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## QUARTERLY REPORT

This report analyzes recent developments in economic activity, inflation and different economic indicators of Mexico, as well as the monetary policy implementation in the quarter January – March 2017, and, in general, the activities of Banco de México over the referred period, in the context of the Mexican and international economic environment, in compliance with Article 51, section II of Banco de México's Law.

## FOREWARNING

This text is provided for readers' convenience only. Discrepancies may possibly arise between the original document and its translation to English. The original and unabridged Quarterly Report in Spanish is the only official document.

Unless otherwise stated, this document has been prepared using data available as of May 29, 2017. Figures are preliminary and subject to changes.

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#### 1. Introduction

During the first months of 2017, the Mexican economy continued facing diverse shocks, which generated significant and highly persistent, albeit transitory, impacts on inflation. In fact, since July 2016 an upward trend of inflation has prevailed for over 10 consecutive months, which resulted from increments in both core and noncore components. Thus, headline inflation attained levels close to 5 percent in the first quarter of 2017, and accelerated to 6.17 percent in the first fortnight of May. The effects of the accumulated depreciation of the national currency since the end of 2014, and the consequences of higher energy prices (in particular gasoline and LP gas prices), which were registered since the onset of 2017, are noteworthy. Furthermore, the raise in the minimum wage at the beginning of the year also contributed to the increment in annual headline inflation. The first of these shocks has considerably affected the trajectory of core inflation, as revealed through a gradual adjustment in relative prices of merchandise with respect to those of services. Meanwhile, higher energy prices affected non-core inflation directly and its core component indirectly by raising production costs of different goods and some services, mainly food-related services, that use such energy products as inputs. More recently, in April annual inflation was further affected by increments in some agricultural products' prices and in government approved fares, especially in passenger transport services.

It should be noted that despite the significant impact on inflation and its short-term expectations produced by the simultaneity and the magnitude of these shocks, the monetary policy, implemented by Banco de México in a timely manner, contributed to maintain medium- and long-term inflation expectations relatively stable; as a result, so far no second round effects on the price formation process in the economy have been observed. Thus, to prevent contamination to the price formation process in the economy, to anchor inflation expectations and to reinforce the contribution of monetary policy to the inflation's convergence to its target, in the period covered by this Report, Banco de México's Board of Governors raised the target for the Overnight Interbank Interest Rate by 100 basis points, to a level of 6.75 percent. These decisions mainly considered the inflation trend in a context of the afore mentioned transitory shocks in relative prices, the expectation of no aggregate demand-related pressures on inflation and increments in the monetary policy rate since 2015, along with the 25 basis-point increase in the target range for the U.S. Federal Reserve reference rate in its March meeting.

This occurred in a context in which the world economy kept recovering in early 2017, reflecting an upturn in investment, industrial production and global trade. However, the expected outlook of a moderate global growth in 2017 and 2018 is still subject to downward risks including the high uncertainty regarding the course of advanced countries' economic policies, vulnerabilities in the Chinese economy that seem to have heightened, the possible consequences of the U.K. exit from the European Union and increased geopolitical risks across various regions of the world. In particular, the characteristics of the fiscal and trade reforms to be adopted in the U.S., along with the rate of its monetary policy normalization, will continue bringing considerable uncertainty to the world economic outlook over the next quarters. Inflation kept growing across the main advanced economies during the first quarter of the year, among other factors, reflecting increments in energy prices during most of 2016. Nevertheless, in most countries comprising this group the said

indicator remains below the respective central banks' targets and inflation expectations still persist at low levels.

Thus, the monetary policy stance of the main central banks in advanced economies remained accommodative, despite the persisting divergences across the countries, which reflect differences in their relative positions in the economic cycle. In particular, after increasing the federal funds' target range in March, the Federal Reserve left it unchanged in its May meeting. However, it is still expected that the monetary stimulus withdrawal in the U.S. will proceed at a gradual pace, and that this central bank will raise this range again in June. In addition, the expectation that the Federal Reserve will start to take actions aimed at reducing the size of its balance sheet, which would speed up the process of the monetary policy normalization, has been strengthening. In the meantime, the European Central Bank and the Bank of Japan maintained their monetary stances unchanged, emphasizing the need to keep them accommodative, although no further stimuli are expected in light of the decrease of deflationary risks.

The economic activity in emerging economies recovered during the first quarter, even though this recovery began from low levels. The recent boost in world trade, which originated from a greater activity in advanced economies, as well as a certain rebound in international commodity prices during 2016 contributed to this recovery. However, vulnerabilities in the Chinese economy and the recent political crisis in Brazil could impact the growth of these economies over the next quarters.

Despite the persisting uncertainty regarding economic policy and growing geopolitical risks, volatility levels declined dramatically in international financial markets, and asset prices went up with respect to the last quarter of 2016. The markets' positive performance seems to respond more to the outlook of sustained growth, backed by favorable credit conditions, the recovery of business profits, stronger demand and global trade, than to high levels of political and economic uncertainty. However, despite low volatility indicators, markets do not rule out extreme or tail risks, observed in the increment in risk hedging costs. Indeed, episodes of major instability in financial markets still cannot be ruled out, in light of the persisting uncertainty over the possible scenario that is still supporting favorable expectations, as well as the probability of the materialization of the above mentioned extreme risks faced by world economy.

Domestic financial markets were strongly affected at the beginning of the year, especially by uncertainty over the possible implementation of trade and migration policies by the incoming U.S. administration, which could negatively impact the Mexican economy. Thus, the Mexican peso observed a significant depreciation and high volatility, while interest rates for all terms increased. However, given the monetary policy actions put in place by Banco de México, the measures set forth by the Foreign Exchange Commission and some constructive comments by the members of the U.S. government relative to the future bilateral U.S. – Mexico relation, the afore mentioned depreciation of the national currency reverted as of the second half of January. In particular, the exchange rate appreciated considerably, to levels comparable to those registered before the elections in the U.S. concluded, and long-term interest rates decreased.

Regarding the domestic economy, in the first quarter of 2017 productive activity expanded at a rate similar to that in the previous one. This was the result mainly of

the persistent growth of private consumption and of external demand. In contrast, weakness of investment became more pronounced, as the negative trend in public investment has been recently accompanied by a slowdown in the private component. In this context, no significant aggregate demand-related pressures on prices have been observed yet, although the labor market slack has been reducing, which, in turn, has been reflected in an upward trajectory in unit labor costs, although starting from low levels.

Economic growth in the first quarter of 2017 was slightly greater than the one anticipated in the previous Report. As a consequence, a greater expansion of GDP is expected for 2017 as a whole, so that the forecast interval for that year is adjusted from one between 1.3 to 2.3 percent to one between 1.5 to 2.5 percent. Despite the relatively favorable performance of the economic activity in early 2017, the most recent data point to a certain slowdown of the productive activity over the next quarters, which seems to be partially linked, as indicated in the previous Report, to the effects of relative uncertainty over the future Mexico – U.S. economic relationship over the decisions on investment and consumption, even though they have slightly attenuated. For 2018, the forecast interval of the GDP growth is not modified with respect to the last Report, remaining at 1.7 to 2.7 percent, so a greater growth rate of the economy is still estimated with respect to 2017, reflecting the expectation of a greater dynamism of the U.S. industrial production in that year, as well as more evident positive effects in 2018 generated by the structural reforms on investment conditions.

It is anticipated that over the next months annual headline inflation will remain temporarily affected by higher auto transport tariffs and by higher prices of some agricultural products, as well as by adjustments caused by the changes in the relative prices of merchandise with respect to services, as a result of the accumulated depreciation of the real exchange rate, as well as the transitory impact of higher energy prices and the raise in the minimum wage in January 2017. Hence, annual headline inflation is estimated to exceed the upper limit of the variability interval of Banco de México during 2017, although over the last months of 2017 and during 2018 it is anticipated to resume its tendency of convergence to the 3 percent target and to reach this level at the end of the forecast horizon. In line with this estimation, in 2017 annual core inflation will also persist above the referred interval, but significantly below the annual headline inflation trajectory, and at the end of that year and in early 2018 it will resume its convergence trend towards this Central Bank's inflation target. These trajectories will be the result of a number of factors, such as the fading of the above mentioned shocks, the reversal of the exchange rate that has been registered in recent months, the expected widening of the negative output gap, and significant adjustments in the monetary policy that have been put into place since December 2015, as well as those that may be required in the future, all of which will continue affecting the inflation performance over the following quarters.

It should be noted that as uncertainty regarding the economic policy to be implemented in the U.S. and its effects on the Mexico - U.S. bilateral relationship still persists, new volatility episodes cannot be ruled out. In this context, this Central Institute will contribute to the robustness of Mexico's macroeconomic framework by procuring low and stable inflation. Fulfilling this mandate is the best manner in which Banco de México can contribute to growth and to the recovery of real wages of the economy. The macroeconomic stability will be also contributed to by fiscal

consolidation measures that have been implemented and that are expected to be put into effect over the next years. In addition, on May 22, 2017, the Executive Board of the International Monetary Fund ratified the availability of the Flexible Credit Line equivalent to USD 86 billion.<sup>1</sup> This confirms the fact that Mexico continues complying with all qualifications required to have access to the contingent resources and generates strong incentives to continue maintaining the soundness of the economic fundamentals, while it is required to retain the access to this credit line.

In the future, the Board of Governors will closely monitor the evolution of all inflation determinants and its medium- and long-term expectations, especially the possible pass-through of exchange rate adjustments and higher energy prices onto the rest of prices. Likewise, it will be watchful of the performance of the monetary position of Mexico relative to the U.S., and the evolution of the output gap. This will be done in order to continue taking the necessary measures to attain the efficient convergence of inflation to its 3.0 percent target.

<sup>&</sup>lt;sup>1</sup> This is an amount equivalent to SDR 62.4 billion, at the exchange rate of May 22, 2017.

## 2. Recent Evolution of Inflation

### 2.1. Inflation

Annual headline inflation keeps registering an upward trend, as a reflection of an array of shocks that have been affecting both its core and non-core components. In the former case, the depreciation of the exchange rate since late 2014 is still manifested through a gradual adjustment in the relative prices of merchandise with respect to services. At the same time, the increment in energy prices (in particular gasoline and LP gas prices), which were registered since the onset of 2017, and the sustained increase in industrial and commercial electricity tariffs, indirectly affected the prices of some items of core inflation, by causing increments in the production costs of different goods and some services, mainly food-related ones. On the other hand, non-core inflation maintained its upward trend, reflecting both the referred higher energy prices and the recent increments in the prices of some agricultural products and in government approved fares, such as the case of auto transport. Meanwhile, the increment in the minimum wage in early 2017 also moderately contributed to the increase in inflation this year so far. Despite the simultaneity and the magnitude of the said shocks, no second round effects on the price formation process of the economy have been perceived so far, and long-term inflation expectations remain stable.

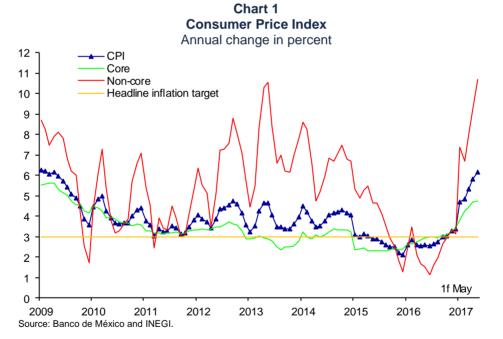
As a reflection of the above environment, annual headline inflation increased from an average of 3.24 percent in the fourth quarter of 2016 to 4.98 percent in the first one of 2017, marking 6.17 percent in the first fortnight of May. In particular, average annual core inflation changed from 3.28 to 4.19 percent between the referred quarters, while in the first fortnight of May it registered 4.75 percent. On the other hand, the average annual change of the non-core component went up from 3.14 to 7.38 percent between the last quarter of 2016 and the first one of 2017, marking 10.71 percent in the first fortnight of May (Table 1 and Chart 1).

	2015	2016				2017	
	IV	I	II		IV	I	1f May
PI	2.27	2.69	2.56	2.78	3.24	4.98	6.17
Core	2.40	2.69	2.91	3.00	3.28	4.19	4.75
Merchandise	2.78	3.04	3.51	3.79	3.98	5.33	6.24
Food, beverages and tobacco	2.55	2.88	3.69	3.89	4.26	5.93	6.73
Non-food merchandise	2.98	3.17	3.36	3.71	3.75	4.83	5.82
Services	2.09	2.40	2.41	2.34	2.68	3.23	3.49
Housing	2.00	2.11	2.21	2.32	2.40	2.52	2.53
Education (tuitions)	4.28	4.21	4.13	4.17	4.26	4.37	4.42
Other services	1.52	2.15	2.09	1.80	2.50	3.62	4.21
Non-core	1.87	2.71	1.46	2.10	3.14	7.38	10.71
Agriculture	2.76	6.51	4.48	3.81	4.98	-0.20	6.56
Fruit and vegetables	6.33	22.45	13.30	8.58	8.32	-6.88	10.97
Livestock	0.84	-1.60	-0.01	1.26	3.09	4.02	4.06
Energy and government approved fares	1.33	0.39	-0.45	1.01	2.00	12.28	13.50
Energy	0.52	-1.10	-1.49	-0.03	1.75	16.85	16.23
Government approved fares	2.86	3.23	1.41	2.83	2.48	3.91	8.87
Trimmed Mean Indicator <sup>1/</sup>							
CPI	2.45	2.46	2.62	2.86	3.15	4.17	4.69
Core	2.76	2.86	3.05	3.20	3.29	4.02	4.45

# Table 1 Consumer Price Index, Main Components and Trimmed Mean Indicators

1/ Prepared by Banco de México with data from INEGI.

