes.
3/ Includes direct financing by commercial banks and placement of BPAs. It excludes other banking operations and special programs.

One important aspect of financial savings is its residual maturity[15], which increased throughout 2001. The latter reflected the longer maturity of public sector securities. This contrasts with the behavior of bank deposits, which have concentrated on liquid instruments with shorter maturities (Table 13).

[15] Refers to the average maturity of the various instruments that make up the financial savings aggregate.

Table 13 **Residual Maturity of Financial Saving in National Currency[1/]**

Days

	Dec-01	Mar-01	Jun-01	Sep-01	Dec-01
Total Financial Savings	254	275	300	324	332
Total Bank Deposits [2/]	18	14	14	12	12
Time Deposits	26	19	20	17	19
Government Securities [3/]	539	571	633	711	744
Private Securities	536	560	577	560	559

1/ M2 less bills and coins held by the public. Does not include SAR housing fund savings.
2/ Includes demand deposits.
3/ Includes securities issued by the Federal Government, the IPAB and Banco de México.

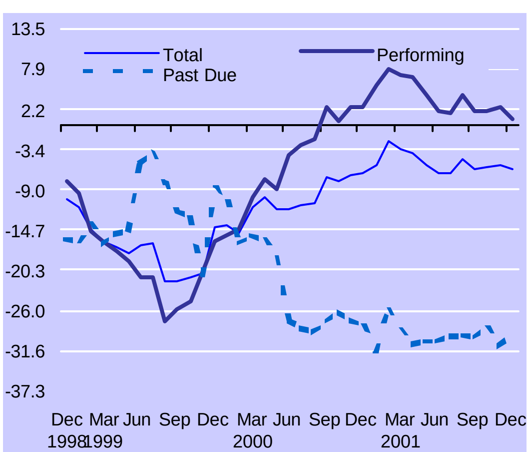
II.5.3. Private Sector Financing

During the fourth quarter of 2001 commercial banks' performing loan portfolio with the private sector continued to grow in real terms, although at lower rates than at the onset of the year. Thus, at the end of December this aggregate registered a real annual increase of 1 percent, while it had been 6.9 percent in the first quarter of the year (Chart 20). Likewise, the real expansion of consumer credit also weakened and in the reported period posted real annual growth rates of around ten percentage points below those prevailing at the start of the year.

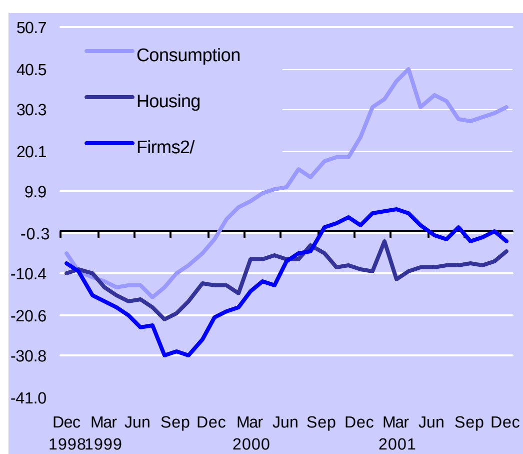
Chart 20 **Credit Granted by Commercial Banks to the Private Sector [1/]**

Real annual percentage change

Total Credit, Performing and Past Due



Performing Loan Portfolio



1/ Refers to commercial banks' own portfolio excluding credit related to debtor support programs and bank rescue programs (promissory notes IPAB-FOBAPROA and Cetes-UDIs).
2/ Firms and individuals with a business activity. Does not include credit granted to non-bank financial intermediaries.

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

(a) Credit granted by mortgage Sofoles (non-bank banks) grew at an annual real rate of 38.8 percent in November 2001, in contrast to the reduction of this type of financing by commercial banks;

(b) In November 2001, the stock of credit granted by automobile Sofoles rose at an annual rate of 21.6 percent in real terms, while bank credit for the purchase of durable goods increased 29.2 percent; and

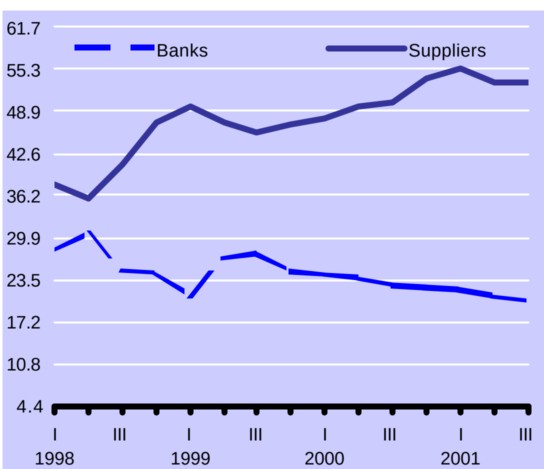
(c) In November 2001, performing credit granted by Sofoles as well as the placement of commercial paper to firms or individuals with a business activity, was very similar to the level attained in December 2000.

One relevant factor to consider is the effect of uncertainty surrounding the international environment and the economic recovery on the credit market. Banco de Mexico's quarterly survey of the credit market confirms that "economic uncertainty" has gained importance in explaining the reduced demand for credit, while the factor "high interest rates" has become less important during the last few quarters (Charts 21 y 22).

Chart 21 **Quarterly Credit Market Evaluation Survey**

Percentage of responses

Main Sources of Financing



Reasons for not Requesting Bank Credit

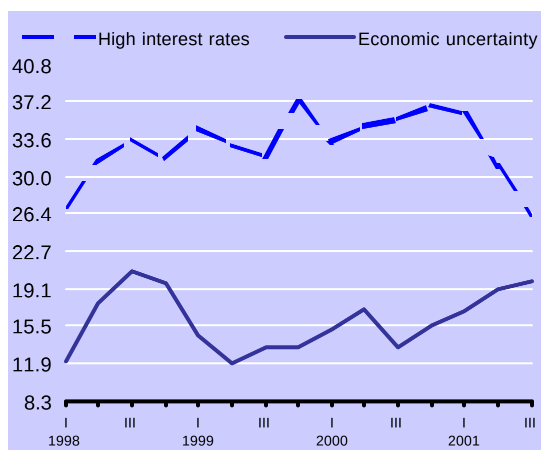
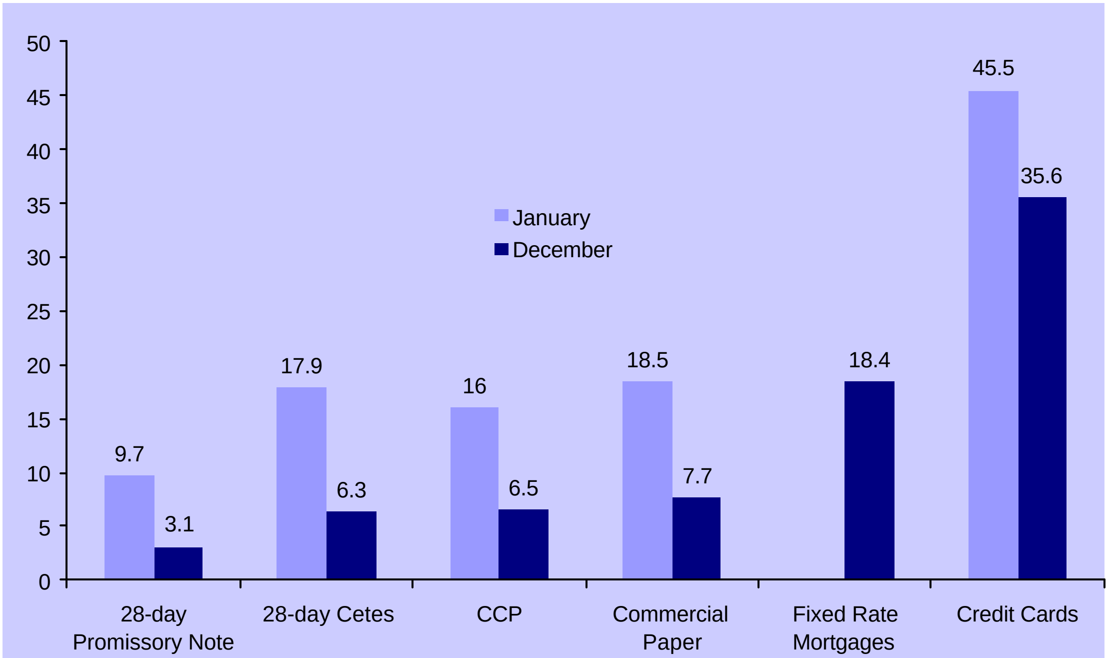


Chart 22 **Interest Rates in January and December of 2001**

Annual percentage



Source: Banco de México and INFOSEL

III. Overview of the Economy in 2001 and Private Sector Outlook for 2002

In 2001 developments in Mexico's economy were much less favorable than what had been forecasted at the onset of the year. Thus, GDP is expected to have contracted slightly (0.3 percent) compared with its level in 2000 as a result of the sharp downturn of the world economy, particularly of the United States. Due to the fact that the Mexican economic slowdown has been related to an adverse international environment instead of to domestic imbalances, the present economic cycle is clearly different from the financial and balance of payments crises that occurred in the past. For this reason, despite the considerable disturbances that the Mexican economy faced it did not experience price instability, sudden interest rate rises or permanent exchange rate depreciations in 2001.

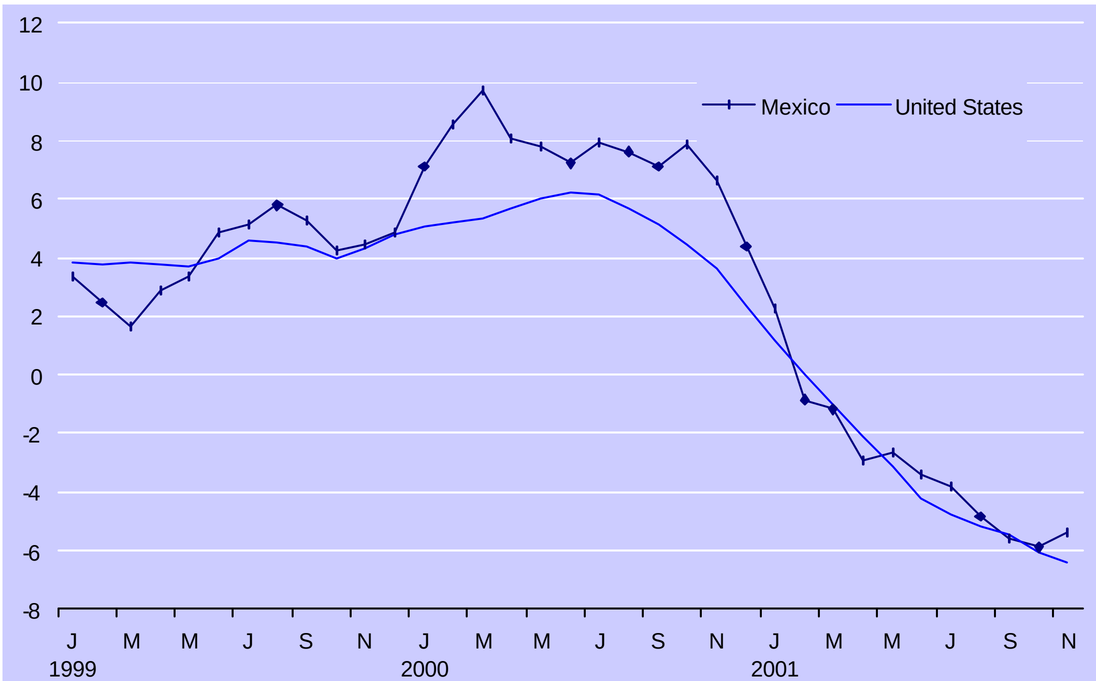
The United States' economy is expected to rebound as from the second quarter of 2002. Growth is also anticipated to accelerate during the second quarter of the year. This expansive influence will foreseeably sustain Mexico's recovery towards the second half of 2002. This section presents a brief assessment of the evolution of the domestic economy in 2001, as well as private sector expectations regarding the development of the main economic variables in 2002.

III.1. Outstanding Aspects of the Evolution of the Economy and of Monetary Policy Implementation in 2001

The evolution of the Mexican economy in 2001 was basically influenced by the United States' downturn. The main link between the two economies is trade, of which the manufacturing industry is a key element. Almost 90 percent of Mexican exports to the United States are manufactured goods. To that effect it is important to mention that the deceleration of the United States' manufacturing sector preceded that of other sectors of its economy. Thus, as from the last few months of 2000, activity, exports and employment in the Mexican manufacturing industry began to weaken. The contribution of the manufacturing sector to investment and employment growth over the last few years is also a fundamental reason as to why these two variables slowed rapidly in the first quarter of 2001. Furthermore, the pronounced fall of employment during the year had undoubtedly a negative impact on private sector consumption (Chart 23).

Chart 23 **Manufacturing Output in Mexico and the United States**

Annual percentage variation of the three month moving average



Source: Banco de México and Bloomberg.

The relevance of Mexico's manufacturing sector as a source of employment and as a destination for investment is one of the elements that explains why Mexico's growth has declined more than in the United States. However, there are other elements that have also aggravated the downturn:

(a) The low level of credit granted by commercial banks to the private sector has limited the Mexican financial system's capacity to mitigate (as has happened in the United States) the decline in investment and consumption; and

(b) After a modest performance in 1999, high economic growth rates in Mexico during 2000 allowed GDP to come close to its potential level. The recovery was sustained by vigorous investment and consumption, which had previously registered lower increases in 1999 as a result of the financial impact of the Russian crisis during the second quarter of 1998. Thus, even in a more favorable environment than at present, the growth rates registered in 2000 would have been unsustainable.

The unfavorable evolution of output in 2001 had a negative effect on job creation. The number of workers (temporary and permanent urban employees) affiliated to the IMSS dropped by 382,631 (3.1 percent). This outcome can be mainly explained by job losses in the manufacturing sector.

The close relationship between the growth of aggregate demand's main components and those of output throughout 2001 led to a decline in both imports and exports, and the trade deficit widened less than had been forecasted. This, together with an abundant supply of foreign capital during the year, contributed to the appreciation of the exchange rate in 2001.

The Mexican economy reacted in an orderly manner to the world's economic downturn and financial markets showed a favorable behavior. The exchange rate remained stable throughout 2001, foreign investment flows were high and interest rates decreased continually. These results were based on Mexico's economic strengths:

(a) A flexible exchange rate regime;

(b) A prudent fiscal policy;

(c) The management of the public sector debt with the aim of reducing the concentration of amortizations;

(d) A monetary policy oriented to attain the inflation targets; and

(e) A stronger financial system.

Regarding the evolution of fiscal policy throughout 2001, a great effort was made in order to comply with the objectives set for the public deficit even in the midst of an economic slowdown. This effort comprised fiscal measures destined to improve the efficiency of tax collection as well as the appropriate management of expenditure in response to the loss of revenues.

Congress approved a transcendental financial reform in 2001 that promoted competition between financial institutions, the quality of corporate governance and the protection of minority shareholders as well as the reduction of regulation and supervision costs. This will foster the healthy development of the financial system as well as new financing to the private sector.

The positive results observed in the Mexican financial markets are mainly attributable to the fact that international capital markets clearly differentiated (more than in the past) between those economies with solid foundations and those with significant weaknesses. This can be seen in the differing behavior shown by country risk indicators for the main emerging markets throughout 2001 (Table 14).

Table 14 **Spreads on EMBI+ Yields**

Basis points

	December 1999	December 2000	December 2001
EMBI +[1]	824	756	731
EMBI + excluding Argentina and Turkey	n.d.	750	617
Latin America	597	706	833
Argentina	533	773	4372
Brazil	636	749	863
Colombia	423	755	514
Ecuador	3353	1415	1233
Mexico	363	392	308
Panama	410	501	409
Peru	443	687	521
Venezuela	844	958	1130
Asia	221	489	356
South Korea	142	218	121
Russia	2432	1172	669
Philipines	324	644	466
Europe	1762	988	621
Bulgaria	626	772	433
Poland	212	241	195
Turkey	420	800	707

1/ The EMBI + is a yield index that includes Brady bonds denominated in U.S. dollars, loans, Eurobonds and local market instruments denominated in U.S. dollars.
Source: J.P. Morgan.

Although in 2001 the Mexican economy registered negative annual GDP growth for the first time since 1995, the current recession has been the least severe for the last 20 years and is the only one where the financial variables have remained stable. Besides being the smallest for two decades, the decline of GDP in 2001 has been accompanied by the least pronounced contraction of investment (Table 15). Furthermore, the fact that this recession has been accompanied by significant falls in interest rates and inflation as well as by an exchange rate appreciation is noteworthy.

Table 15 **Indicators for the Mexican Economy: 1981-2001**

	GDP	Consumption	Gross Fixed Capital Formation	Inflation (December to December)	Exchange Rate Depreciation (December to December)	Interest Rate (Average)		Current Account
	(Annual Growth Rate)						(December to December Change)	(% GDP)
1981	8.5	7.4	15.9	28.7	11.9	30.8	5.4	-6.1
1982	**-0.5**	-0.8	-16.8	98.8	209.9	45.7	24.5	-3.1
1983	**-3.5**	-3.4	-27.8	80.8	76.4	59.5	-3.9	3.7
1984	3.4	3.4	6.6	59.2	33.8	49.7	-4.6	2.3
1985	2.2	2.8	8.2	63.8	86.8	63.7	25.5	0.4
1986	**-3.1**	-1.7	-11.6	105.8	150.7	73.9	30.7	-1.0
1987	1.7	-0.1	0.4	159.2	125.6	102.8	25.6	2.9
1988	1.3	1.0	5.8	51.7	13.6	58.6	-79.6	-1.3
1989	4.1	6.6	5.8	19.7	15.3	44.8	-11.3	-2.6
1990	5.2	6.0	13.1	29.9	11.8	35.0	-14.4	-2.9
1991	4.2	4.8	11.0	18.8	4.4	19.8	-8.5	-4.7
1992	3.5	4.3	10.8	11.9	1.6	15.9	0.2	-6.7
1993	1.9	1.6	-2.5	8.0	-0.3	15.5	-5.8	-5.8
1994	4.5	4.4	8.4	7.1	26.5	14.6	7.9	-7.0
1995	**-6.2**	-8.4	-29.0	52.0	94.9	48.2	28.4	-0.5
1996	5.1	1.8	16.4	27.7	2.8	32.9	-21.5	-0.7
1997	6.8	6.0	21.0	15.7	3.3	21.3	-6.6	-1.9
1998	4.9	5.0	10.3	18.6	21.8	26.2	14.5	-3.8
1999	3.8	4.2	7.7	12.3	-5.0	22.4	-16.7	-2.9
2000	6.9	8.7	10.0	9.0	0.3	16.2	-0.2	-3.1
2001/e	**-0.3**	2.4	-6.2	4.4	-2.9	12.2	-9.9	-2.9

e/ Estimated.

Economic slowdown, exchange rate stability and restrictive monetary policy measures implemented during the second half of 2000 and in January of 2001, helped to lower inflation swiftly. Thus, annual CPI inflation fell from 8.96 percent in 2000 to 4.40 percent at year-end 2001. During the same period annual core inflation fell from 7.52 to 5.08 percent.

CPI inflation performed better during 2001 and was lower than core inflation at the end of the year. This can be explained by the favorable and most likely transitory behavior of prices for agricultural goods and for goods provided or regulated by the public sector. Furthermore, core inflation of goods declined more than that of services. Goods' prices mainly responded to the appreciation of the exchange rate, while the behavior of prices for services was explained by high wage increases and rising unit labor costs.

III.2. Private Sector Forecasts for 2002[16]

During the October-December quarter of 2001, the estimates of private sector analysts regarding the evolution of the most important macroeconomic variables in 2002 underwent changes in the following directions: lower economic growth, a fall in oil prices and a slight decrease in inflation.

III.2.1. Forecasts for the Main Determinants of Inflation

Private sector's financial analysts continue to believe that an unfavorable international environment will tend to prevail in 2002. To that effect, the following are worth mentioning:

(a) Estimations for the annual growth rate of the United States' economy in 2001 were revised slightly upwards from 0.8 percent in September to 1.1 percent in December. At the time of publishing this Report, U.S. analysts' forecast relating to the contraction of that country's economy during the fourth quarter of 2001 is 1.3 percent, while for the year as a whole the expectation is 1 percent growth[17]. A recovery in the beginning of the second quarter in addition to an annual growth of 0.9 percent are expected for 2002. It is interesting to note that in the first few weeks of 2002 the most important international investment banks revised upwards their forecasts for economic growth in the United States for that year. At present the average forecast from three important firms[18] is 1 percent (Table 16); and

Table 16

Expectations for GDP Growth in the United States

Annualized quarterly percentage change

	2001		2002				
	IV	Annual	I	II	III	IV	Annual
Consensus Forecasts	-1.3	1.0	0.1	2.3	3.0	4.6	0.9
Deutsche Bank	-2.0	1.0	0.5	2.5	3.8	4.4	0.7
Goldman Sachs	-1.5	1.0	2.0	3.0	2.0	2.5	1.0
JP Morgan	-2.0	1.0	1.0	4.0	4.5	3.5	1.2
Average*	**-1.8**	**1.0**	**1.2**	**3.2**	**3.4**	**3.5**	**1.0**

*Estimates average from Deutsche Bank, Goldman Sachs and JP Morgan.