Source: Banco de México and INEGI.

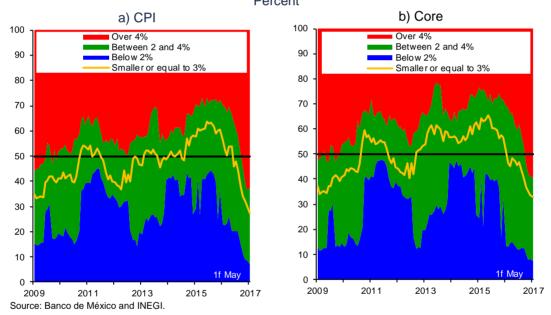


To analyze both the headline and core inflation trends, and the performance of inflation at the margin, the following indicators are shown. Firstly, the proportion of the CPI basket is calculated, exhibiting annual price changes within certain intervals. In this way, generic items comprising the basket of both headline and core index are grouped into three categories according to the annual change in their prices: i) items with an annual change below 2 percent; ii) between 2 and 4 percent; and iii) over 4 percent. In the same vein, the percentage of the said baskets is

presented in additional categories: the one with annual price changes lower or equal to 3 percent, and the one with annual price changes over 3 percent (Chart 2).

This analysis illustrates that the percentage of both headline and core baskets with price increments below 4 percent has been declining (the blue and green areas, Chart 2a and Chart 2b). Specifically, in the fourth quarter of 2016, the share of the CPI basket of goods and services of the headline inflation with price increments lower than 4 percent was on average 61 percent, while in the first quarter of 2017 this share was 45 percent and in the first fortnight of May it was 37 percent. As regards the basket of the core index, these shares were 60, 47 and 41 percent, respectively, in the same time frames. Likewise, the share of the headline index basket with price changes lower or equal to 3 percent (the area below the yellow line) was on average 46 percent in the fourth quarter of 2016, 35 percent in the first one of 2017 and 27 percent in the first fortnight of May. In the case of the core index, the respective shares were 45, 37 and 33 percent.





Secondly, the medium-term trend of headline inflation is shown, represented by the Trimmed Mean Indicator, which has increased from 3.15 percent in the fourth quarter of 2016 to 4.17 percent in the first one of 2017, and which marked 4.69 percent in the first fortnight of May. Likewise, the referred indicator for core inflation went up, exhibiting 3.29 percent in the last quarter of 2016, 4.02 percent in the first quarter of 2017 and 4.45 percent in the first fortnight of May. Even though the figures of the Trimmed Mean Indicator for headline and core inflations are below the observed data, their upward trend and the high levels of both indicators point to a growing trajectory of most generic items' prices comprising it (Chart 3 and Table 1).

Thirdly, the evolution of annualized monthly (seasonally adjusted) headline and core inflation, and their trends are presented (Chart 4a and Chart 4b). As can be appreciated, the trend of both headline and core inflation is upward, reflecting the

shocks these indicators have been exposed to, although both of them somewhat declined at the margin. The components of core inflation (merchandise and services) have performed similarly (Chart 4c and Chart 4d).

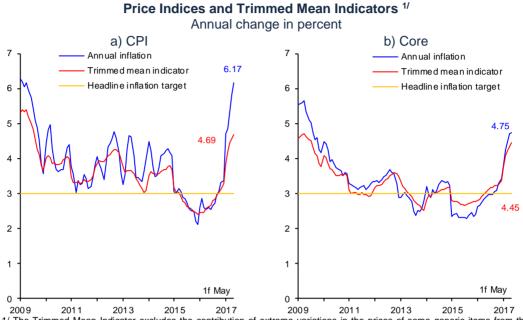


Chart 3

1/ The Trimmed Mean Indicator excludes the contribution of extreme variations in the prices of some generic items from the inflation of a price index. To eliminate the effect of these changes, the following is done: i) monthly seasonally adjusted changes of the generic items of the price index are arranged from the smallest to the largest value; ii) generic items with the biggest and the smallest variation are excluded, considering in each distribution tail up to 10 percent of the price index basket, respectively; and iii) using the remaining generic items, which by construction lie closer to the center of the distribution, the Trimmed Mean Indicator is calculated.

Source: Prepared by Banco de México with own data and data from INEGI.

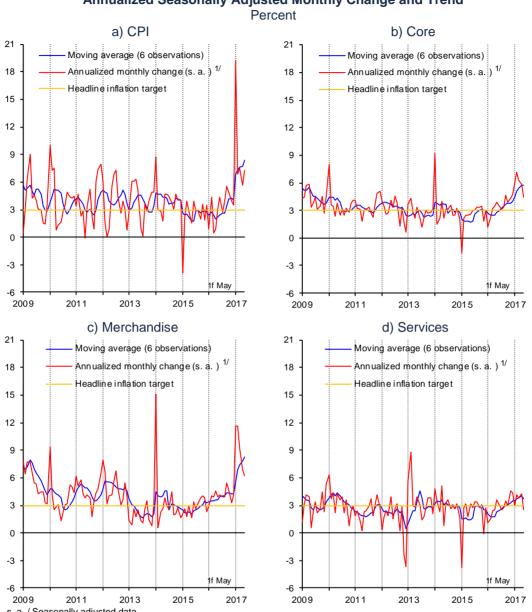


Chart 4 Annualized Seasonally Adjusted Monthly Change and Trend

s. a. / Seasonally adjusted data.

1/ For the last observation, the annualized biweekly change is used.

Source: Seasonal adjustment prepared by Banco de México with own data and data from INEGI.

Within the performance of core inflation, a marked acceleration of annual growth rates of the merchandise subindex stands out. As a result of this trajectory, the contribution of the change in merchandise prices to annual headline inflation increased from 1.40 to 2.19 percentage points between December 2016 and the first fortnight of May 2017. Meanwhile, the impact of the subindex of services prices on annual headline inflation also increased, albeit to a lower degree, shifting from 1.19 to 1.44 percentage points between the referred periods (Chart 5). In particular:

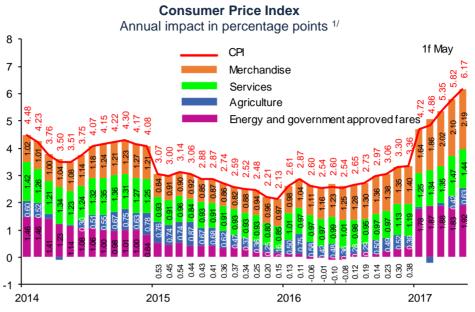
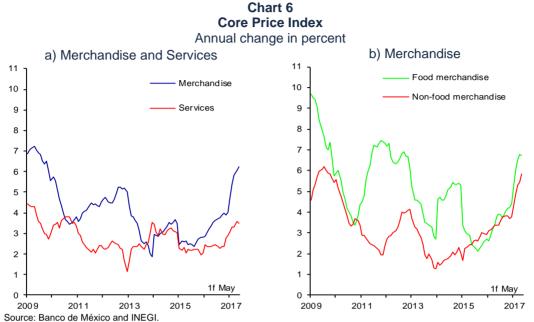


Chart 5

1/ In some cases, the sum of respective components can exhibit some discrepancies due to rounding. Source: Prepared by Banco de México with data from INEGI

- i. In recent months, growth of the merchandise price subindex has been reflecting more evidently the effects of the accumulated depreciation of the national currency, as the pass-through apparently accelerated in the aftermath of the U.S. elections. This may have derived from the fact that, so far, the depreciation of the real exchange rate was perceived as a more permanent phenomenon and that other shocks that affected inflation converged. Thus, this subindex shifted from an average annual change rate of 3.98 percent in the last guarter of 2016 to 5.33 percent in the first one of 2017, locating at 6.24 percent in the first fortnight of May. Even though both food and non-food merchandise prices observed increments in their annual changes, it was the former group that accelerated more, their annual growth rate shifting from 4.26 to 5.93 percent between the said quarters, attaining 6.73 percent in the first fortnight of May. Average annual change rates of non-food merchandise were, on the other hand, 3.75, 4.83 and 5.82 percent over the same time frames (Chart 6a and Chart 6b).
- ii. The subindex of services' prices also exhibited increments in the annual growth rates, even though they have remained relatively more moderate. This largely derived from lower reductions in mobile phone tariffs as compared to last year, as well as for price increases in food services, which reflected the price increments in food and energy products, especially LP gas. In this way, the average annual change of the services price' subindices shifted from 2.68 to 3.23 percent between the fourth quarter of 2016 and the first one of 2017, registering 3.49 percent in the first fortnight of May (Chart 6a). In particular, the item of services other than housing and education presented annual average changes of 2.50 and 3.62 percent in the indicated guarters, marking 4.21 percent in the first fortnight of May. It is noteworthy that in the data on the first fortnight

of May tourism services' prices slightly adjusted downwards, with respect to the high levels exhibited in April, which were affected by the calendar effect of the Holy Week.



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On the other hand, as stated above, non-core inflation remains high and has continued to go up in the reference period. This reflects the effects of energy price increments, with an emphasis on gasoline and LP gas prices, which occurred at the beginning of the year and were complemented in April and May by a rebound in agricultural goods' prices, as well as increments in some passenger transport services (Chart 5 and Table 1).

- i. Indeed, even though the average annual change of the agricultural price subindex decreased from 4.98 to -0.20 percent between the fourth quarter of 2016 and the first one of 2017, in the first fortnight of May it rebounded to 6.56 percent, largely due to the increase in the prices of some fruit and vegetables, such as tomato, onion and avocado.
- ii. Between the last quarter of 2016 and the first one of 2017, the average annual change of the price subindex of energy products and government approved fares spiked from 2.00 to 12.28 percent and marked 13.50 percent in the first fortnight of May, through which its contribution to inflation increased as well (Chart 5).

With respect to the above, it is noteworthy that:

Between January 1 and February 17, 2017, maximum gasoline prices were the ones that had been determined on December 27, 2016 by the Ministry of Finance across 90 regions of the country, based on a formula in which the international prices of this fuel, converted to Mexican pesos, continued to directly enter the calculation of the said maximum prices, excluding the upper and the lower limits between which the price was allowed to fluctuate during 2016. As of February 18, 2017, the maximum gasoline

prices started to be determined on a daily basis in line with a new formula, which, although still considering the prices of international references converted to the Mexican pesos, seeks to moderate the impact of excessive fluctuations in these references. In line with the timeline announced on December 20, 2016 by the Energy Regulating Commission (CRE) regarding the liberalization of gasoline prices in Mexico, gasoline prices in the states of Baja California and Sonora were liberalized on March 30, 2017, while in the rest of Mexico prices set by the Ministry of Finance will remain effective, until their liberalization is stipulated in line with the said timeline. The direct impact of gasoline price adjustments on inflation has been considerable this year. In particular, the monthly change of gasoline prices in January 2017 was 17.29 percent. Moreover, these increments strongly affected annual inflation. Thus, out of annual inflations of 4.72 percent in January; of 4.86 percent in February, of 5.35 percent in March; of 5.82 percent in April, and of 6.17 percent in the first fortnight of May, gasoline prices directly contributed with 1.35, 1.36, 1.30, 1.23 and 1.20 percentage points, respectively (Chart 7).

- As regards LP gas, starting from January 1, 2017, its prices were liberalized, which generated a raise of 17.85 percent relative to December 2016. The monthly changes of this fuel's prices were 2.27, 0.30 and -2.95 percent in February, March and April, respectively, while the change in the first fortnight of May was -0.76 percent (see Box 1).
- Natural gas prices, determined in line with their international references, exhibited high annual growth rates, presenting an average of 20.27 percent in the last quarter of 2016 and of 27.16 percent in the first one of 2017. In the first fortnight of May, the price of this fuel observed an annual change of 21.27 percent.
- In early 2016, low consumption electricity tariffs for domestic sector decreased by 2 percent and in 2017 they are expected to remain unchanged. On the other hand, high consumption electricity tariffs for domestic sector (DAC) have been rising approximately since mid-2016, as a reflection of the performance of input costs required to generate electric power, mainly fuels. In 2017 so far, the monthly changes in DAC tariffs have been 2.6 percent in January, 3.8 percent in February, 8.0 percent in March, -1.5 percent in April and -4.8 percent in May.
- The average annual growth rate of the component of government approved fares has increased from 2.48 percent in the fourth quarter of 2016 to 3.91 percent in the first one of 2017. The most noticeable acceleration has taken place recently, when an annual change of 6.29 percent was registered in April, and 8.87 percent in the first fortnight of May. This performance was largely due to the increment in public transport fares across different cities. In particular, in Mexico City, public transport and urban bus fares generally increased by 1 peso, which represents an increase of 16.7 and 25 percent, depending on the specific considered service.

This rise started as of April 27, reason why most of the impact generated by this increment was perceived in May, which led to an increment of 10.14 percent in annual terms in the CPI component of urban public transport in the first fortnight of May (Chart 7). Other cities that observed adjustments in different public transport tariffs during April were Huatabampo, Son.; San Luis Potosí, S.L.P; Tehuantepec, Oax.; and Tijuana, B.C., even though their impact on headline inflation was lower.