[16] Unless specified otherwise, forecasts in this section are taken from the Survey of Private Sector Economic Analysts' Expectations conducted each month by Banco de México.

[17] Source: Consensus Forecasts, December 10th 2001. Forecasts for the fourth quarter correspond to the annualized quarterly growth.

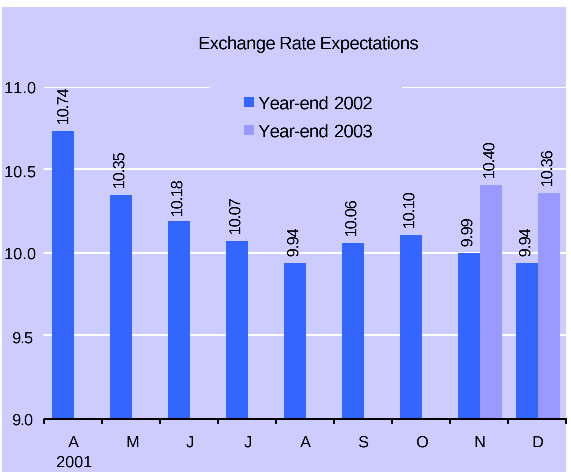
[18] Goldman Sachs, JP Morgan and Deutsche Bank.

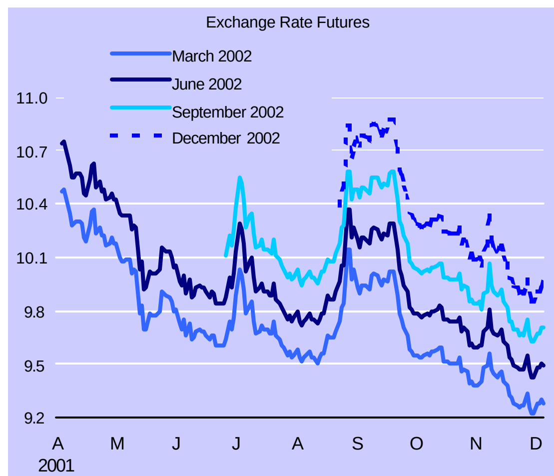
(b) Mexican analysts expect the average price of the Mexican crude oil mix to be 15.56 dollars per barrel in 2002.[19]

Estimates for the exchange rate at year-end 2002 were adjusted downwards during December. At the end of September the private sector predicted that the exchange rate would be 10.06 pesos per dollar in December 2002. This forecast was revised to 9.94 pesos per dollar in December. Peso futures prices for year-end 2002 were also reduced from 10.80 pesos per dollar in September to 9.96 pesos per dollar in December (Chart 24). Finally, analysts who took part in the survey estimate that the exchange rate will be 10.40 pesos per dollar in December of 2003.

Chart 24 **Exchange Rate Forecasts and Exchange Rate Futures for Year-end 2002 and 2003**

Pesos per dollar





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

The analysts' forecasts for contractual wage increases in January and February 2002 are 6.6 and 6.4 percent, respectively (Chart 25).

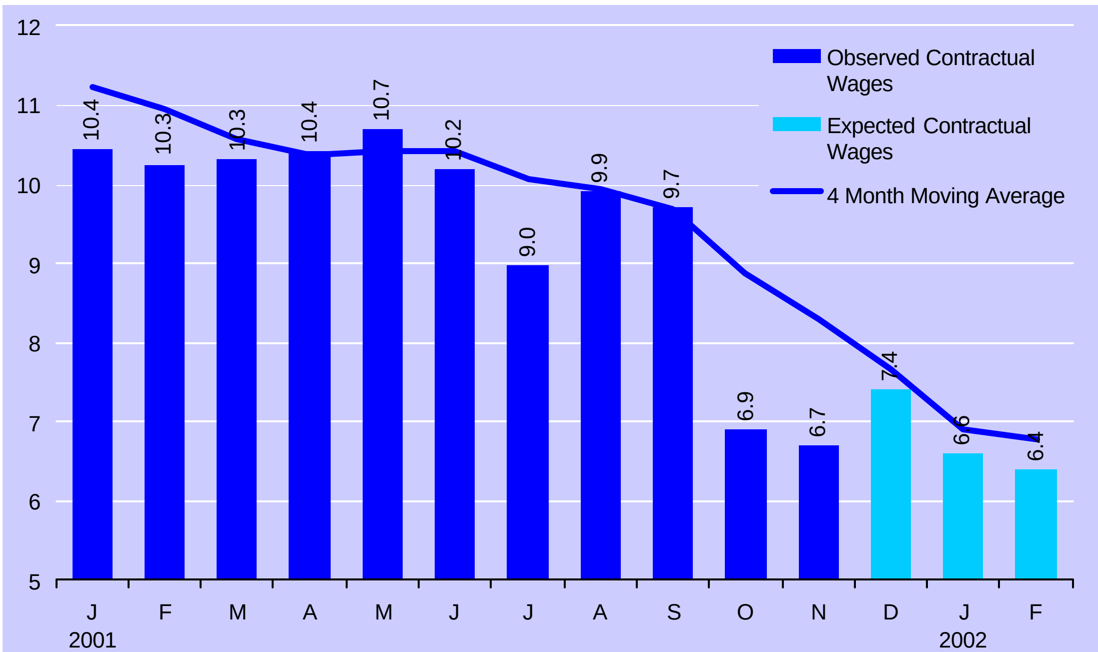
In contrast to the increase that consultants expected in September (0.21 percent), in the last survey of 2001 they forecasted a 0.26 percent contraction of GDP for that year. They also estimated smaller trade and current account deficits than those given in September, reducing them from 9.001 to 8.999 billion dollars and from 18.41 to 16.91 billion, respectively. The analysts who took part in December's survey forecasted a 1.8 percent fall in

[19] Taking into account the difference between WTI oil futures' prices on December 17th and the price of the Mexican crude oil export mix at that time, the average price for Mexico's crude oil mix is estimated at 12.59 dollars per barrel for 2002.

non-oil exports and a 20.1 percent decline of oil exports in 2001. They also expected imports to decrease 2.9 percent during the same year. Finally, the surveyed analysts made substantial corrections to their estimates for direct foreign investment inflows during 2001, modifying them from 17.68 billion dollars in September to 25.31 billion in December.

Chart 25 **Contractual Wage Increases**

Annual percentage change



Source: Ministry of Labor. For January and February of 2002, information was obtained from the forecasts reported in Banco de México's Survey of Private Sector Economic Analysts' Expectations carried out in December 2001.

The forecast for real GDP growth in 2002 was revised downwards, from 2.9 percent in September to 1.4 percent in December. Furthermore, predictions for the trade and current account deficits were 10.93 and 20.16 billion dollars respectively. Expectations regarding foreign direct investment inflows rose from 13.89 billion dollars in September to 14.52 billion in December. GDP's annual growth forecast for 2003 is 4 percent.

Business climate and business confidence indicators remain weak but have improved slightly since September. Of the analysts who took part in the survey, 18 percent considered that the business environment will be favorable in the next quarter, while 39 percent thought it will remain unchanged and the rest believed it will likely deteriorate.

According to private sector analysts, the main factors that could limit Mexican economic activity over the next six months are as follows: the weakness of external markets and of the world economy (32 percent of all responses); oil prices (19 percent of all responses); the domestic markets' weakness and uncertainty about the Mexican economy (7 percent of all responses each); and international financial instability (6 percent of all responses).

III.2.2. Private Sector Inflation Forecasts

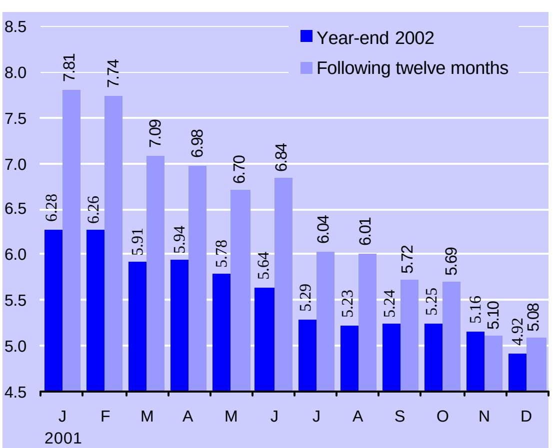
In the survey conducted in December, monthly inflation forecasts for January, February and March of 2002 were 0.92, 0.48 and 0.39 percent. These forecasts imply that annual inflation will increase from 4.4 percent in December to 5.1 percent in March of 2002.

Analysts who took part in the survey reduced their inflation expectations for the following twelve months from 5.72 percent in September of 2001 to 5.08 percent in December. Likewise, estimates for annual inflation at year-end 2002 decreased from 5.24 percent in September to 4.92 percent in December (Chart 26). Finally, expected inflation for 2003 was 4.15 percent.

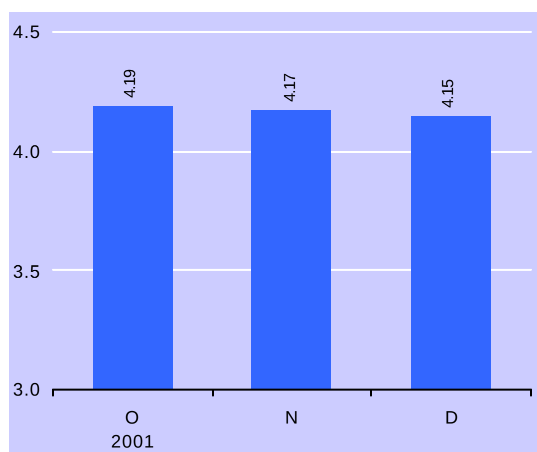
Chart 26 **Evolution of Inflation Forecasts**

Annual percentage change

Year-end 2002 and the Following 12 months



Year-end 2003



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

IV. Monetary Program for 2002

As has been mentioned in previous Monetary Programs, Banco de Mexico's monetary policy regime has been adjusted in response to changes in the Mexican economy. These developments have recently led to the formal adoption of an inflation-targeting scheme, which includes the following features:

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

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

(c) The consolidation of an autonomous monetary authority;

(d) The transparent implementation of monetary policy, based on open communication of the central banks' targets, instruments and decisions;

(e) Permanent analysis of all potential sources of inflationary pressures in order to evaluate the future path of the growth rate of prices; and

(f) The use of alternative inflation indicators such as core inflation in order to distinguish those factors that have a transitory influence on inflation and identify the growth trend of prices in the medium term.

To attain the established targets, monetary policy actions in Mexico have recently been based on an exhaustive and continuous analysis of short and medium-term inflationary pressures. When such analysis has indicated that medium-run inflation is incompatible with the stated targets, the monetary authority has decided to alter its policy stance, in order to induce the monetary conditions required to re-establish compatibility between inflation forecasts and inflation targets.

One aspect of the present monetary policy scheme that deserves mentioning is its emphasis on transparency and communication regarding the central bank's purposes and actions. These factors, besides being a fundamental part of the process of accountability that an autonomous entity like Banco de México must carry out, contribute to reduce the social cost of the abatement of inflation by making monetary policy more efficient in the following ways:

(a) Transparency enables financial markets' participants to anticipate Central Bank's actions in differing circumstances, thus preventing monetary policy measures from becoming an additional cause of instability;

(b) Should disturbances in some prices lead to short-term deviations from the inflation target, the medium-term objective becomes the system's nominal anchor and this mitigates any changes in inflation expectations;

(c) The public's awareness of the inflation target facilitates the convergence of expectations with the objective. For example, it is important that workers and employers be convinced that real wages will not be eroded by inflation and that firms will not be able to pass on excessive rises in nominal wages to final prices in a stable economic environment. As a result, revisions stemming from contractual wage negotiations would be based on foreseeable productivity gains and expected inflation;

(d) Preventive monetary policy measures reduce the cost of the disinflationary process. Firstly, because of their lagged effect and, secondly, because a rebound in inflation is less costly to prevent than to revert;

(e) By explaining the benefits of price stability to the public, the Central Bank can influence other macroeconomic policies to come into line with stabilization efforts; and

(f) The inflation target scheme and the flexible exchange-rate regime help to reduce the pass-through effect of exchange rate movements on domestic prices. A credible inflation target reduces the likeliness of accommodating economic policies, thus increasing the certainty that monetary authority will respond in a timely manner to any suggested deviation of inflation from the target.

* * *

The key elements of the Monetary Program for 2002 are presented in the following section. In addition, the expected evolution of the main macroeconomic variables during the year, and the risk factors that could foreseeably change these forecasts as well as the likely response of monetary policy should any of these alternative scenarios arise are also included.

IV.1. Elements of the Monetary Program

The main elements of the Monetary Program for 2002 are:

(a) Inflation targets;

(b) The framework for monetary policy implementation;

(c) The framework for the assesment of the economic situation and of inflationary pressures; and

(d) The policy for communicating with the general public.

IV.1.1. Program Objectives

Banco de México's main objective, as specified in the Constitution, is to ensure the stability of the Mexican currency's purchasing power. In other words, the Central Bank's task is to pursue low and stable inflation and to improve the well-being of the population. Banco de México is also committed to promote the development of the financial system and to assure an adequate operation of the payment systems. The latter objective is achieved by ensuring price stability and carrying out the Central Bank's regulatory and supervisory tasks.

The above purpose responds to the large number of studies that provide evidence of the negative effects of inflation. Research indicates that inflation affects five fundamental aspects of the economy's performance in the following way:

(a) By limiting output growth;

(b) By considerably hindering improvements in real wages;

(c) By inhibiting the development of financial markets;

(d) By deteriorating the income distribution; and

(e) By weakening the public sector finances.

The above reasons lead to emphasize how consolidation of the stabilization process that began in 1996 is essential for the attainment of rapid and sustainable economic growth. The growth rate of prices has declined almost without interruption on a year-to-year basis after the 1994-1995 Mexican crisis. As a medium-term objective for 2003, the Board of Governors of Banco de México set an inflation target of approximately 3 percent as part of a strategy to gradually reduce inflation. Likewise, in the Monetary Program for 2000 an objective of less than 4.5 percent inflation was established for year-end 2002. These are the objectives that will guide the implementation of monetary policy during the current year.

In an environment of low or moderate inflation, the volatility of prices of goods and services excluded from core inflation estimations has a relatively greater influence on overall CPI inflation. For this reason, Mexico's core price index has become a more reliable indicator of inflation trends. Thus, the evolution of core inflation is crucial to evaluate whether the Central Bank's actions are in line with the medium-term inflation objectives. The latter is due to the fact that fluctuations in prices excluded from core inflation calculations (which also cause fluctuations in overall inflation) tend to be, most of the time, transitory. As the monetary policy stance becomes oriented towards bringing core inflation into line with the established inflation objectives, overall inflation will also tend to move towards the targets. However, in some situations overall inflation could differ from the Central Bank's objectives in response to unforeseen increases in prices for agricultural goods or in prices provided or regulated by the public sector. Nevertheless, once the impact of theses shocks is absorbed, CPI inflation will tend to converge with core inflation. When faced with such situations, the main challenge for the monetary authority is to ensure that disturbances in overall inflation do not contaminate inflation expectations.

Movements in the exchange rate are another factor that could affect the attainment of the inflation target. When the economy requires a depreciation of the real exchange rate, unexpected inflationary pressures arise. If under such circumstances the monetary authority attempted to attain its short-term inflation target at all costs, it would have to induce an opposite movement in the rest of the prices in order to offset the inflationary impacts of the exchange rate depreciation. Owing to the downward inflexibility shown by almost all prices, this adjustment would be practically impossible to carry out in the short term without excessively burdensome costs. Therefore, faced with this situation, and following the practices of most central banks worldwide, Banco de México would not completely offset the direct inflationary impact of the exchange rate shocks, therefore leading to a transitory deviation of inflation with respect to its short-term target. Under this scenario, Banco de México would have to restrict monetary policy to avoid long-lasting effects on inflation expectations and on inflation itself. In this way, the aforementioned shocks would only have a temporary impact on inflation. Once this impact is absorbed, price growth would return to the originally established trajectory.

It is reasonable to assume that the potential impact of exchange rate variations on inflation has declined in Mexico. Although there is still no statistical evidence to back up this hypothesis, the experience of several open economies, with a level of development similar to Mexico, a flexible exchange-rate regime and an inflation-targeting scheme, suggests that this is the case due to the following reasons:

(a) In an economy with low inflation and a flexible exchange rate regime, exchange rate variations are not necessarily permanent and should, therefore, not induce automatic responses from price setters;

(b) In a stable economy, movements in the exchange rate tend to be interpreted as a change in relative prices and not as a sign of future inflation; and

(c) As the credibility of the inflation targets increases, expectations that the monetary authority will follow an accommodative monetary policy diminish.

Due to the influence of the above factors, it is likely that as stability is consolidated the pass-through effect of exchange rate movements on domestic prices will weaken and may become more symmetric.

When nominal wage rises are incompatible with the sum of productivity gains and the inflation target, the social cost of the disinflation process increases markedly as firms' production costs escalate. Faced with this situation and with the impossibility of continuously absorbing larger costs by accepting a reduction in profits, firms attempt to pass on higher costs to consumers via price increases. Should the monetary authority accommodate these increases, inflation would rise therefore reducing or cancelling out any intended improvement in real wages.

Should the monetary authority react in a restrictive manner, the result would be a contraction of firms' profits and consequently of investment and job creation. In short, the economy would be submerged in a situation of low or null growth. The inflation target would have been achieved, but the adjustment costs would have been very high.

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

Compliance with the fiscal program has been a key element supporting the attainment of inflation targets over the past three years, Nonetheless, the recent indirect tax increases could lead to upward pressure on prices in the sort-term. If preventive actions by the monetary authority manage to stave off the aforementioned side effects, inflation will return to its originally established path.

Thus, the necessary elements to attain the inflation target proposed for 2002 and, subsequently, the convergence towards the 3 percent inflation target set for 2003 are as follows:

(a) A monetary policy that is compatible with the adopted targets;

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

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

(d) The absence of severe external shocks —such as a deterioration of the terms of trade or a sudden reduction in the supply of foreign capital— which could depreciate the real exchange rate; and

(e) A structurally sound fiscal stance.

In its Inflation Reports to be published throughout 2002, Banco de México will evaluate the possible consequences if one or more of the aforementioned conditions are not fulfilled. Furthermore, efforts will be made to forecast the time required for the inflationary shocks to be absorbed. Obviously, this exercise would be subject to a considerable degree of uncertainty.

IV.1.2. Monetary Policy Implementation

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

To signal its monetary policy intentions, Banco de México announces on a daily basis the level at which the accumulated balance of total daily balances that commercial banks hold with the Central Bank intends to be at the end of the estimation period. For example, a zero accumulated balances' objective indicates the Central Bank's intentions to fully satisfy the demand for currency at market interest rates so that the banking sector is provided with the necessary resources and does not incur in overdrafts or accumulates any unwanted positive balances at the end of the period.

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

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

On several occasions, the market-determined interest rate might not be in line with the attainment of the inflation targets. Should this situation arise, Banco de México would need to restrict its monetary policy stance by establishing or widening the "short". As previously mentioned, the effectiveness of the "short" to induce higher interest rates has been proved in several studies as well as by the implemented increases in the "short" over the last few years.

During the second half of 2000 and especially since the fourth quarter of that year, the widening of the "short", besides validating interest rate increases by participants in the financial markets, has caused sustained increases in real interest rates. Inversely, reductions of the "short" implemented in 2001 not only validated decreases in market determined interest rates, but also caused domestic rates to fall further.

Due to the fact that interest rates, prices of financial assets and monetary conditions stem from both the actions of participants in the money market as well as from the Central Bank's decisions, the level of the "short" is not the only indicator of how restrictive or how loose monetary policy is. The same level of the "short" is compatible with differing interest rates, financial assets' prices and monetary conditions. Thus, this instrument is only modified when, in the opinion of the Board of Governors of Banco de México, the monetary conditions determined by the market are not compatible with medium–term inflation objectives. This explains why the monetary policy bias has been closely linked to changes made in the accumulated balances' objective over the last few months. To conclude, in order to attain a thorough assessment of the monetary policy stance, the behavior of the "short" should be accompanied by an analysis of its recent variations as well as of the recent changes in real interest rates, other assets's prices and overall monetary conditions.

The "short" is the instrument that Banco de México uses in order to induce those interest rate movements necessary to attain the proposed inflation targets. The "short" has been very efficient in allowing a spontaneous distribution of the effects of external shocks between the exchange rate and interest rates. This represents an enormous advantage in an economy like Mexico's, subject to a high degree of financial volatility. Furthermore, reliance on this mechanism has also contributed significantly to the disinflation process, since nominal and real interest rates have reacted swiftly to changes in the level of this instrument and to deviations of anticipated inflation from the target.

IV.1.3. Analysis of the Economic Situation, Inflationary Pressures and the Communication Policy

The monetary policy actions a central bank implements affect inflation with a considerable lag and a substantial degree of uncertainty. Thus, in order to accomplish the proposed targets, the monetary authority's actions must depend on a very careful analysis of inflation perspectives.