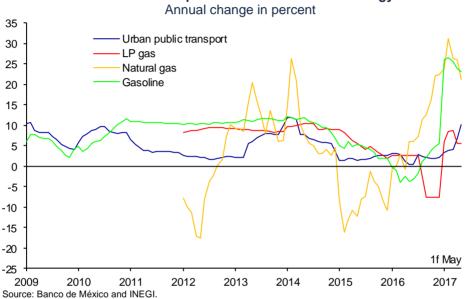


Chart 7 Indices of Selected Transport Services' Prices and Energy Products Annual change in percent

#### Box 1 Recent Evolution of LP Gas Price and Market Considerations

#### 1. Introduction

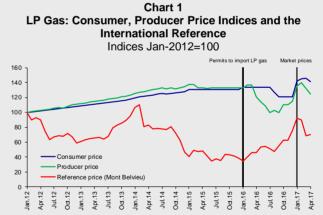
This Box analyzes the recent evolution of LP gas prices in Mexico in view of the liberalization process that started in 2016 upon opening up the imports to be carried out by individual businesses, and which ended on January 1, 2017 with the full liberalization of this fuel's consumer prices. In particular, it presents the analysis of some of the main factors that affected the dynamics of LP gas prices, along with the relation between the degree of the competition level in this market and this fuel's prices. Available information shows that prior to 2016 consumer and producer prices in Mexico observed an upward trend, which was not related to the dynamics of the international reference, as it decreased considerably in recent years. On the other hand, starting from January 2017, the evolution of the international reference was only partially reflected in the prices of this good. Similarly, consumer prices of this energy product increased more than its producer prices.

It also shows that there are significant differences among price increments at the regional level, the highest increases having been registered in the Northern region. In this context, it is established that for different states of Mexico, the higher the number of retail businesses distributing this good, the lower are, on average, both the level of the price and its growth rate, a phenomenon that has been observed during 2017. This evidence could be congruent with the presence of differences at the level of competition at the regional level, as a result of which some regions with fewer suppliers may have a greater margin to increase LP gas consumer prices, which could partly account for the performance of this good's price since early 2017. Therefore, competition conditions in this market should be strengthened by incorporating a greater number of businesses, especially in the regions in which the price of this energy product has risen the most.

#### 2. Evolution of LP Gas Prices in Mexico

The process of the liberalization of LP gas prices was announced in the Hydrocarbons Law, which was published on August 11, 2014 in the Federal Official Gazette, establishing the following: i) that until December 31, 2015 permits for LP gas imports will be exclusive to PEMEX, its subsidiary bodies and affiliate companies; ii) as of January 1, 2016, any interested party that complied with applicable legal provisions could obtain licenses to import LP gas; iii) up until December 31, 2016, the Mexican President will set maximum LP gas prices for final consumption; and, iv) as of January 1, 2017 public LP gas prices will be determined under market conditions. Chart 1 exhibits the price indices of the LP gas international reference, as well as producer and consumer price indices of this energy product in Mexico. The quote used to prepare the Producer Price Index (PPI) corresponds to the Pemex's selling price, as it is the sole producer in Mexico. This firm sets its price, which is called first-hand sale price (FHSP), based on the methodology established by the Energy Regulatory Commission (CRE).<sup>1</sup> On the other hand, until December 31, 2016, the LP gas monthly consumer price was determined based on four elements: i) the producer price; ii) freight from the shipping center to the storage plant for distribution; iii) the marketing margin; and, iv) the value added tax.

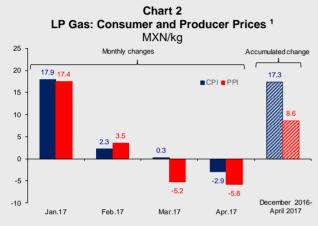
As exhibited in Chart 1, in the trajectories prior to January 2017, LP gas producer and consumer prices in Mexico did not reflect the adjustments in the international reference, as the former were determined by the Federal Government. In particular, producer and consumer prices in Mexico presented an upward trend until 2016, which stands in contrast to the fact that the price of the international reference significantly declined in the period from 2014 to 2016. On the other hand, following the price liberalization in January 2017, LP gas prices in Mexico, to a limited extent, reflected the evolution of the international reference.

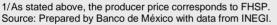


Source: Prepared by Banco de México with data from Bloomberg (the reference price expressed in pesos), INEGI (consumer and producer prices).

The CRE establishes that the FHSP is composed of: i) the price of the international reference in the Mont Belvieu Market, Texas; ii) the cost of attributable internment; iii) the adjustment due to transportation costs to reflect opportunity costs and competitiveness conditions in each point of sale; and iv) tariffs of the supply facility in which the delivery of LP gas is carried out.

Furthermore, while LP gas producer prices in Mexico went up 8.6 percent during the months in which the liberalization of prices has been carried out, consumer prices increased by 17.3 percent (Chart 2 and Table 1). These data contrast with the 6.7 percent decline in the price of the international reference expressed in Mexican pesos during the same period and indicate that the distributors of LP gas have passed through the increments that had not been registered in the international market onto consumers. In addition, they have passed through a greater increment as compared to that observed in producer prices.



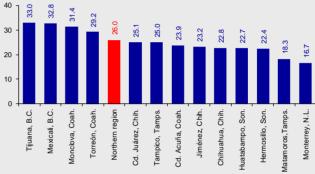


During 2017, there were differences in the performance of LP gas prices at the local level. In particular, by pooling 46 cities that are considered in the CPI across the four regions, that is, the Northern, the North-Central, the Central and the Southern regions, it stands out that from December 2016 to April 2017, prices in all regions increased more than the increment in LP gas reported in the PPI and more than the increase in the international reference prices expressed in Mexican pesos, those in the Northern region being especially notable (Table 1).<sup>2</sup> Within the Northern region, increments in the cities of the CPI, that are located in Baja California (Tijuana and Mexicali) and Coahuila (Monclova and Torreón) stand out, observing accumulated increments of around 30 percent over the first four months of the year, while in Monterrey the increase in the same time period was almost half as low (Chart 3).

Table 1					
LP Gas: Consumer and Producer Prices in Mexico					
Accumulated changes since Dec-2016, in percent					

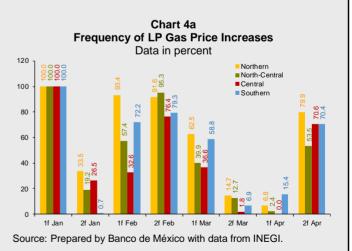
Region	2017						
Region	January	February	March	April			
CPI	17.9	20.5	20.9	17.3			
Central	17.4	18.6	18.3	14.8			
North-Central	19.6	23.1	23.6	16.5			
Northern	18.4	24.6	27.3	26.0			
Southern	16.4	18.1	17.4	15.1			
PPI	17.4	21.6	15.3	8.6			



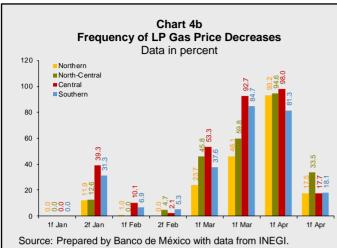


Source: Prepared by Banco de México with data from INEGI.

Additionally, when analyzing the CPI microdata during 2017, it is established that the Northern and the North-Central regions registered the highest share of LP gas prices with upward adjustments, as well as the lowest share of downward price adjustments (Chart 4a and Chart 4b).



This regionalization coincides with that used in the Regional Economic Report published by Banco de México.

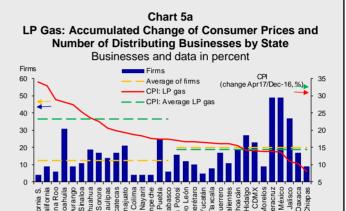


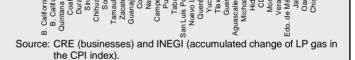
In view of the recent nature of the liberalization of the LP gas price, it is relevant to analyze factors that affected the evolution of consumer prices. In particular, it is important to identify the elements that may be limiting the consumer from benefitting from the reductions both in the quote of the LP gas international reference and in the U.S. dollar quote, following the increments at the beginning of the vear.

#### 3. Market Structure and LP Gas Prices in Mexico

It is argued in this Section that one of the factors affecting LP gas consumer prices in different states of Mexico is the number of distributors of this energy product. To do so, Mexican states were split into two groups: the first encompasses the states that from December 2016 to April 2017 presented price increments of LP gas, which were higher than the average price increment of this energy product in the CPI at the national level, and the second incorporates the states in which price increments were lower than the average in the same period. It turns out that the states with LP gas price increments above the average increase at the national level are characterized by a lower number of distribution companies. Indeed, while in the first group (an accumulated price change above the national average) the price change was 23.3 percent, the number of firms per state was on average 12.6. Conversely, states that increased the price less than the national average, did it by 14.4 percent, having on average of 20 distribution firms (Chart 5a). Additionally, a second exercise was carried out, which used the price levels reported by distributors to the CRE on April 30, 2017, by Mexican state, generally yielding the same result: the bigger the average number of firms, the lower the price level and vice versa, showing coincidence across most states (Chart 5b).

In addition, Chart 6 shows, by means of a scatter diagram. the relation between the accumulated consumer price increment of LP gas between December 2016 and April 2017 and the number of firms by state. The results point to an inverse association between the number of retail firms distributing this fuel and consumer price increments that have been observed during 2017. Furthermore, this chart presents the regression equation, which is statistically significant and with an R<sup>2</sup> of 0.35. In line with the results of this estimation, on average, the smaller the number of firms distributing LP gas, the higher the price increment in this fuel, and vice versa. This evidence complements the above results, suggesting that there are benefits for the consumer to promote a greater inflow of firms distributing this fuel, to generate an environment of higher competition.

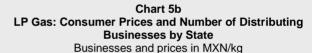


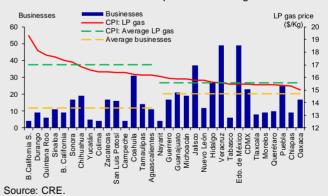


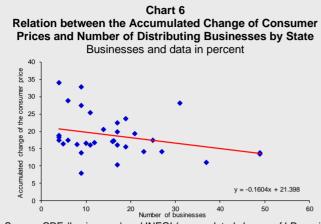
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Source: CRE (businesses) and INEGI (accumulated change of LP gas in the CPI index).

It is noteworthy that, based on the above exercises, 12 states of the Mexican Republic can be found both in the group characterized by accumulated price increments above the national average and in the group with the prices above the national average. These are Baja California, Baja California Sur, Campeche, Chihuahua, Coahuila, Colima, Durango, Quintana Roo, Sinaloa, Sonora, Tamaulipas and Zacatecas. However, some states that registered price changes from December 2016 to April 2017 that are above the national average belong to the group of Mexican states with prices below the national average. This could indicate that the price that

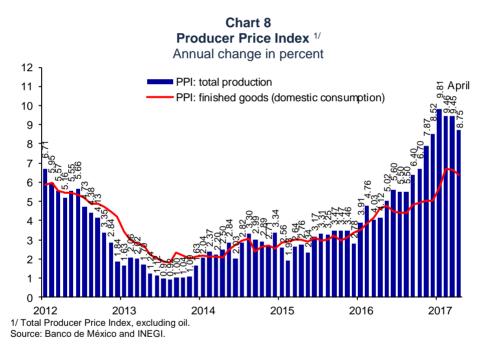
prevailed in December 2016 in these states was relatively low, reason why its high change could in part be reflecting a price adjustment that was previously relatively distorted. Hence, despite the evidence presented in this Box that is congruent with a possible competition problem in some states, not all price performance should be associated to the said situation.

#### 4. Final Remarks

As a result of the LP gas liberalization in January 2017, there was an accumulated increment of 17.3 percent in consumer prices of this energy product between December 2016 and April 2017, which has been greater than the accumulated increment of 8.6 percent in producer prices, which also currently serve as FHSP. LP gas prices increased in a widespread manner across different regions of the country, the Northern region exhibiting the highest increments. Similarly, evidence for different states of Mexico shows that in the states characterized by a higher number of retail businesses distributing LP gas, both prices and accumulated increments in 2017 tended to be lower. Previous results seem to suggest that the LP gas market in Mexico began its liberalization with competition levels that were differentiated across the states and, therefore, it would be advisable to have a larger number of businesses distributing this energy product in those regions where the price increased the most, in the interest of competition.

#### 2.2. Producer Price Index

Between the fourth guarter of 2016 and the first one of 2017, the Producer Price Index (PPI) of total production, excluding oil registered an increment in the average annual change rate from 7.70 to 9.57 percent, marking 8.75 percent in April 2017 (Chart 8). The PPI subindex of exports presented the highest annual change rate (13.31 and 12.71 percent in the fourth guarter of 2016 and the first one of 2017, while in April 2017 it was 9.35 percent), as it is an indicator that includes goods quoted in USD, and, thus, it reflects to a greater extent the national currency depreciation. However, the appreciation of the national currency in recent months seems to be contributing to gradually decrease the change rate of these goods' prices. even though the said rate still remains high. Meanwhile, the subindex of finished merchandise prices for domestic consumption exhibited more moderate annual change rates (4.99 and 6.36 percent in the fourth guarter of 2016 and in the first one of 2017, respectively, while in April 2017 it marked 6.39 percent). As stated in previous Reports, the PPI subindex of finished merchandise for domestic consumption is the one with the maximum predictive power on the performance of the core prices of merchandise destined to consumers.<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> See Box 1 of the Quarterly Report April – June 2016 "Can Inflationary Pressures be Identified when Measured with CPI by means of the Performance of PPI Merchandise Subindices?".