If any inflationary pressures incompatible with inflation targets should be detected, the Central Bank would need to modify its monetary policy stance in order to change the direction of the inflationary process. This kind of preventive intervention reduces the cost of disinflation. Thus, Banco de México must constantly study inflationary pressures and respond in a timely manner when expectations deviate from targets. Furthermore, when the monetary authority's actions are transparent and clear, the disinflationary process becomes more effective and less costly. An appropriate framework for the detailed study of the evolution of inflationary pressures must give special attention to the following variables:

(a) The international environment and the exchange rate;

(b) Wages, contractual wage settlements and unit labor costs;

(c) Employment and unemployment indicators;

(d) Aggregate supply and demand;

(e) Interest rates and country risk indicators;

(f) Public finances;

(g) Prices of the goods and services provided or regulated by the public sector;

(h) Transitory factors that affect inflation; and

(i) Monetary and credit aggregates.

The recent behavior of inflation and of medium-term inflationary pressures can be studied by following the above variables carefully. This analysis is made public through the quarterly Inflation Reports published by Banco de Mexico. At the start of each year, the Central Bank also presents a monetary program, which spells out the main elements of the monetary policy strategy for the following twelve months. Furthermore, a Report on the conduction of monetary policy during the first semester of the year is also published in September. Finally, there is the Annual Report, which presents a summarized overview of the economy's developments during the previous year. Moreover, when the Board of Governors of Banco de Mexico modifies its monetary policy stance, Banco de Mexico issues a press release explaining the main reasons for this decision.

In this way the public always has the necessary information to analyze the actions of Banco de Mexico's Board of

Governors of and to evaluate the impact of these measures on the economy and financial markets. These documents also enable analysts and the general public to anticipate the Central Bank's actions in the future and thereby help to diminish additional uncertainty about the economy.

Despite reservations expressed in previous Reports, the growth of the monetary base is still a useful reference to follow the evolution of monetary policy. This is why the Appendix to this document includes the expected daily path of the monetary base. The projections were based on information available as of January 2002 and include the assumptions used to prepare the forecast.

IV.2. Outlook for 2002 and Balance of Risks

Once more, the performance of the Mexican economy in 2002 is expected to be strongly conditioned by the United States' economic cycle. In addition, it is anticipated that the availability of external financing will remain as favorable as in 2001. A brief description of the international environment and the probable evolution of the main Mexican macroeconomic variables in 2002 is presented in the following pages. Finally, the most important elements of risk in the base scenario are discussed.

IV.2.1. International Environment

After having undergone in 2001 the most generalized and intense downturn in two decades, the world economy is expected to begin a gradual rebound in 2002. This forecast is based on the following factors:

(a) During 2001, many countries implemented monetary and fiscal policy measures directed towards fostering economic recovery;

(b) Weak oil prices -as a consequence of reduced world economic growth and OPEC's difficulties to reach agreement over cuts in production- will have a positive income-effect in oil importing countries;

(c) The end of the process of inventory reduction could foreseeably stimulate aggregate demand; and

(d) The solid fundamentals of almost all of the world's developed economies meant that disturbances in global economic activity during 2001 did not have a significant impact on the balance sheets of firms, commercial banks or consumers.

Based on the above, the forecasts point to a recovery in the world economy that will be more evident towards the second half of the year. Due to the fact that growth is expected to rebound substantially only in the second quarter, the average expansion of world GDP is estimated to be significantly lower than that between the fourth quarter of 2001 and the fourth quarter of 2002. Since the opposite phenomenon occurred in 2001, world economic growth in 2002 is estimated to be slightly lower than that of 2001.

Table 17 **IMF Forecasts for GDP Growth**

Annual percentage change

	October* 2002	December 2002
World	3.5	2.4
Industrialized Economies	2.1	0.8
U.S.A.	2.2	0.7
Japan	0.2	-1.0
Germany	1.8	0.7
France	2.1	1.3
Italy	2.0	1.2
United Kingdom	2.4	1.8
Canada	2.2	0.8
Rest	3.3	1.9
Euro Zone	2.2	1.2
Asian RIEs[1/]	4.3	2.0
Latin America	3.6	1.7

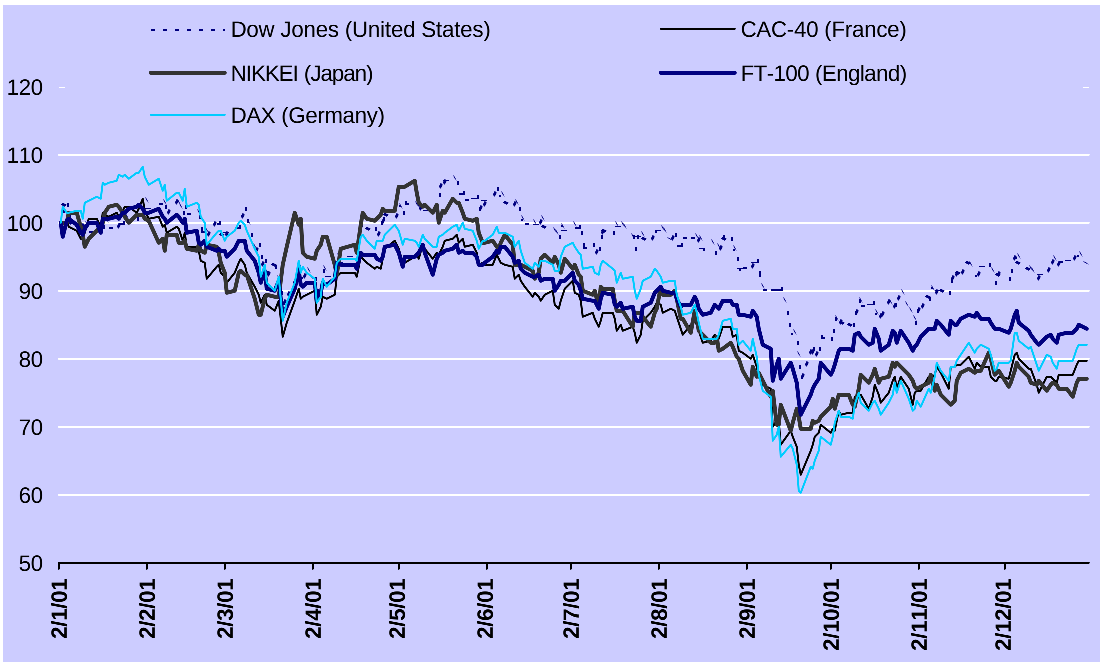
Source: World Economic Outlook and International Monetary Fund.
* Forecasts for November do not include the effects of the events on September 11th.
[1/] Recently Industrialized Economies.

Regarding developed countries, the IMF forecasts an economic upturn in most of these economies for 2002, except for Japan where it estimates (as in 2001) a contraction. In emerging markets, the IMF expects growth rates in the most affected regions in 2001 (Latin America and Asia) will rebound. Nevertheless, Eastern Europe’s expansion is estimated to be slightly weaker (Table 17).

Forecasts of a recovery have already influenced the world’s most important stock exchanges, which have risen substantially since September. Stock markets have traditionally begun to recover six months before the upturn phase of the economic cycle (Chart 27).

Chart 27 **Main Stock Market Indexes: United States, Japan, Germany, France and England**

(January 2nd 2001=100)



Source: Bloomberg.

Given the significance of developments in the United States' economy to Mexico, its outlook is carefully examined below as well as the likely behavior of oil prices.

IV.2.1.1. Expected evolution of the United States' economy and oil prices

There are several factors that point to a rebound in the United States' economy, among which the following are noteworthy: falling energy prices, the end of the inventory depletion process, the stock market recovery, improvements in business climate and consumer confidence indicators, and the monetary and fiscal stimuli.

Furthermore, some macroeconomic data published in the last few weeks in the United States have been more favorable than the market had anticipated. In this context, positive expectations have slowly begun to appear in financial markets despite the fact that some indicators show that the United States' economy is still contracting.

The most important news that have increased confidence among analysts and led them to anticipate recession's end in the spring of 2002 are presented below:

(a) Between the first and the last week of December, the 4-week moving average for the number of unemployment claims in the United States diminished by more than 50 thousand. During the third week of January, this indicator was at 411 thousand claims, its lowest level since mid September;

(b) Despite the recent increases in mortgage rates, home purchases have remained at high levels. In particular, spending on construction registered its second consecutive increase in November, rising 0.8 percent compared to the previous month's level. Moreover, in that same month new and used house sales continued to increase at rates of 6.4 and 0.6 percent;

(c) Purchase orders for capital goods not associated with national defense rose 4.8 percent in November, a second consecutive monthly increase;

(d) The rebound of Michigan University's and the Conference Board's confidence indexes in December;

(e) The increase of the ISM index (previously known as the NAPM) in December due to new purchase orders;

(f) The stability shown by total hours worked and the increase it has already registered in the manufacturing sector; and

(g) The low level of inflation observed during the last few months has increased the monetary authority's margin to take measures against possible adverse shocks in the future.

Moreover, some analysts predict that due to the fact that current recession began in the manufacturing sector, the first signs of recovery will also appear in this sector. Recent information from the United States indicates that inventories' contraction during November and December could have meant that the inventory to sales ratio was at its historic minimum. Thus, some analysts believe that industrial output, after having experienced such a substantial fall during the fourth quarter, will grow at positive rates during the first quarter of 2002.

Nonetheless, there has been some unfavorable news which has not affected expectations regarding the performance of the United States' economy. In particular:

(a) Failure to reach an agreement with Congress on the approval of an additional fiscal package. Most analysts had discounted that a significant stimulus would be implemented (between 0.7 and 1.0 percentage points of GDP);

(b) The economic growth rate was revised marginally downward in the third quarter; and

(c) Although the number of unemployment claims decreased, they are still at levels that indicate slack in the labor market. This was reflected in the monthly labor market report that showed employment was still weak in December. Thus, in that month, job losses in the non-agricultural sectors totalled 124 thousand and unemployment rose to 5.8 percent.

There are several factors whose influence could curb economic recovery in the United States:

(a) The current recession originated from a fall in investment. As a result, the continued weakness of several components of this aggregate could hinder its recovery. In particular, firms' profits have remained low and there is still excess capacity;

(b) Rises in the unemployment rate could eventually have an adverse affect on the growth rate of private consumption;

(c) The federal government's fiscal stimulus is being partly offset by the expenditure cuts applied by state governments;

(d) The widening of the spread between long and short-term interest rates could have an adverse impact on investment and consumption;

(e) The world economy's weakness will prevent the export sector from making a significant contribution to growth; and

(f) Although the accumulation of inventories will undoubtedly contribute to economic expansion in 2002, this stimulus is not usually permanent.

Taking the above factors into account, the IMF forecasts a 0.7 percent growth for the United States' economy in 2002. This compares unfavorably with the 0.9 percent average expressed by analysts and published in the December's *Consensus Forecast*. As has been shown, the most important analysts who follow the evolution of the United States' economy revised recently their growth forecasts upward. Recovery is expected to begin around the first and second quarters and intensify during the second half of the year.

The weakness of the world economy during the last few quarters, which is expected to continue throughout the first half of 2002, has had an adverse affect on international oil prices and oil futures prices corresponding to the first quarters of 2002. However, the world's economic recovery is expected to be accompanied by a slight rebound in international oil prices during the second quarter. Oil futures prices indicate that the Mexican crude-oil export mix is likely to move from 14.94 dollars per barrel on January 25th to 15.08, 15.55, 15.64 and 15.70 dollars per barrel at the end of March, June, September and December, respectively.

Based on the above, the assumptions behind Banco de México's forecasts concerning the evolution of the external environment were only slightly modified from those published in the Inflation Report for June-September 2001. Among the aforementioned assumptions the most important are:

(a) The forecast for an economic rebound in the United States during 2002 remained unchanged at 0.7 percent. However, estimates for industrial output were revised upwards;

(b) Considering WTI futures prices and that the spread between them and the Mexican mix will remain similar to that observed in the last few months, the average price of the Mexican crude-oil export mix in 2002 is expected to be between 14 and 16 dollars per barrel; and

(c) The evolution of the financial markets and the granting of investment grade to Mexico's foreign public debt by a second international rating agency meant it is possible to anticipate that conditions and availability of external financing will be similar to those observed in 2001. In particular, country risk perception will resemble that of 2001.

IV.2.2. Expected Evolution of the Main Macroeconomic Variables in 2002

The evolution of Mexico's economy in 2002 will be determined, to a large extent, by two factors:

(a) the profile of the economic recovery in the United States; and

(b) The conditions and availability of external financing.

In the domestic realm, the most important factor besides those used in the preparation of the macroeconomic framework published in the Inflation Report for July-September is Congress' approval of the Federal Budget, the Federal Revenues Law and the new tax measures. While the package included both positive and negative elements, the balance is moderately favorable. Positive aspects include:

(a) The fact that a plural Congress approved a prudent budget and a moderate measured public deficit for the fourth consecutive year is noteworthy. In addition, the Federal Budget once again incorporated automatic stabilizers that, if the revenues estimated for 2002 do not materialize, provide the Ministry of Finance with the authority to reduce expenditures and thereby ensure the attainment of the targeted deficit. These clauses and their use whenever necessary are essential to maintain fiscal discipline and to consolidate macroeconomic stability; and

(b) The trend towards the creation of a global income tax base for individuals. Furthermore, the implementation of various measures directed towards improving the fiscalization of the income tax for individuals and firms will make the collection of this tax much more efficient.

Among the negative aspects are:

(a) The administration of indirect taxes was not simplified and the rates became more dispersed. The latter will lead to significant distortions that will hence affect different production sectors and consumers in various ways, working against the equity of the tax system.

(b) The dependence on oil revenues was not reduced and public sector saving did not increase. In this regard, it is important to stress that the financial requirements of the public sector were not reduced. Estimates for 2002 are that these requirements will be 3.14 percent of GDP and 3.91 percent if non-recurrent revenues are excluded. This situation puts upward pressure on interest rates in addition to limiting available resources to stimulate private sector investment.

Thus, the approved reform (together with the continuing prudent management of public sector finances) has increased investors confidence in the stability of the Mexican economy. Nevertheless, a great opportunity to solve the structural problems of the public finances was indeed lost. This would have allowed simultaneous increases in social expenditures and public sector saving. Moreover, a more ambitious reform would have fostered a substantial decrease in both short and long-term interest rates. Lower public sector borrowing requirements would have eased pressures on available financial resources.

The rebound of economic growth in the United States will first be transmitted to Mexico through a recovery of the industrial sector as a result of the close relationship observed in recent years between this sector in both countries. It is likely that this will take place together with an upturn in investment, the macroeconomic aggregate that contracted the most in 2001. Furthermore, as a consequence of lower productivity gains in the industrial sector and increases in unit labor costs, it is reasonable to expect that output growth reactivation in Mexico will not be accompanied by a considerable expansion of employment. It is therefore foreseeable that consumption will rise at a lower rate in 2002 than it did in 2001. Finally, a slight increase in the trade deficit is anticipated in response to falling oil prices. In this scenario, investment is expected to contribute more to growth while consumption and external sector's contribution will diminish slightly.

Based on the above assumptions and on incomplete information about the evolution of the economy during the last quarter of 2001, Banco de México prepared a forecast of the main macroeconomic variables in 2002. The most important results of this study were very similar to those presented in the Inflation Report for June-September. Among these the following are noteworthy:

Economic Growth: The economy is expected to grow 1.5 percent. It is anticipated that GDP will register a slightly negative annual percentage change during the first quarter of the year and that the economy will again experience positive growth rates from the second quarter onward. Likewise, a substantial increase in these rates is expected towards the second quarter.

Current Account: The deterioration of the trade balance during the last few months of 2001, partly explained by the fall in oil prices, points to a current account deficit of around 3.2 percent of GDP for 2002.

Inflation: The current monetary policy stance is deemed appropriate to meet the inflation target for year-end 2002. However, important inflationary pressures remain that might eventually curb the decline of inflation. Among these the following deserve mentioning:

(a) At year-end 2001, contractual wage increases in the private sector were still above levels consistent with the inflation target and foreseeable productivity gains. It is also surprising that at the end of a year in which employment contracted sharply, the difference between the increase in the minimum wage approved for 2002 and the inflation target was the highest in the last four years. The minimum wage increase authorized in 2002 resulted from an attempt to equalize it in the different regions of the country. However, this policy does not follow any economic logic given that increases in each regions cost of living, worker's characteristics, unemployment rates and levels of development are not homogenous. The aforementioned increase will undoubtedly generate inflationary pressures and have an adverse impact on firms' competitiveness and job creation in the most disadvantaged regions of the country;

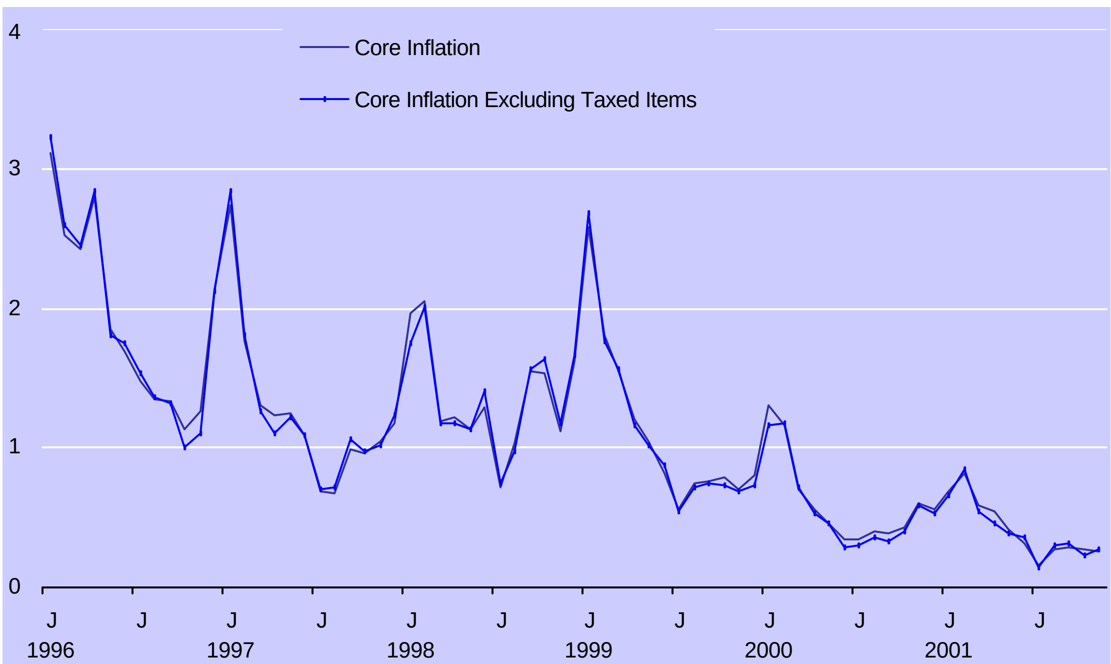
(b) The recently approved tax measures will have an upward effect on prices via two channels. Firstly, the elimination of the subsidy for wage credit will increase firms' unit labor costs and this could eventually lead to an increase in the final prices of goods and services. Secondly, the IEPS and the luxury tax on some products will have a direct upward effect on their prices; and

(c) Increases in some prices provided or regulated by the public sector. In particular, prices for subway and urban bus services in Mexico City as well as electricity for residential use.

The first two factors mentioned above could affect both core and overall inflation, whereas the last, only overall inflation. In order to evaluate core inflation's path excluding the effects of the IEPS and the luxury tax, Banco de México will publish an adjusted core index on a twice-monthly basis in addition to the traditional core index. The adjusted core index will not include the prices of newly taxed goods and services in its estimations. The difference between traditional core inflation and adjusted core inflation will be an indicator of fiscal policy's impact on price developments. During the 1996-2001 period these two core inflation measures behaved very similarly (Chart 28)[20]. Thus, any substantial differences observed in 2002 will most likely be attributable to changes in taxes.

Chart 28 **Core Inflation and Core Inflation Excluding Taxed Items**

Monthly percentage change



According to studies carried out by Banco de México, previous changes in indirect taxes have been absorbed in the two months following their implementation. However, due to the different interpretations given to some of the recent fiscal changes and the transitory regime established for alcoholic beverages, it is particularly complex to anticipate at this moment the time it may take for the effects of these measures to become apparent. As a result, during the first quarters of the year it will be of utmost importance to carefully analyze the evolution of the core inflation indexes in order to asses the impact of the fiscal reforms.

Traditional core inflation is expected to remain stable in the first few months of the year and recover its downward trend

[20] During this period the total average difference between the series was 0.04 percent.

once the impact of the fiscal measures on prices has dissipated, whereas adjusted core inflation will decline throughout the year.

Annual CPI inflation will most likely rebound in January and February as a result of the following factors:

(a) Rises in subway, urban bus service and electricity prices;

(b) The impact of the fiscal measures; and

(c) An arithmetic effect associated with the low monthly inflation of prices for agricultural and livestock products in those months. It is possible that this phenomenon will occur again in July and December, thus leading to an annual inflation rebound in both months.