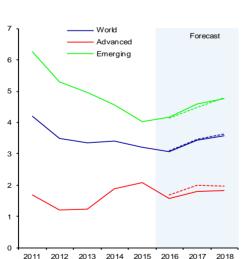
## 3. Economic and Financial Environment

Chart 9 World Economic Activity

### 3.1. External Conditions

Strengthening of the world economic growth rate that had begun in the second half of 2016 continued during the first quarter of the year, as a result of the rebound in investment, in industrial production and global trade. World economy is still expected to recover in 2017 and 2018, which is attributed to a greater-thanpreviously-estimated expansion of some of the main advanced economies and to the expected greater growth of the emerging ones (Chart 9). This is largely supported by the relative strength of fixed investment in the main advanced and in some emerging economies, which has been registered since the end of 2016. This recovery has been driven by favorable credit conditions, lower indebtedness levels, greater business profits, and a relative decrease in financial volatility levels, as well as the strengthening of global demand.

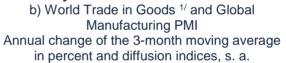
However, growth remains modest and risks to this scenario are downward, high uncertainty prevailing over the direction of the economic policy in advanced economies, in particular in relation to the U.S. fiscal and trade policies, the possibility of a faster-than-estimated rate of the monetary policy normalization in that country, risks associated to macroeconomic and financial stability in China, the evolution of negotiations between the U.K. and the European Union over the future of their economic and financial relations, the persistence of geopolitical risks across different regions of the world. These factors could propitiate new volatility episodes in international financial markets and affect the world growth outlook.

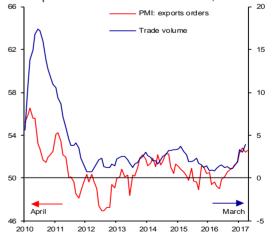


a) Growth Forecast of World GDP

Annual change in percent

# Note: The dotted lines refer to WEO forecasts of April 2017, the solid lines refer to WEO forecasts of October 2016. Source: IMF, WEO October 2016 and April 2017.





s. a. / Seasonally adjusted data.
1/ It refers to the sum of exports and imports.
Source: CPB Netherlands and Markit.

#### 3.1.1. World Economic Activity

The U.S. economy slowed down during the first quarter of 2017, as its annualized guarterly growth rate shifted from 2.1 percent in late 2016 to 1.2 percent in the first guarter of 2017 (Chart 10a). The low growth pace has been associated to such transitory factors, as lower demand for energy during the winter season in light of unusually warm weather conditions, the delay in tax returns and a lower rate of inventories' accumulation. Besides, just like in the first quarter of the previous years, the measurement of GDP could be biased to the downside due to the difficulties related to the seasonal adjustment of some of its components. Therefore, a greater rate of expansion is expected over the next guarters. In particular, even though growth of private consumption moderated significantly, the persisting growth of employment and high levels of wealth and households' confidence are estimated to contribute to the rebound in private consumption over the next quarters (Chart 10b). Furthermore, the expansion of the economy is anticipated to remain supported by the recovery of residential and non-residential investment.

On the other hand, the growth rate of the U.S. industrial production accelerated in the first quarter of 2017, as it grew at an annualized guarterly rate of 1.8 percent, the highest change registered since 2014 (Chart 10c). This recovery persisted in April, in response to the recovery in the manufacturing sector and in mining, which is a sector that has been supported by improved oil activities observed since the crude oil prices stabilized. Conversely, gas and electricity production were affected at the beginning of the year by unusual weather conditions.

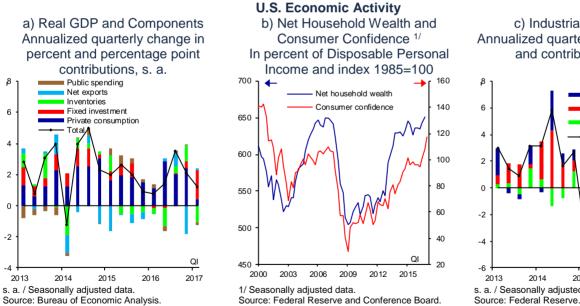
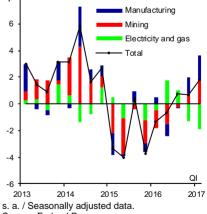
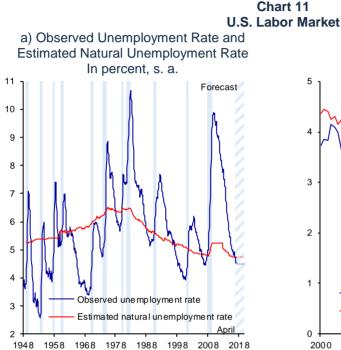


Chart 10

#### c) Industrial Production Annualized guarterly rate in percent and contributions, s. a.

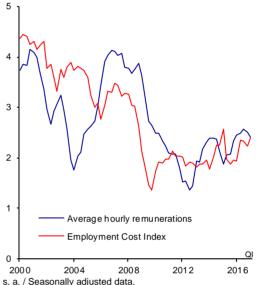


In this context, the U.S. labor market continued strengthening during the first months of 2017. Indeed, on average, there was a monthly increment of 185 thousand new jobs during the first four months of the year, which is a similar rate to that observed on average during all 2016. This represented a higher rate than the one that is considered necessary to absorb the growing labor force, as a result of which the unemployment rate lied at 4.4 percent in April, which is below the natural unemployment rate estimated by the Federal Reserve (Chart 11a). Additionally, in April the number of employed people as a share of the civil population attained the highest level since 2009. Still, hourly remunerations kept expanding at a moderate pace during the first quarter of 2017, which is similar to that exhibited in the last quarter of 2016 (Chart 11b).



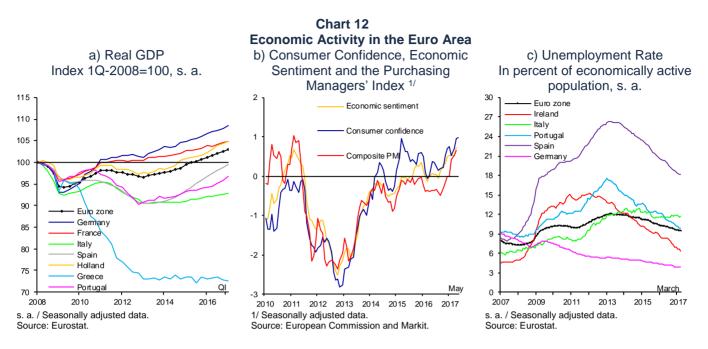
- Note: Columns refer to recessions. The dotted lines refer to medians of the Federal Reserve long-term unemployment rate estimates (red) and estimates for the next three years (blue).
- s. a. / Seasonally adjusted data. The observed unemployment rate corresponds to the 3-month moving average.
- Source: BLS, CBO, Federal Reserve and the Federal Reserve Bank of San Luis.

b) Wage Indicators Annual change in percent, s. a.



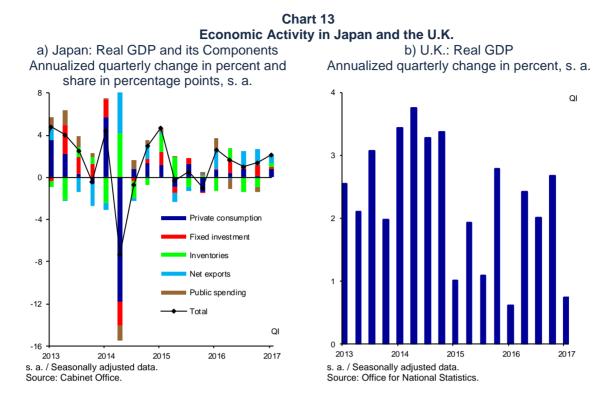
Source: Bureau of Labor Statistics.

GDP in the Euro area expanded at an annualized quarterly rate of 2.0 percent during the first quarter of 2017, which implies a slightly higher growth rate than the average in the last four quarters, which was 1.8 percent (Chart 12a). On the other hand, in April the purchasing managers' composite index reached the highest level for the last six years and reflected a more widespread recovery across sectors and countries, which suggests a possible acceleration of growth in the second quarter of the year (Chart 12b). The dynamism of economic activity in this region remained driven by domestic demand, in a context of a persisting recovery of the labor market and a continuous rebound in economic agents' confidence (Chart 12c). Nevertheless, despite the moderation of downward risks to growth after the announcement of the elections' results in France, there is still uncertainty regarding the strength of the banking sector in some countries and the impact of the U.K. withdrawal from the European Union.



In Japan, the economy continued expanding at an annualized quarterly growth rate of 2.2 percent during the first quarter of the year, after registering 1.4 percent in the previous quarter (Chart 13a). The greater dynamism of economic activity was largely due to the soundness of external demand, growth of public spending, higher corporate profits and the rebound in businesses' confidence levels. On the other hand, even though industrial production moderated its growth rate during the first quarter of the year, prospective indicators point to its solid growth during the second quarter of 2017, which is consistent with a greater public spending in the construction sector. In this scenario, the unemployment rate reached its lowest level since 1994, and the labor market seems to be tightening.

In the U.K., the growth rate of economic activity moderated, registering an annualized quarter growth rate of 0.7 percent in the first quarter of the year, after the expansion of 2.7 percent in the last quarter of 2016 (Chart 13b). This occurred after the relatively high growth of financial and commercial services and the moderate expansion of industrial production and public spending were counteracted by the low dynamism of construction and the contraction of the private consumption-related services. With respect to demand, spending on consumption decelerated significantly and net exports negatively affected the GDP growth. In contrast, public spending and investment rebounded considerably. Prospective indicators point to a scenario of moderate growth in the second quarter.



In emerging economies, timely indicators suggest an improvement in industrial activity, retail sales and exports during the reference period (Chart 14). This has been contributed to by the recent momentum gained by the world trade in view of the improvement in advanced economies and a certain recovery in international commodity prices during 2016. The growth rate of the Chinese economy accelerated with respect to the last quarter of 2016, and registered an annual growth rate of 6.9 percent. However, available indicators point to a moderation in its growth rate over the following guarters and there is a risk that this slowdown may be greater than anticipated, due to the tightening of liquidity conditions and the implementation of macroprudential measures to strengthen its financial system, which could lead to tightening of credit conditions in the next guarters. In Brazil, despite the recovery of economic activity in the first quarter, the recent deterioration of the political situation could affect the growth of the economy by increasing the probability that the process of the monetary policy relaxation may be interrupted and that the approval of structural reforms in that economy may be hampered. Meanwhile, most emerging economies are still facing risks, mainly in light of a possible introduction of trade and investment barriers, and a tightening of global financial conditions. These factors could favor capital outflows and affect demand and production levels in these economies.

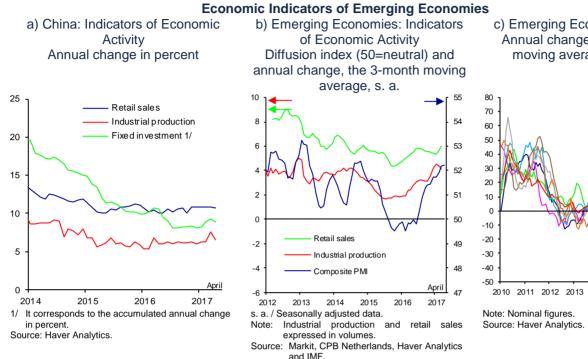
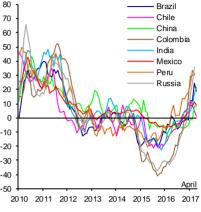


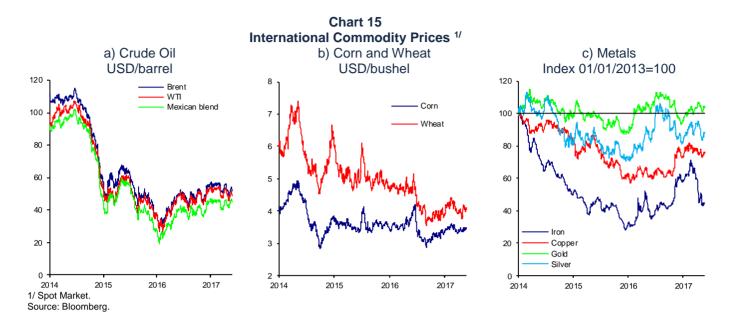
Chart 14

#### c) Emerging Economies: Exports Annual change of the 3-month moving average in percent



#### 3.1.2. **Commodity Prices**

During the period analyzed in this Report, international commodity prices generally stabilized around the levels registered in late 2016. In particular, oil prices decreased as a result of higher levels of crude oil production in the U.S., even though in recent weeks there has been a certain recovery in light of the agreement established among the OPEC member countries and other oil producing economies to extend production cutbacks until March 2018. On the other hand, industrial metal prices reverted the increment at the beginning of the year, as production went up. In the meantime, grain prices went down after a moderate recovery at the beginning of the year, in view of the increment in the forecast for global final inventories, released by U.S. Department of Agriculture (Chart 15).



### 3.1.3. Inflation Trends Abroad

Inflation kept rising in the main advanced economies during the first quarter of 2017, reflecting energy price increments during most of 2016, as well as lower slackness in the use of resources. Still, in most economies inflation remains below the respective central banks' targets, while its core component and inflation expectations are at even lower levels (Chart 16a and Chart 16b).

In the U.S., the consumption deflation shifted from an annual rate of 1.6 percent in December 2016 to 1.8 percent in March 2017. Even though the annual change of the core index decreased from 1.7 to 1.6 percent in this period, it was largely due to transitory factors, such as drops in telecommunication tariffs.