The above disturbances to prices have different implications regarding the conduction of monetary policy. In previous Monetary Programs, Banco de México has explained that, as a general rule, it will allow deviations from the target caused by direct inflationary shocks and that it will also combat the appearance of second-round effects. The logic behind this is to ensure that adjustments in relative prices do not hinder economic activity and that these processes do not end in an inflationary spiral. The proposed rule is in line with this thesis because it allows the nominal adjustment of those prices that need to increase at the same time that it prevents these movements from being passed on to other prices in the economy. Should the latter occur, corrections to the relative prices would not be fully completed, hence generating another round of price adjustments that would unnecessarily raise inflation.

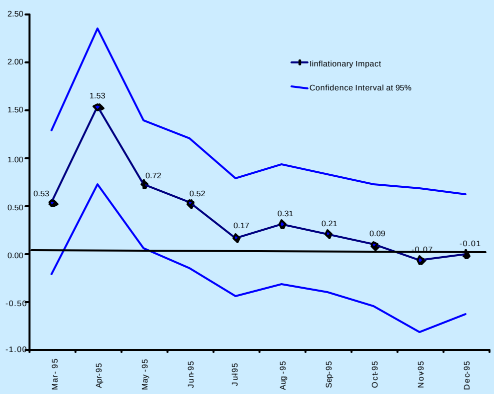
The Inflationary Effect of Increased Taxation on Consumption

Since taxes on consumption can lead to increases in the final prices of products subject to taxation they generally have a significant impact on inflation. From a Central Bank's point of view, there are two important aspects of this phenomenon: the impact of taxes on consumer prices and the time that this impact takes to be totally absorbed by products' prices.

A recent study carried out by Banco de México[1] analyzes the changes made to the Value Added Tax (VAT) in 1995. On April 1st of that year Congress raised this tax from 10 to 15 percent in most of the cities of the country, while in border communities (those located within a 20 kilometer band measured from the border) the tax was kept at 10 percent. This was the only relevant modification as the number of goods and services that were exempt or subject to a zero rate remained unchanged.

The use of data from the Consumer Price Index in each of the 46 cities where information is collected makes it possible to compare price behavior in border and non-border communities between March and December of 1995. Thus, the observed inflation in the border area is used as a control variable to measure the differences in price growth observed in the country's interior (the zone where VAT increases were applied). This exercise allows to estimate the impact of tax changes on inflation and the uncertainty associated to each monthly effect.

Chart 1
Monthly Inflationary Impact on the CPI of the Changes to VAT in 1995 (Percentage points)



The results are extremely significant. The change in monthly inflation caused by the VAT reform was only statistically different from zero in April and May. As from June the confidence interval includes a zero value (Chart 1). Nevertheless, the total inflationary impact of the tax changes in 1995 was around 2.3 percentage points, obtained by adding the estimated effects in the two months following the VAT modification. This figure is small compared to inflation's rebound observed throughout that year.

The limited period of the upward impact on prices derived from VAT changes is an important result and even when the analysis is done with full detail, that is to say, when goods are studied individually, the rise in monthly inflation also dissipates between 1 and 3 months after the tax increase. Moreover, the short span of the inflationary effects in 1995, a year in which price growth accelerated, and when a more favorable environment for inertial inflation existed.

It is difficult to extrapolate all the results of the 1995 modification in Value Added Tax to the inflationary impact of the Financial Reform in 2002. However, the obtained evidence includes relevant information. Firstly, the fiscal modification of 1995 was a general tax on most goods and services in the economy. Meanwhile, the 2002 Financial Reform raised tax rates on a selected group of goods and services so it is therefore expected to have only a limited impact on inflation.

Secondly, although changes in taxes take less than 3 months to be included in the prices of products, such period will probably be longer in this occasion. This mainly depends on two aspects of the Reform: a) the uncertainty during the first weeks of the year over the application of the different taxes; and b) the establishment of a transitory fiscal regime for the tax on alcoholic beverages that may delay the inclusion of this tax in their final prices.

[1] "The 1995 Reform of Value Added Tax: Inflationary Impact, Incidence and Relative Elasticities". *Documento de Investigación*. No. 2002-I, Banco de México, January 2002.

In light of the aforementioned rule, the inflationary pressures described above can be separated into those that will have a direct or an indirect impact on the CPI. Contractual wage increases do not affect the CPI directly due to the fact that labor is a component of the production process and not of final consumption. Thus, when these increases are not in line with the inflation target and the productivity gains, the monetary authority is committed to prevent them from being transmitted to consumer prices. If price rises do occur, real wages will not increase and in the following wage negotiations new and higher rises will be demanded in order to compensate for lost purchasing power and obtain further real wage increases. This type of process usually leads to an inflationary spiral.

Increases in public sector prices and indirect taxes have a direct impact on prices because most of the products and services affected are included in the CPI. These factors should have a one-time effect on the CPI. This will be reflected in the monthly inflation (precisely at the time changes are introduced) as well as in the annual inflation during the twelve months following the shock (moment after which it tends to disappear). The implementation of the monetary policy rule should allow the direct impacts and prevent the generation of second-round effects, thereby ensuring the transitory nature of the shocks. The direct effects of price increases provided or regulated by the public sector are easy to measure by multiplying the price rise for the service by its corresponding weight in the CPI. The direct impact of increases in subway and inter-city bus fares on inflation in January is estimated to have been 0.15 and 0.13 percentage points, respectively. It is worth pointing out that both prices are excluded from core index calculations so that the evolution of this index does not include their direct effects.

Estimates corresponding to indirect taxes (IEPS and the luxury tax) are more complex because when taxes are applied to goods or services the total amount of this tax increase is not necessarily reflected in the final prices. The ability of producers to pass the tax on to consumers depends, among other factors, on the strength or weakness of aggregate demand. The difficulty involved in estimating the inflationary effect of indirect tax changes means that in the following quarters the analysis of adjusted core inflation will be very useful.

In the context of volatile CPI inflation, core inflation (and adjusted core inflation) will become more reliable as a reference to assess inflationary pressures over the medium term. Particularly, during the first quarter of 2002, the latter indicator will be extremely relevant to guide monetary policy decisions.

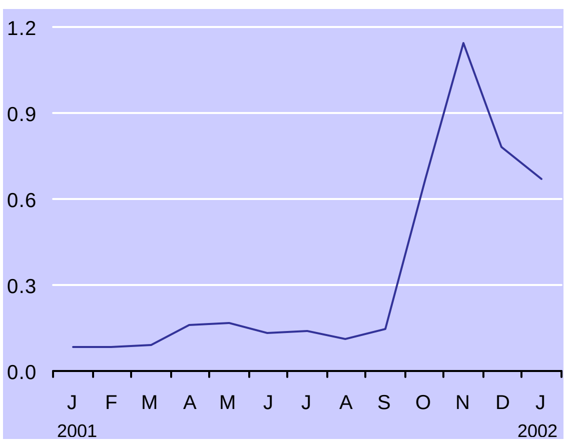
IV.2.3. Balance of Risks

The above base scenario is subject to a much greater degree of uncertainty than in previous years due to the following reasons:

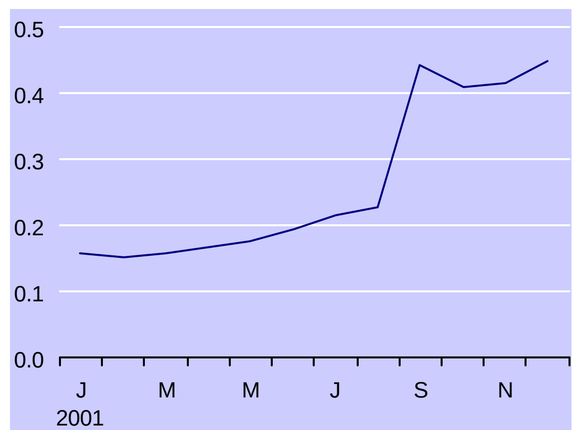
(a) The lack of confidence about future developments in the United States' economy. This can be explained by the unprecedented events of September 11th and the historically difficult task of forecasting the turning point in the economic cycle. This uncertainty is evident in the dispersion of analysts' expectations presented in the Consensus Forecast (Chart 29); and

Chart 29 **Variation Coefficient of Forecasted GDP Growth for the United States and Mexico in 2002**

United States



Mexico



Source: Consensus Forecasts and Banco de México.

(b) The uncertainty related to the eventual impact of economic recovery in the United States on the Mexican economy. It is worth mentioning that there is not any previous information as to the outcome of this scenario. In particular, the present recession is the first one to hit the United States since the NAFTA was signed and there is not enough data to predict its influence on the Mexican economy. For this reason the considerable increase in the variability of the responses recorded in Banco de Mexico's survey of private sector analysts should not be surprising (Chart 29).

The main external risks that could affect this scenario are:

(a) A slower than expected economic growth in the United States; and

(b) A more pronounced fall in oil prices.

Most of the analysts that follow the United States' economy anticipate that economic activity in that country will start to show positive growth rates between the first and second quarters of 2002. However, the likelihood that the aforementioned scenario will be delayed is not negligible.

Although the risks remain biased towards slower growth than that considered in the base scenario, some analysts believe there is a possibility of a more vigorous expansion in the United States than what has been assumed.

Weaker economic growth in the United States would probably cause oil prices to plummet even further. These two factors would lead to sluggish economic growth and lower job creation in Mexico, while their impact on inflation would probably remain ambiguous. The latter is due to the fact that slower economic growth would be associated with weaker inflationary pressures. Nonetheless, the unfavourable influence on Mexican exports and economic activity could bring about a fall in the demand for domestic assets, which in turn, could lead to exchange rate's depreciation. As has been mentioned, the pass-through effect of exchange rate depreciations on domestic inflation has probably weakened in the last few years. However, should the depreciation substantially affect the formation of inflation expectations the application of a more restrictive monetary policy would therefore be needed to attain the established objectives.

The most important domestic risks factors that could lead to changes in the base scenario are:

(a) The widening of the spread between contractual wage revisions and the sum of the inflation target and the foreseeable labor productivity gains; and

(b) The increases in annual CPI inflation resulting from arithmetic effects, from adjustments in prices provided or regulated by the public sector or from the impact of the new fiscal measures that may contaminate the formation of expectations.

As has been pointed out on many occasions, contractual wage increases that are incompatible with the sum of foreseeable gains in labor productivity and the inflation target are not only a cause of inflationary pressures but also have a negative impact on job creation and company profits. Throughout 2001, the lowest number of job losses has been in sectors with the most moderate wage revisions. In the context of an economic downturn and a decline in demand, firms have compensated for higher unit labor costs by cutting the work force. It is therefore important that congruence of contractual wages is achieved in order to protect employment and assure a rapid recovery in the near future. If this gap widens the competitiveness of Mexican industry will deteriorate causing a negative impact on economic growth and job creation. Under such circumstances monetary policy would tend to become more restrictive to assure the attainment of medium-term inflation objectives and to contribute to a swifter recovery of employment.

Furthermore, if increases in annual CPI inflation contaminate the formation of medium-term inflation expectations and contractual wage negotiations, inflationary pressures that are incompatible with the established objectives would arise. In this context, Banco de México would not hesitate to tighten its monetary policy to interrupt the inflationary process and re-establish consistence between inflation forecasts and medium-term inflation targets.

Likewise, in a scenario in which expected inflation should be -in Banco de México’s judgement- at sustainable levels on a path compatible with the set targets, the Central Bank would ease monetary policy as it did on two occasions in 2001.

V. Final Remarks

During 2001, the adverse external environment, in particular the downturn in the United States' economy, was the most important factor determining the performance of the Mexican economy.

The above shock halted the economic expansion that began in Mexico in 1996. At the time of publishing this Report estimates are that GDP declined 0.3 percent in 2001. However, several elements of strenght allowed an orderly adjustment to the downward phase of the economic cycle. Compared with past recessions, Mexico's financial environment in 2001 remained stable.

Mexico's economy orderly insertion into the world economic cycle was sustained by the country's sound economic fundamentals among which the following are worth mentioning:

(a) The positive results of the disinflationary efforts;

(b) The discipline of public sector finances;

(c) The floating exchange-rate regime and market-determined interest rates;

(d) The comfortable foreign public debt amortization schedule in 2001 and 2002;

(e) The stability of foreign investment fostered by previous structural reforms; and

(f) A moderate current account deficit.

Annual inflation declined from 8.96 percent to 4.40 percent between December 2000 and the same month in 2001. Thus, the target was met for the third consecutive year. In contrast to what happened in 2000, overall inflation decreased more than core inflation during 2001. This resulted from the very favorable evolution of prices for agricultural products and of prices provided or regulated by the public sector. As mentioned in this Report, it is very likely that these prices will revert slightly during 2002. However, the decline of core inflation was also substantial, moving from 7.52 percent to 5.08 percent between year-end 2000 and year-end 2001, a trajectory that is compatible with the target set in October of 2000. The current scenario as well as the volatility of the prices sub-indexes that are excluded from core inflation calculations have raised the importance of core inflation in the assessment of medium-term inflationary pressures.

Recent information about the United States' economy suggests that the likelihood of a recovery during the first quarters of 2002 has increased. In this context, and given the synchronization of the economic cycle among the members of the NAFTA, the Mexican economy is expected to register positive annual GDP growth rates during the second quarter of 2002.

In spite of the expected recovery of world's growth, it is unlikely that economic activity in Mexico's main trading partners will return to the levels seen before the current downturn. Besides, Mexico's production base has recently been affected by rising unit labor costs as a consequence of real wage increases and falls in productivity growth rates. This loss of competitiveness could curb the country's economic capacity to expand at the moment when economic activity in the United States begins to rebound. This underlines the need to reinforce those domestic factors that will allow Mexico to reach high and sustainable growth rates within the context of a less favorable international environment. Among these factors the following should be mentioned:

(a) Macroeconomic stability;

(b) Reform of the energy sector;

(c) The deepening of the economic deregulation process;

(d) The promotion of capital market development and higher domestic saving rates;

(e) The stimulus for investment in infrastructure, technology, education and health; and

(f) The labor market reform.

The above reforms are deemed essential to achieve the needed productivity gains that will promote job creation, improvements in real wages and economic growth.

Perseverance in monetary and fiscal discipline will be crucial to attain high and sustainable growth. To that effect, the results obtained in 2001 are very promising since they were achieved in the context of an adverse international environment.

The attainment of macroeconomic objectives in previous years strengthened the credibility of the authorities in charge of economic policy. However, the fact that these results were obtained in a favorable international situation left unanswered the question as to how would policy react in a more adverse environment. Thus, the results obtained in 2001 should have a considerably positive impact since they were achieved in the presence of very serious economic shocks.

For 2002, the Federal Government and Congress have confirmed their unwavering commitment to continue with prudent fiscal policy implementation in the midst of an uncertain environment. The public deficit objective was therefore kept unchanged. Nevertheless, as has been previously mentioned, the recently approved measures will not fully resolve the structural weaknesses of the public finances.

Regarding monetary policy, the Board of Governors of Banco de México has also reiterated its commitment to attain an inflation rate of less than 4.5 percent in 2002 and a convergence towards inflation of approximately 3 percent in 2003. The Central Bank will use the instruments at its disposal in a timely and effective manner to ensure an environment of low and stable inflation that, together with the recovery of economic growth, will result in a sustainable improvement in the well-being of the population.

Appendix 1: Forecast of the Demand for Monetary Base in 2002

As has been mentioned in previous Monetary Programs, the use of monetary aggregates for monetary policy conduction has significantly declined over the last few years, as the relationship between these aggregates and prices has become more uncertain as inflation has dropped. Thus, monetary base growth is not an objective for Banco de México. Nonetheless, in order to provide information that could be of use in monetary policy evaluation, the expected daily path of the stock of the monetary base for 2002 is presented below (Table 18). This forecast is compatible with the following assumptions: GDP growth of 1.5 percent in real terms; annual inflation no higher than 4.5 percent, and remonetization of 3.7 percent. The aforementioned assumptions result in a monetary base stock forecast of 248.1 thousand million pesos as of December 31st of this year, a figure 10 percent higher than that observed on the same date of 2001. The confidence interval limits, considering one standard deviation of the residuals estimated by the model, correspond to 255.5 and 240.7 thousand million pesos[21].

The independent variables used in the model to estimate the demand for base money are: economic activity, interest rates, the lags of the dependent variable, and a set of binary variables which try to capture all seasonal effects. It is important to mention that it is very difficult to specify *a priori* the trajectory of the monetary base due to the following reasons: a) the basic assumptions used in monetary base forecasts may not materialize; b) the relationship between the demand for base money and the variables explaining its evolution can change over time due to technological innovation or changing payment practices; c) the occurrence of extraordinary events could lead to a transitory change in the demand for the monetary base[22]; and d) some seasonal affects associated with days of the week or public holidays are difficult to anticipate.

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

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

Table 18 **Daily Monetary Base Stock Forecast for 2002***

(Thousands of Millions of Pesos)

Days	Jan	Feb	Mar	Apr	May	Jun
1	225.6	208.1	200.2	201.0	198.4	202.4
2	221.6	208.1	200.2	195.5	199.6	202.4
3	221.3	208.1	200.2	192.1	200.2	200.3
4	219.6	205.3	196.6	193.1	200.2	197.8
5	219.6	205.3	193.1	193.9	200.2	196.3
6	219.6	202.2	190.9	193.9	196.5	198.2
7	214.9	203.0	192.3	193.9	192.8	199.1
8	211.6	203.3	193.3	189.9	192.1	199.1
9	209.1	203.3	193.3	186.9	195.3	199.1
10	210.8	203.3	193.3	186.8	197.9	195.8
11	213.4	199.5	189.8	191.7	197.9	193.7
12	213.4	196.7	187.4	196.5	197.9	194.7
13	213.4	197.8	188.1	196.5	197.1	199.6
14	213.3	202.8	192.7	196.5	197.2	202.9
15	213.1	205.0	195.9	195.5	197.9	202.9
16	211.2	205.0	195.9	192.9	200.2	202.9
17	212.7	205.0	195.9	191.8	201.5	199.6
18	213.2	200.8	193.7	194.1	201.5	196.0
19	213.2	197.0	192.1	195.3	201.5	194.1
20	213.2	195.1	196.2	195.3	198.0	195.7
21	208.9	196.3	196.2	195.3	194.1	196.6
22	204.7	197.3	198.5	192.2	192.0	196.6
23	202.9	197.3	198.5	189.6	194.0	196.6
24	203.4	197.3	198.5	189.5	195.4	193.3
25	204.2	194.3	197.9	193.7	195.4	191.0
26	204.2	192.9	203.3	198.1	195.4	192.1
27	204.2	194.6	207.4	198.1	192.8	197.2
28	201.6	198.4	207.4	198.1	191.4	201.3
29	200.3		207.4	198.4	193.0	201.3
30	201.9		207.4	198.4	198.6	201.3
31	206.1		207.4		202.4	
Monthly average	211.2	200.8	197.1	194.2	197.0	198.0

*/ Observed data as of January 25th.

Table 19 **Daily Monetary Base Stock Forecast for 2002**

(Thousands of Millions of Pesos)

Days	Jul	Aug	Sep	Oct	Nov	Dec
1	199.6	204.2	201.3	195.6	205.2	214.9
2	197.8	206.0	198.7	194.8	205.2	213.3
3	197.3	206.0	196.1	197.3	205.2	212.1
4	201.5	206.0	195.0	198.8	202.6	212.8
5	203.5	203.1	197.1	198.8	199.1	218.8
6	203.5	200.1	198.2	198.8	197.5	224.2
7	203.5	198.7	198.2	195.4	199.5	224.2
8	199.8	200.9	198.2	192.1	201.0	224.2
9	196.8	202.7	195.5	191.2	201.0	225.0
10	196.2	202.7	193.6	195.2	201.0	228.1
11	200.8	202.7	194.8	199.1	198.3	238.1
12	205.1	200.0	200.4	199.1	196.5	238.1
13	205.1	199.0	204.5	199.1	197.8	244.9
14	205.1	200.6	204.5	199.5	203.3	244.9
15	203.6	204.5	204.5	198.4	206.7	244.9
16	200.9	205.7	204.5	197.3	206.7	244.0
17	199.6	205.7	200.6	199.6	206.7	243.5
18	201.9	205.7	198.1	200.7	204.7	244.2
19	202.8	201.8	199.2	200.7	202.9	250.6
20	202.8	198.1	199.3	200.7	202.9	256.9
21	202.8	196.2	199.3	196.9	204.4	256.9
22	198.4	197.7	199.3	193.0	204.8	256.9
23	195.2	198.7	195.3	191.4	204.8	255.6
24	194.2	198.7	191.7	193.7	204.8	255.2
25	197.5	198.7	190.9	196.0	201.8	255.2
26	200.9	195.2	195.0	196.0	200.4	254.1
27	200.9	192.5	199.2	196.0	202.4	254.3
28	200.9	193.0	199.2	194.7	209.2	254.3
29	200.3	198.0	199.2	195.0	214.9	254.3
30	200.4	201.3	197.9	197.9	214.9	250.8
31	201.3	201.3		202.5		248.1
Monthly average	200.6	200.8	198.3	196.9	203.5	240.1
Yearly average						203.3