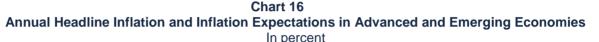
In the Euro area, inflation continued increasing during the reference period, from an annual rate of 1.1 percent in December 2016 to 1.9 percent in April 2017. Meanwhile, core inflation went up from 0.9 percent to 1.2 percent in the said period, mainly due to temporary factors, especially higher prices of the tourism services' component, as a result of the Easter calendar effect. Although inflation exhibited a major convergence among the economies of the region, inflation and its expectations still lied below the target set by the European Central Bank. This reflects the presence of a certain degree of slackness in the labor market in the Euro area.

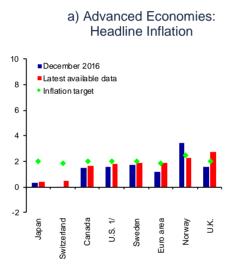
In the U.K., progress of consumer inflation continued, as it shifted from an annual rate of 1.8 percent in December 2016 to 2.6 percent in April, exceeding the 2 percent target established by the Bank of England for the first time since September 2013. Similarly, the core indicator presented an increase in its rate from 1.8 percent in December to 2.4 percent in April. The inflation rebound was largely due to the pass-through effect of the previous depreciation of the pound sterling onto prices, a tendency, which, albeit being offset by a limited increase in domestic costs, could imply greater inflation pressures throughout the year.

In Japan, headline inflation increased from an annual rate of 0.3 percent in December to 0.4 percent in April. On the other hand, the indicator, which excludes

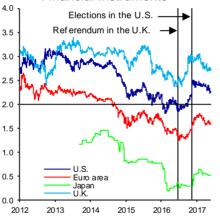
fresh foods, shifted from a rate of -0.2 percent to 0.3 percent in this period, and thus continued with a recovery trend it had started in the last quarter of 2016, which was mainly related to the progress in energy prices during most of 2016. Despite the estimation that the recent tightening in the labor market could generate greater inflation pressures, wage indicators of the first quarter suggest that they will remain moderate. Additionally, inflation expectations and break-even inflation reflected in financial instruments remained far below the target set by the Bank of Japan.

In emerging economies, inflation has performed in a differentiated manner across countries and regions, but in many cases inflation pressures have moderated insofar as the effects of the pass-through of the previously observed exchange rate weakness onto prices dissipated in many of these countries, along with a lower impact of increments in public tariffs and taxes, which occurred in most cases in 2016. Lower inflation pressures derived from exchange rate adjustments and from higher commodity prices allowed inflation in this group of economies to be largely determined by their relative position in the business cycle (Chart 16c).

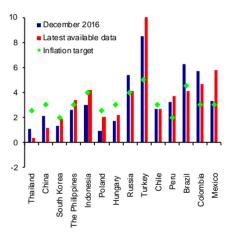




 It refers to consumption deflator. Seasonally adjusted data.
 Source: Haver Analytics. b) Advanced Economies: Long-term Inflation Expectations Derived from Financial Instruments <sup>1/</sup>



1/ Inflation expectation in a 5-year period for the following 5 years. Expectations obtained from swap contracts in which one counterparty agrees to pay a fixed rate in exchange for receiving a referenced payment at an inflation rate over a specified period. Source: J.P. Morgan. c) Emerging Economies: Headline Inflation



Source: Haver Analytics.

#### 3.1.4. International Monetary Policy, and Financial Markets

In advanced economies, the monetary stance of the main central banks remained accommodative during the first months of 2017, even though there are still divergences across countries, as a reflection of the differences in their relative positions in the economic cycle. While the monetary normalization process in the U.S. continues, in the Euro area and Japan the importance of maintaining an accommodative policy has been called attention to, even though a lower need of further stimuli is perceived in view of lower deflationary risks.

In its meeting of March, the Federal Reserve increased the target for the federal funds' rate by 25 basis points, locating it between 0.75 to 1 percent, and subsequently maintained it unchanged in its meeting of May. In the latest press release, this Institution emphasized the strength of the labor market and its expectation that economic activity will continue expanding, despite the deceleration during the first guarter, which was perceived as an eminently temporary phenomenon. In this context, the market expectation that the cycle of upward adjustments in the federal funds' rate is to be resumed in the next meeting of June has not been modified. In this environment, it has been confirmed that the most appropriate strategy to stabilize inflation around its 2 percent target is still through a gradual increment in the reference rate, and that the referred institution will continue monitoring the evolution of inflation and its expectations with respect to a symmetrical objective. Furthermore, there was a strengthening of the expectation that by the end of 2017 the Federal Reserve will start taking actions aimed at decreasing the size of its balance, which would accelerate the process of the monetary policy normalization. Still, this institution has been emphasizing that the said process should take place in a gradual and predictable manner, by not reinvesting at least part of the securities' maturities held by it.

In its meeting of April, the European Central Bank maintained its levels of the reference interest rates unchanged. This institution perceives a lower probability of implementing further monetary stimuli, considering that the risks to growth, despite being biased to the downside, have moderated. Nonetheless, even though deflation risks decreased and the dispersion of inflation levels across the economies has diminished, this institution acknowledges that inflation pressures are still low and do not give any clear signals of increasing, reason why the need to maintain an accommodative monetary stance persists. In this sense, the ECB confirmed that it remains prepared to adjust the size and/or the duration of its asset purchase program, if necessary.

In its meeting of April, the Bank of Japan maintained unchanged the amount of its asset buying program and its guide to manage the yield curve, with the deposit rate of -0.1 percent and the 10-year government rate around 0 percent. Although its press release specified that the economy could initiate a moderate expansion process and that inflation remains at low levels mainly due to transitory factors, the need to maintain the monetary stance accommodative was emphasized. In accordance with that, the Bank of Japan increased its growth expectations for 2017 and 2018, and, despite moderately reducing its inflation forecast for 2017, it estimates that inflation will attain its 2 percent target in 2019.

In its meeting of May, the Bank of England also maintained its monetary stance unchanged. Even though this institution keeps perceiving downward risks to growth, it stood out that the economic activity has continued presenting dynamism, despite the uncertainty with respect to the U.K. exit from the European Union, and it signaled that its monetary stance will continue depending on the balance between the inflation above its target and the level of slackness in the economy. In its Inflation Report of May, this institution lowered its growth expectation for 2017 and raised it for the subsequent years. Moreover, it increased its inflation forecast for 2017 and adjusted its outlook for the following years downwards, even though it anticipated that inflation will still remain above its target during the next three years, slowly converging towards it. Thus, this institution stressed that, if the economy evolves in accordance with the estimates, the monetary policy will have to follow a slightly greater tightening trajectory than that reflected in the yield curve of the market.

In emerging economies, in the first months of 2017 monetary stances remained differentiated in accordance with the cyclical position of the countries, as well as with different idiosyncratic factors. Indeed, moderation of inflation pressures contributed to the fact that the monetary stance remained unchanged in a great number of economies and even relaxed in such countries as Brazil, Colombia and Russia, where pressures declined considerably and the output gap remained significant. On the other hand, some other central banks, Turkey among them, preferred monetary tightening in view of greater inflation risks derived from geopolitical factors.

There was lower volatility in international financial markets and asset prices increased during the first months of 2017, with respect to the last months of 2016. This occurred despite the persisting uncertainty regarding the economic policy in the main advanced economies and despite the increasing geopolitical risks across different regions of the world. The favorable performance of the markets seems to be responding more to the expected scenario of sustained growth rather than to high levels of political and economic uncertainty. Thus, interest rates in advanced economies remained at historically low levels, while their stock markets kept increasing (Chart 17). Emerging markets registered significant capital inflows. reverting the outflows that had been observed in the wake of the U.S. elections. In this context, most currencies in emerging economies strongly appreciated (Chart 18). Additionally, market indicators that measure the sovereign credit risk for this group of countries exhibited a widespread decrease. Still, despite low volatility measures, markets do not rule out extreme or tail risks, observing an increment in the costs of these risk hedges. Indeed, episodes of greater instability in financial markets cannot be ruled out yet, given the persisting uncertainty over the materialization of the scenario that is sustaining favorable expectations, such as the probability that the above referred extreme risks to the global economy may take place.

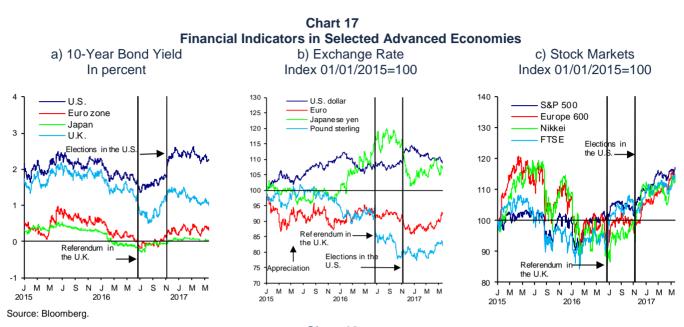
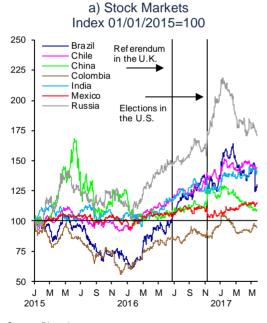
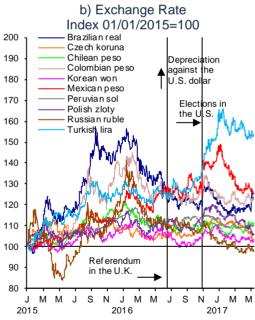
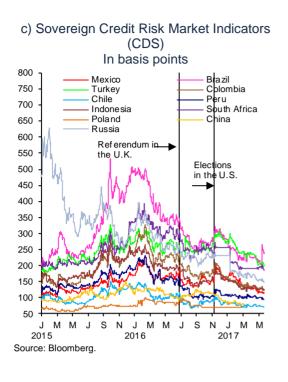


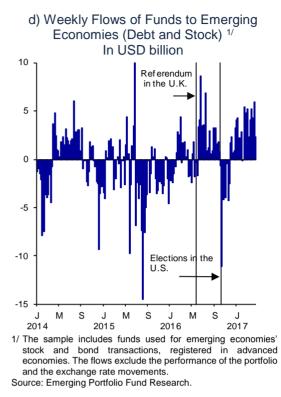
Chart 18 Financial Indicators in Selected Emerging Economies



Source: Bloomberg.







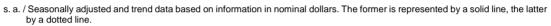
# 3.2. Evolution of the Mexican Economy

# 3.2.1. Economic Activity

In the first quarter of 2017, the growth rate of the Mexican economy was similar to that observed in the last quarter of 2016. This largely reflected the expansion of both private consumption and external demand. In contrast, weakness of investment accentuated.

Indeed, in the period of January – March 2017 manufacturing exports kept recovering, following the negative trend displayed during 2015 and in early 2016, which had been contributed to by the depreciation of the real exchange rate and the gradual strengthening of global economic activity in general, and in particular of the U.S. industrial production and foreign trade. The improvement in Mexican exports was observed both in those destined to the U.S. and to the rest of the world (Chart 19a). Likewise, the reactivation was visible in both automotive and non-automotive exports (Chart 19b and Chart 19c). Meanwhile, oil exports expanded in the first quarter of the year, although they remain at low levels. This increment is accounted for by a higher average price of the Mexican blend for exports, given that the crude oil platform for exports decreased (Chart 19d).

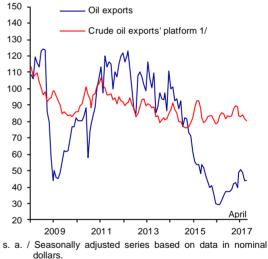




Source: Banco de México with data from SAT, SE, Banco de México, INEGI. Merchandise Trade Balance. SNIEG. Information of National Interest.







s. a. / Seasonally adjusted and trend data based on information in nominal dollars. The former is represented by a solid line, the latter by a dotted line.

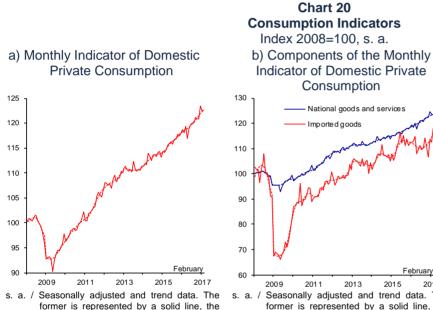
As regards domestic demand, in early 2017 the monthly indicator of domestic private consumption continued with a positive trend. The increasing trajectory of this indicator reflected the performance of both the domestic goods and services' component, and the consumption of imported goods (Chart 20a and Chart 20b).

Source: Banco de México with data from SAT, SE, Banco de México, INEGI. Merchandise Trade Balance. SNIEG. Information of National Interest.

 <sup>3-</sup>month moving average of daily barrels of the seasonally adjusted series.

Source: SAT, SE, Banco de México, INEGI. Merchandise Trade Balance. SNIEG. Information of National Interest and Banco de México with data from *PMI Comercio Internacional*, S.A. de C.V.

- i. Despite the above, more timely indicators, but with less coverage, suggest a certain deceleration of private consumption. In fact, the revenues of retail businesses and the sales of light vehicles declined in the quarter (Chart 20c).
- Strength of the labor market seems to have contributed to maintaining ii. relatively high private consumption levels, even though in the guarter there was a drop in real wages as a result of higher inflation. Moreover, remittances and the growth rate of consumer credit slightly decelerated in the reference period, although they remain at high levels (Chart 21a, Chart 21b and see Section 3.2.3). Similarly, consumer confidence remained low, in spite of the recovery following the plunge registered last January (Chart 21c).



former is represented by a solid line, the latter by a dotted line.

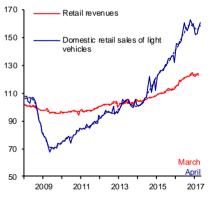
Source: Mexico's National Accounts System (SCNM), INEGI.

Indicator of Domestic Private Consumption National goods and services Imported a oods February 2013 2015 2017

Seasonally adjusted and trend data. The former is represented by a solid line, the latter by a dotted line.

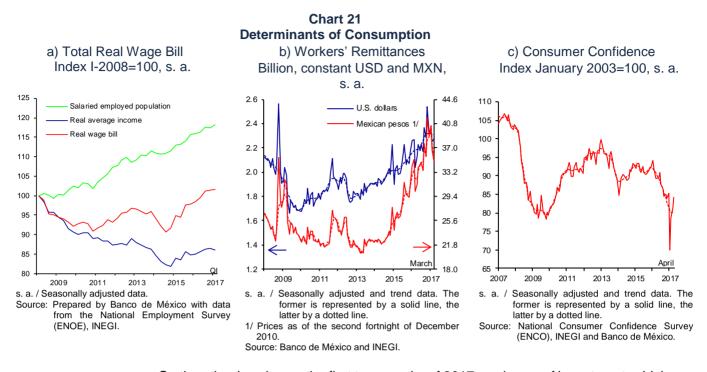
Source: Mexico's National Accounts System (SCNM), INEGI.



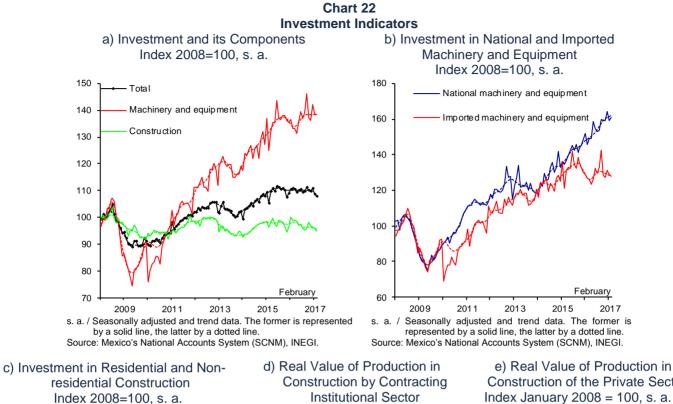


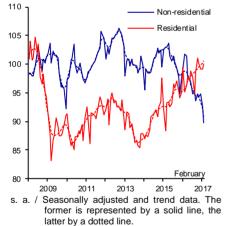
s. a. / Seasonally adjusted and trend data. The former is represented by a solid line, the latter by a dotted line.

Source: Prepared by Banco de México with data from the Mexican Automotive Industry Association (AMIA) and the Monthly Survey of Commercial Establishments (EMEC), INEGI.



On the other hand, over the first two months of 2017 weakness of investment, which had been registered before, accentuated, even indicating an incipient negative trend (Chart 22a). In particular, the imported component of investment in machinery and equipment kept decreasing, while the domestic component slightly decelerated (Chart 22b). As regards construction, the positive trend prevailing in residential construction has been offset by the negative trend in non-residential construction (Chart 22c). In turn, the performance of the latter has been affected by the contraction in public sector construction and by a deceleration in private sector construction relative to the growth rate that was observed in the first half of 2016 (Chart 22d). Specifically, considering construction projects contracted by the private sector, there was a quarterly decrease in the construction of industrial, commercial and service buildings. On the contrary, a positive trend persisted in works related to installations in buildings, such as electromechanical and air-conditioning installations (Chart 22e). Notably, there is a possibility that in late 2016 and in early 2017 private investment in Mexico was at levels below those that would have been observed in the absence of uncertainty related to the protectionist rhetoric of the new U.S. administration (see Box 2).





Source: Mexico's National Accounts System, INEGI.

Institutional Sector Index January 2008 = 100, s. a. <sup>1/</sup>



s. a. / Seasonally adjusted and trend data. The former is represented by a solid line, the latter by a dotted line.

1/ Seasonally adjusted by Banco de México, except for the total.

Source: Prepared by Banco de México with data from ENEC, INEGI.

Construction of the Private Sector Index January 2008 = 100, s. a. <sup>1/</sup>



s. a. / Seasonally adjusted and trend data. The former is represented by a solid line, the latter by a dotted line.

1/ Seasonally adjusted by Banco de México. Source: Prepared by Banco de México with data from ENEC, INEGI.

Quarterly Report January - March 2017

## Box 2 Analysis of the Recent Performance of Private Investment

### 1. Introduction

In recent years, the Mexican economy has faced a particularly complex external environment, characterized by weak global economic activity and world trade, along with volatility in international financial markets and lower oil prices. Besides, since the beginning of the U.S. elections and subsequently after their outcome, the latent risk that in the future the U.S. authorities may implement policy measures that would hamper international trade generated an environment of high uncertainty in Mexico, which led to a deterioration in business confidence. This, in turn, seems to have generated less private investment as compared to the level that would have been observed in the absence of the protectionist rhetoric of U.S. authorities. Thus, the uncertainty that has prevailed in recent months seems to have contributed to the weakness in private investment from a medium-term perspective and, in particular, since the second half of 2015.

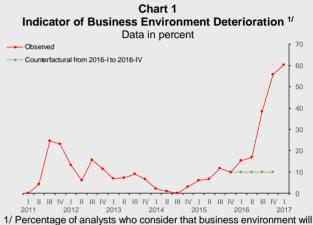
In this context, this Box presents evidence indicating that uncertainty and the deterioration of the economic outlook negatively affected the recent evolution of private investment in Mexico. To this end, an econometric model was estimated, which controlled for different factors affecting investment decisions.

## 2. Econometric Model

To explain the recent performance of private investment in Mexico, an error correction model was estimated using data from 1999-I to 2016-IV. This model takes private investment as the independent variable (measured by the gross formation of fixed capital in the private sector) and includes the deterioration level of the business environment as an explanatory variable, while controlling for other factors that can affect investment.

Business agents' and investors' expectations over future economic activity are an important determinant of investment decisions, as they directly affect the assessment of profitability and risks associated to any production project. To carry out the econometric analysis, information from the question of business environment expectations asked in the Survey of Professional Forecasters carried out by Banco de México on a monthly basis was used. Specifically, the quarterly average of the percentage of analysts, who consider that the business environment will worsen over the next six months was employed. This indicator has strongly deteriorated since the second half of 2016 (Chart 1). Even though this deterioration may be related to an array of factors, the observed sharp increase, given the dates over which it took place, seems to be

related to the process of the U.S. elections and their outcome. Indeed, these events gave rise to great uncertainty over the U.S. – Mexico economic relationship. In this respect, it should be noted that in the same survey, the percentage of analysts that mentioned international political uncertainty as one of the main obstacles for growth shifted from an average of 1 percent in the first quarter of 2016 to 13 percent in the same period of 2017.



worsen over the next six months, in line with the Survey of Professional Forecasters carried out by Banco de México. Source: Prepared by Banco de México with own data.

The cost of capital is another factor that determines investment decisions. The econometric analysis controls for the behavior of cost of capital using a measure of the real ex ante interest rate, based on the annualized yields of 28-day Cetes and the 12-month inflation expectations. Additionally, the ahead econometric analysis controls for the growth of the Gross Domestic Product and public investment. The former, to a certain degree, captures the resources available for investment, while providing signals on the profitability of productive projects. Similarly, public investment also affects private investment decisions, even though its effect is ambiguous from a theoretical point of view. Insofar as public investment contributes to a greater and better infrastructure, its effect on private investment will be complementary. However, lower private investment could also arise as a consequence of a crowding-out effect generated by public investment.

Cointegration tests show that in the long run private investment is positively related to GDP, and negatively to public investment. According to this model, the long-term relation of private investment with GDP and public investment is given by the following equation:<sup>1</sup>

$$IPr_t = 1.34 Y_t - 0.11 IPu_t$$

Where:

IPr = Gross formation of fixed capital in the private sector, at 2008 prices;

Y = Real GDP of Mexico, at 2008 prices; and

IPu = Public investment in national accounts, at 2008 prices.

In turn, the short-term relationship is described by the following equation:

$$\begin{split} \Delta IPr_{t} &= -1.61 - \underbrace{0.27}_{(0.49)} EC_{t-1} + \underbrace{0.35}_{(0.07)} \Delta IPr_{t-4} + \underbrace{1.29}_{(0.14)} \Delta Y_{t} \\ &- \underbrace{0.06}_{(0.03)} \Delta IPu_{t-2} - \underbrace{0.06}_{(0.03)} Conf_{t-1} + \underbrace{0.07}_{(0.03)} Conf_{t-2} \\ &- \underbrace{0.05}_{(0.02)} Conf_{t-5} - \underbrace{1.16}_{(0.40)} \Delta R_{t-1} - \underbrace{0.77}_{(0.31)} \Delta R_{t-3} \\ &- \underbrace{0.54}_{(0.23)} \Delta R_{t-5} \end{split}$$

Where:

EC = Error correction term;

Conf = Indicator of a worsening in the business environment;

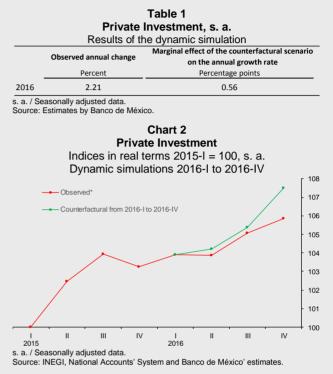
R = Real interest rate; and

 $\Delta$  = Difference operator.

The estimated short-term dynamics suggest that a deterioration in the business environment is related to lower growth of private investment. Thus, the analysis suggests that the loss of confidence could indeed be adversely affecting private investment. In this sense, uncertainty related to the mere possibility that the U.S. implements policies that could hamper its economic relationship with Mexico, even if specific polices have not been put into effect, seems to be already generating real negative effects on the Mexican economy.

### 3. Counterfactual Exercise

To analyze the extent to which the loss of confidence has affected private investment, this section evaluates a counterfactual scenario of the behavior of the perception of the business environment in Mexico. In particular, it is assumed that the indicator of a business environment worsening remains unchanged from the last quarter of 2015 and until the end of 2016 (Chart 1). The results of this exercise suggest that the annual growth rate of private investment in 2016 would have been 0.56 percentage points higher than the observed rate of 2.21 percent, in the absence of the deterioration of the business environment that was registered throughout that year (Table 1 and Chart 2).



As described in Section 3.2.1 of this Report, private investment kept decelerating at the beginning of the first quarter of 2017. In line with the estimates prepared for this Box, the said weakness can be attributed to the further deterioration in the business climate observed in that period (Chart 1), which, in turn, can be associated to greater uncertainty regarding the U.S. authorities' stance on the future of the North American Free Trade Agreement.

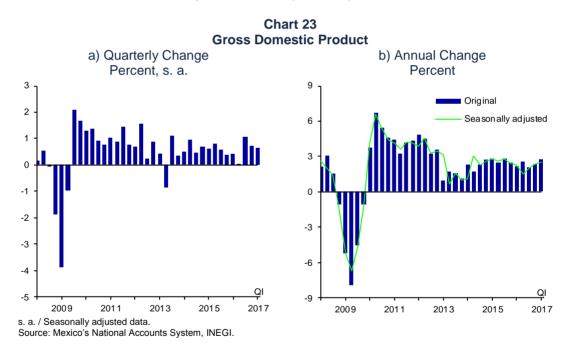
#### 4. Final Remarks

The results of this Box suggest that private investment in Mexico has been affected by the reduced business confidence in light of the uncertainty over the economic policies that may be implemented by the new U.S. administration. Still, from a medium-term perspective, weakness of private investment in Mexico, registered since the 2008 global financial crisis, is worrisome. Furthermore, this weakness has been observed in a context in which public investment over the same period presented a marked decreasing trend. Thus, the continuous growth of the Mexican economy in recent years could be incurring certain imbalances, given that private consumption has been relatively dynamic, while private investment has been registering a prolonged atony. This composition may turn out unsustainable in

<sup>&</sup>lt;sup>1</sup> The model was estimated with the quarterly data without seasonal adjustment in logarithms, except for the case of the interest rate and the indicator of the worsening in the business environment. Standard errors of the coefficients are included in parenthesis. The Johansen trace test suggests that the cointegration relation among variables is significant at conventional significance levels. Equations that describe short-term dynamics satisfy traditional specification tests and diagnostics at conventional significance levels, and include indicator variables that control for outliers.

the medium run, in particular due to the fact that, if weakness in investment spending persists, the potential growth of Mexico could be negatively affected. Therefore, it is imperative for the country to intensify its efforts to generate the conditions that would allow business confidence to recover and would lead to more investment. In this sense, economic policy actions that strengthen the macroeconomic framework of Mexico should continue to be adopted and further progress in the modernization efforts of the country by adequately implementing structural reforms should be made. Similarly, it is indispensable to continue strengthening the rule of law, so that corruption and a lack of safety do not become obstacles to greater investment, and, therefore, impediments to the economic development of the country.

As regards the performance of economic activity from the production side, in the first quarter of 2017 GDP grew 0.67 percent with respect to the previous period, based on seasonally adjusted data, after having presented respective quarterly changes of 1.08 and 0.73 percent in the third and the fourth quarters of 2016. In the annual comparison based on seasonally adjusted data, in the period of January – March 2017, the Mexican economic activity presented an annual growth rate of 2.6 percent, after annual increments of 2.0 and 2.3 percent in the third and the fourth quarters of 2016, respectively. Based on non-seasonally adjusted data, in the reference quarter, GDP expanded at an annual rate of 2.8 percent, figure that compares to an annual increase of 2.0 percent in the third quarter and of 2.3 percent in the fourth quarter of 2016 (Chart 23).



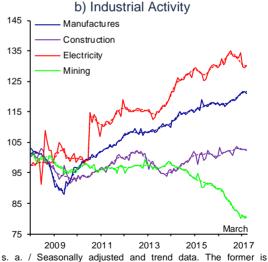
In the first quarter of 2017, GDP growth continued reflecting the dynamism of services, while the secondary activities as a whole kept exhibiting stagnation they had registered since mid-2014 (Chart 24a). In particular, within industrial activity, manufacturing production maintained a positive performance, which was offset by the stagnation in construction, a negative evolution in the electricity sector and a downward trend in mining.

- i. Indeed, in the period being reported, the positive trend in manufacturing production persisted, indicating a recovery with respect to the levels observed in 2015 and the first half of 2016 (Chart 24b). This improvement reflected the positive trends both in the items of transport equipment and in the non-transport manufacturing aggregate, even though the latter contracted in March, largely as a result of drops in the subsectors of chemical industry; beverage and tobacco industry; manufacturing of accessories, electric equipment and power generation equipment; food industry; and machinery and equipment manufacturing (Chart 25).
- ii. In contrast, the indicator of spending on construction –which, unlike that reported in the classification of investment in aggregate demand, excludes oil drilling- remained stagnant (Chart 24b). Indeed, the marked positive trend exhibited by the component of specialized works has been offset by a deceleration in construction of buildings; and spending on civil construction works remained low, as a reflection of a lower amount of works contracted by the public sector.
- iii. Similarly, a negative quarterly seasonally adjusted change was observed in the electricity, water and gas pipeline supply sector, which has exhibited lower sales of electricity both for residential and for industrial and commercial use (Chart 24b).

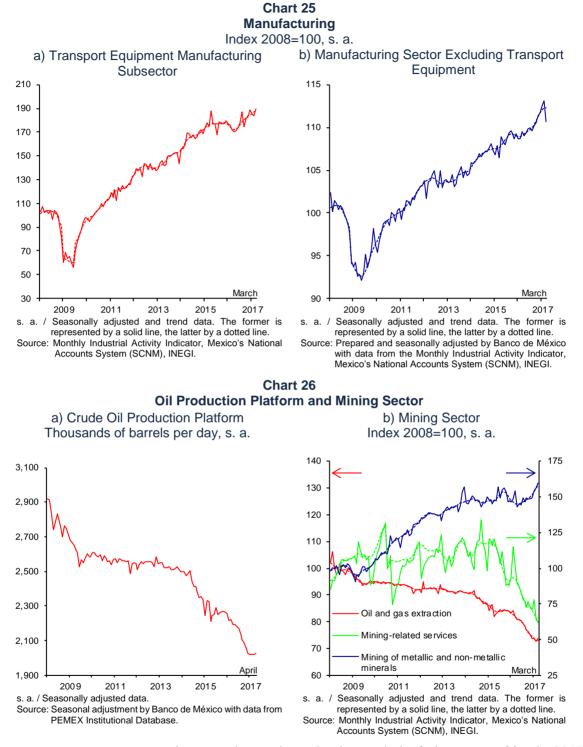
iv. Additionally, mining kept contracting, as a result of a lower crude oil production platform, as well as the contraction in oil drilling (Chart 26a and Chart 26b).



Chart 24 Production Indicators Index 2008=100, s. a.



represented by a solid line, the latter by a dotted line. Source: Mexico's National Accounts System (SCNM), INEGI. represented by a solid line, the latter by a dotted line. Source: Monthly Industrial Activity Indicator, Mexico's National Accounts System (SCNM), INEGI.



۷.

As regards services, in the period of January – March 2017, they maintained a positive trend, despite a slowdown. In particular, this growth has been principally contributed to by the increment in financial and real estate services, as well as in professional, corporate and business support-related services. Nevertheless, there was a certain moderation in

the growth rate of the commerce component; of the transport and mass media component; and of temporary lodging and food preparation services. Possibly, the latter has been in part affected by a certain deceleration in spending by international tourists (Chart 27).

vi. The quarterly (seasonally adjusted) expansion of primary activities in the first quarter of 2017 largely derived from an increment in the area sown in the spring – summer and the autumn – winter cycles, as well as from a greater production of some perennial crops, principally cane sugar.

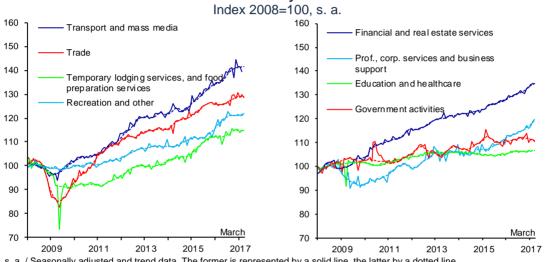


Chart 27 Global Economic Activity Indicator: Services

s. a. / Seasonally adjusted and trend data. The former is represented by a solid line, the latter by a dotted line. Source: Mexico's National Accounts System (SCNM), INEGI.

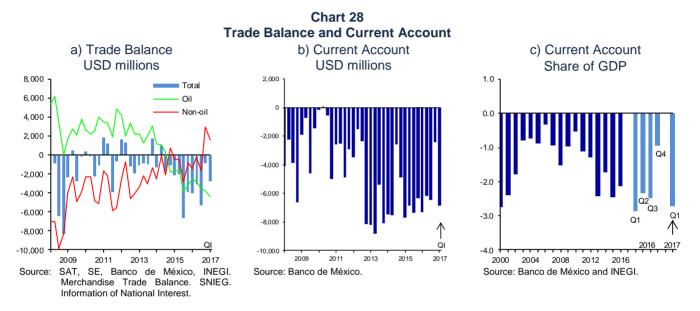
With regard to Mexico's external accounts, in the first quarter of 2017, deficit of the current account totaled 2.7 percent of GDP (USD 6.9 billion), a figure that is lower than the 2.8 percent of GDP registered in the first quarter of 2016 (Chart 28b and Chart 28c). It should be taken into account that various components of the current account exhibit seasonality, therefore the comparison to the results reported in the same period of the previous year are especially relevant.<sup>3</sup> In relation to the performance of the current account components, the following stands out:

- i. In the analyzed period, non-oil trade balance presented a surplus, which stood in contrast to the deficit registered in the same period of 2016. Conversely, the oil trade deficit kept growing. Based on these results, in the first quarter of 2017 the total trade deficit added up to USD 2.8 billion, which was below the amount registered in the first quarter of 2016 (USD 4.0 billion; Chart 28a).
- ii. On the other hand, in the first quarter of 2017, deficit in the services' balance increased with respect to the first quarter of 2016. Within it, it stands out that although the surplus of the travel account kept expanding,

<sup>&</sup>lt;sup>3</sup> Through the dissemination of the balance of payment data referent to the first quarter of 2017, Banco de México began releasing these statistics in accordance with the classification criteria of the sixth edition of the Balance of Payments Manual of the IMF.

its growth was insufficient to offset the growing deficit in the rest of the components that comprise the services' balance.

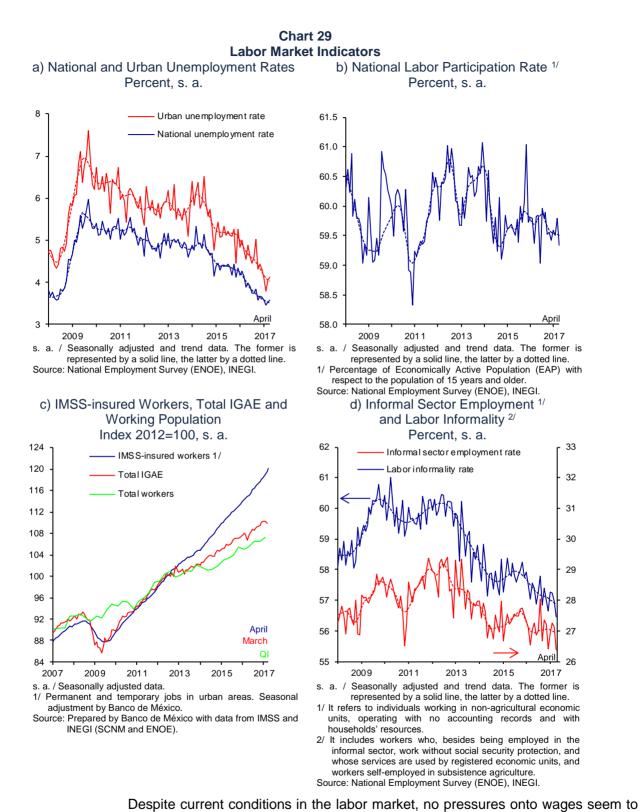
- iii. In January March 2017, the deficit in the primary income balance increased with respect to the same period of 2016, mainly due to higher net interest payments abroad, while the negative balance from the profits line remained relatively constant.
- Finally, the surplus in the secondary income balance increased in the annual comparison, essentially due to higher income from remittances.
   Still, it stands out that these decelerated in the first quarter of the year with respect to the levels observed over the previous three quarters.



## 3.2.2. Labor Market

In the period of January – April 2017, labor market conditions kept tightening, so that, in fact, this market seems to no longer exhibit slack. Indeed, both the national and urban unemployment rates maintained a downward trend and lied below the levels reported in 2008, prior to the onset of the global financial crisis (Chart 29a). The above occurred in a context in which the labor participation rate slightly went up with respect to the last quarter of 2016 (Chart 29b). Thus, there was an increment in the number of employed population. In particular, in the period of January – April 2017, the number of IMSS-affiliated jobs continued growing (Chart 29c). Meanwhile, the labor informality rate has remained at the lowest levels in twelve years (Chart 29d).<sup>4</sup>

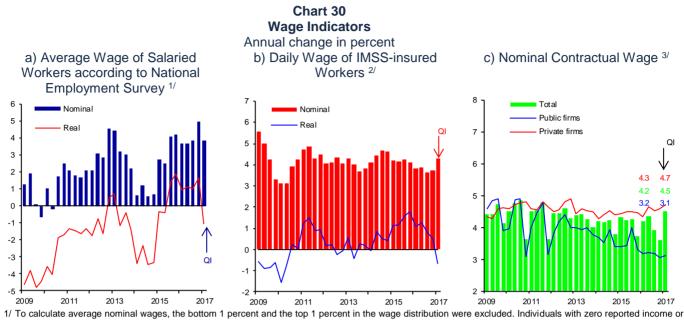
<sup>&</sup>lt;sup>4</sup> Currently, the labor informality rate is measured based on the National Employment Survey (ENOE), which started to be carried out in 2005. In this context, in April 2017 this indicator marked the lowest level since the beginning of this survey.



be observed, given that real average remunerations have declined. In fact, in accordance with various available indicators, in the first guarter of 2017 real

average remunerations registered a contraction, derived the recent performance of inflation. In particular:

- i. The annual growth rate of the average wage of salaried workers in the economy lied at 3.9 percent in the period of January March 2017 (Chart 30a). However, as stated above, in view of the recent evolution of inflation, an annual decrease of 1.0 percent in real terms has been observed.
- ii. Similarly, in the reference period, even though the daily wage of IMSSaffiliated jobs showed an annual increment of 4.3 percent, which was the largest since the last quarter of 2014, it presented an annual reduction of 0.7 percent in real terms (Chart 30b). In April 2017, these wages exhibited an even larger average expansion, of 4.9 percent. Nonetheless, that implied an annual drop of 0.9 percent in real terms.
- iii. In the first quarter of 2017, the growth rate of contractual wages negotiated by firms under federal jurisdiction was greater than that in the same quarter of 2016 (Chart 30c). This increase is attributed to a greater average increment in wages negotiated by private firms with respect to last year, whereas the average change rate of increments negotiated by public firms was lower than in the first quarter of 2016. Nevertheless, in April 2017, the average change rate of nominal contractual wages of 3.9 percent was lower than the one reported in the same month of 2016, while the inflation evolution during that month generated a negative annual change in real terms.
- iv. The performance of real average remunerations is congruent with the perception of the group of business agents who participated in the Credit Market Conditions Survey in the first quarter of 2017. On the one hand, only 2.0 percent of businesses indicated Labor Force Availability as the most pressing problem they had faced during the first quarter of 2017. On the other hand, prospectively, only 2.2 percent of business agents pointed to an Increment in Wage Costs as one of the factors that would limit growth of economic activity during the next six months.



those who did not report it are excluded.

2/ During the first quarter of 2017, on average 18.8 million workers were registered with IMSS.

3/ The contractual wage increase is an average weighted by the number of involved workers. The number of workers in firms under federal jurisdiction that report their wage increases each year to the Secretary of Labor and Social Welfare (STPS) is approximately 2.3 million.

Source: Calculated by Banco de México with data from IMSS, STPS and INEGI (ENOE).

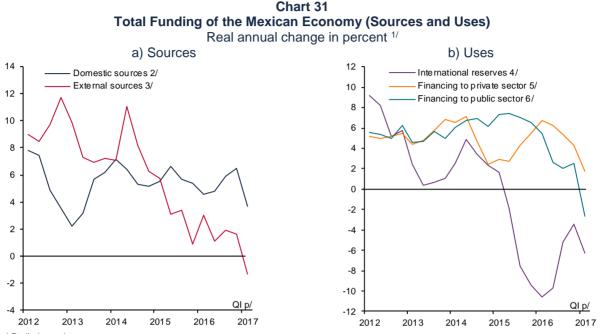
## 3.2.3. Financial Saving and Financing in Mexico <sup>5</sup>

In the first quarter of 2017, the sources of financial resources of the economy decelerated with respect to the previous quarter. Indeed, in this period, the real annual change shifted from 4.5 to 1.7 percent, which was the lowest since the first quarter of 2010 (Chart 31a). This reflected lower growth rates both of domestic and external sources, in a context of high uncertainty regarding the direction of the economic policy in advanced economies, particularly in the U.S., and the potential implications for the Mexican economy. Thus, despite the persisting decrease in public sector financial requirements, as a result of the ongoing efforts of fiscal consolidation and given that international reserves slightly declined in the reference quarter, the lower growth of sources of financial resources was reflected in a deceleration of financing to the private sector relative to the previous quarter (Chart 31b).

As regards domestic sources of financial resources of the economy –measured as the monetary aggregate M4 held by residents–, their growth rates declined from 6.5 to 3.7 percent in real annual terms between the fourth quarter of 2016 and the first one of 2017 (Chart 32a). This derived from a lower growth of both the voluntary and the compulsory components (Chart 32b). On the other hand, the real annual change of the external sources was -1.4 percent in the first quarter of 2017, which was lower than 1.6 percent observed in the previous quarter (Chart 31a). Largely, this resulted from a sustained decrease in external resources (both bank and market resources) destined to finance businesses in Mexico. In contrast, it is noteworthy that the stock of the monetary aggregate M4 held by non-residents exhibited a rebound in its

<sup>&</sup>lt;sup>5</sup> In this section, unless otherwise stated, growth rates are expressed in real annual terms and are calculated based on balances adjusted due to exchange rate and asset price variations.

growth rate, as it shifted from -3.1 to 0.5 percent between the fourth quarter of 2016 and the first one of 2017. This was largely a reflection of an increase in the holdings of medium- and long-term government bonds by non-residents (Chart 32c).



p/ Preliminary data

1/ Real annual changes are calculated based on balances adjusted due to exchange rate and asset price variation.

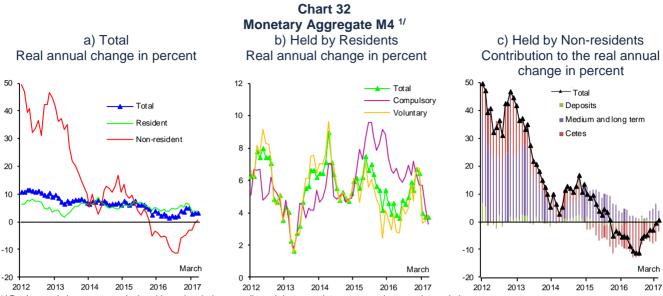
2/ It includes the monetary aggregate M4 held by residents.

3/ It includes the monetary aggregate M4 held by non-residents, foreign financing for the federal government, public institutions and enterprises, commercial banks' foreign liabilities and external financing to the non-financial private sector.

4/ It is made up by currencies and gold reserves of Banco de México, free of any security rights and the availability of which is not subject to any type of restriction; the position in favor of Mexico with the IMF derived from contributions to the said entity; currency obtained from financing to realize foreign exchange regulation of the IMF and other entities of international financial cooperation or groups of centrals banks, of central banks and other foreign legal entities that act as financial authorities. Currencies pending to be received for sales transactions against the national currency are not considered, and Banco de México's liabilities in currency and gold are deducted, except for those that are for a term longer than 6 months at the moment of reserves' estimation, and those corresponding to financing obtained to carry out the above mentioned foreign exchange regulation. See Article 19 of Banco de México's Law.

5/ It refers to the total portfolio of financial intermediaries, of the National Housing Fund (Instituto del Fondo Nacional de la Vivienda para los Trabajadores, Infonavit), and of the ISSSTE Housing Fund (Fondo de la Vivienda del ISSSTE, Fovissste), the issuance of domestic debt and external financing. It includes restructuring programs.

6/ It includes financing to the federal public sector, as well as financing to states and municipalities. Source: Banco de México.



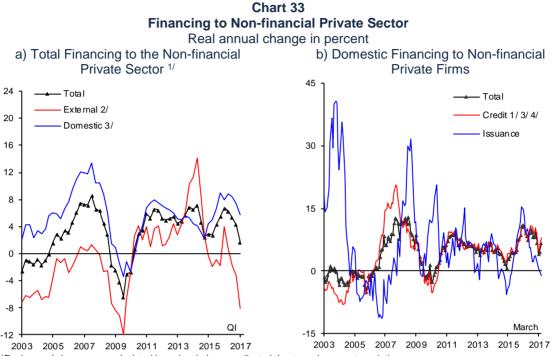
Real annual changes are calculated based on balances adjusted due to exchange rate and asset price variations.
 Source: Banco de México.

As regards the use of financial resources of the economy, the growth rate of financing to the public sector decreased in the first guarter of 2017. As mentioned above, this reflects the fiscal consolidation effort undertaken by the Federal Government, the presence of excess budgetary revenues and lower public expenditure with respect to the program, besides the delivery of Banco de México's operational surplus of the 2016 fiscal year during the reference guarter, which amounted to MXN 321.7 billion. Thus, the real annual growth rate of financing to the public sector in the first quarter of 2017 was -2.7 percent, which compares to 2.6 percent in the fourth quarter of 2016. It is notable that, even excluding the effect of Banco de México's operational surplus on the historical balance of the Public Sector Borrowing Requirements, financing to the federal public sector would have expanded at a lower rate as compared to that observed during the previous quarter (0.9 percent). On the other hand, in January – March 2017, the stock of international reserves contracted by 6.3 percent in real annual terms, which is compared to a decrease of 3.5 percent in the previous quarter.<sup>6</sup> As detailed in the Quarterly Report October - December 2016, this is due to the direct sale of USD 2 billion to the market, which took place during the first week of January 2017, in line with the instructions given by the Foreign Exchange Commission with the aim of propitiating a more orderly functioning of the foreign exchange market.

In this context, total financing to the non-financial private sector moderated its growth rate in the first quarter of 2017. This indicator expanded at a real annual rate

<sup>&</sup>lt;sup>6</sup> The real annual change of the international reserve in Mexican pesos is obtained with the method of revalued cash flows. It consists in multiplying the absolute annual change in USD by the average exchange rate of the period; adding to this amount the initial balance of international reserves in Mexican pesos, to obtain the final adjusted balance of international reserves in Mexican pesos; deflating both balances in Mexican pesos with the CPI, and, finally, calculate its annual change. Thus, in terms of US dollars, between the first quarter of 2016 and the same quarter of 2017, international reserves diminished by USD 2.8 billion. This figure expressed in Mexican pesos using the average exchange rate in the period equals an annual decrease of MXN 221 billion, which, complemented by the balance of MXN 3,508 billion of international reserves as of the first quarter of 2016 implies a real annual change of -6.3 percent. As a reference, the annual nominal change of the international reserves in US dollars in the period was -1.6 percent.

of 1.7 percent in the reference quarter, which is compared to 4.3 percent in the previous one. This resulted from the above mentioned contraction of external financing, as well as for a lower dynamism of domestic financing –especially, credit to households– (Chart 33a).



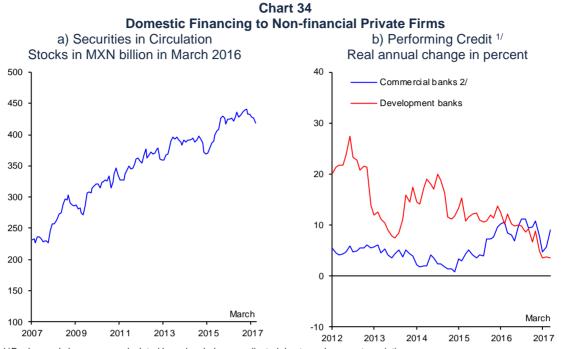
1/Real annual changes are calculated based on balances adjusted due to exchange rate variations.

2/Data of foreign financing for the first quarter of 2017 are preliminary.

3/These data are adjusted due to the withdrawal from and the incorporation of some financial intermediaries to the credit statistics.
4/ It refers to the performing and non-performing portfolios, and includes credit from commercial and development banks, as well as other non-bank financial intermediaries.

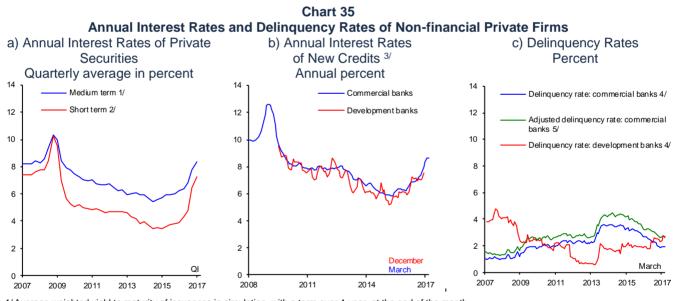
Source: Banco de México.

Delving in the above, external financing to firms has been contracting for several quarters, as a result of tighter conditions in external markets and an environment of exchange rate volatility. Thus, firms have, to a larger extent, resorted to the domestic market to meet their financing needs, especially to credit granted by commercial banks, while the issuance of debt and credit from development banks presented low dynamism. At the end of the first quarter of 2017, domestic financing to firms exhibited a real annual change of 6.6 percent, which is similar to 6.8 percent observed in December 2016 (Chart 33b and Chart 34). In this context, cost of financing to firms, measured by interest rates of new bank credits and by yield of short- and medium-term private securities, kept increasing, responding to increments in the monetary policy reference rate (Chart 35a and Chart 35b). As regards the quality of the credit portfolio, delinquency rates have persisted at low levels (Chart 35c).



1/Real annual changes are calculated based on balances adjusted due to exchange rate variations.
 2/ It includes Sofomes ER subsidiaries of bank institutions and financial groups. Data are adjusted so as not to be affected by the transfer of bridge loans.

Source: Banco de México.



1/Average weighted yield to maturity of issuances in circulation, with a term over 1 year, at the end of the month.

2/ Average weighted rate of private debt placements, at a term of up to 1 year, expressed in a 28-day curve. It only includes stock exchange certificates. 3/ It refers to the interest rate of new bank credits to non-financial private firms, weighted by the associated stock of the performing credit and for all credit terms

requested. It is presented as a 3-month moving average.

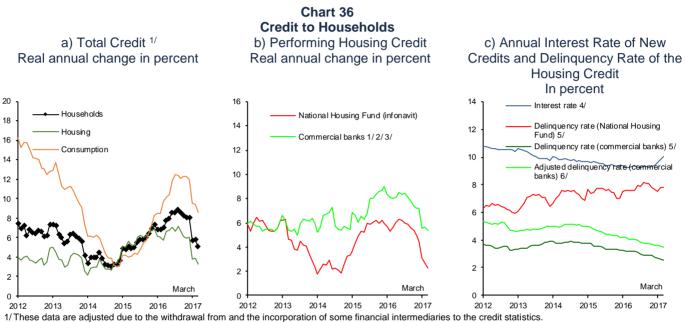
4/The delinquency rate is defined as the stock of non-performing loans divided by the stock of total loans.

5/ The adjusted delinquency rate is defined as the non-performing portfolio plus debt write-offs accumulated over the last 12 months divided by the total portfolio plus debt write-offs accumulated over the last 12 months.

Source: Banco de México.

Credit to households –both destined to housing and for consumption– continued decelerating, as its real annual change shifted from 8.0 to 5.0 percent between the

fourth guarter of 2016 and the first one of 2017 (Chart 36a). As regards housing loans, lower dynamism was observed both in the commercial bank portfolio and the National Housing Fund portfolio -which together constitute over 90 percent of total credit in this segment in Mexico- (Chart 36b).7 In terms of their costs, in the reported quarter, for the first time over the last five years, increments were observed in the interest rates of new housing loans granted by commercial banks. On the other hand, the corresponding delinguency rates remained low and stable (Chart 36c).



2/Includes the Sofomes ER subsidiaries of bank institutions and financial groups.

3/ Figures are adjusted in order to avoid distortions by the transfer and the reclassification of direct credit portfolio, by the transfer from the UDIS trust portfolio to the commercial banks' balance sheet and by the reclassification of direct credit portfolio to ADES program.

4/The interest rate of new housing credits from commercial banks, weighted by the stock associated to the performing credit. It includes credit for acquisition of new and used housing.

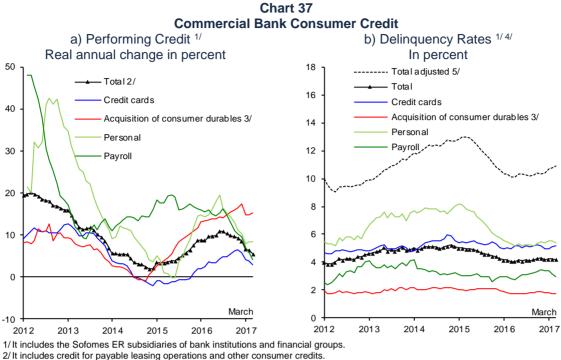
5/The delinquency rate is defined as the stock of non-performing loans divided by the stock of total loans.

6/ The adjusted delinquency rate is defined as the non-performing portfolio plus debt write-offs accumulated over the last 12 months divided by the total portfolio plus debt write-offs accumulated over the last 12 months.

Source: Banco de México.

Meanwhile, growth rates of consumer credit moderated with respect to the previous guarter, as a reflection of lower growth rates in all its components (Chart 36a and Chart 37a). Interest rates in this segment remained unchanged in the reference guarter, after certain increments registered in the second guarter of 2016, particularly in the credit granted via credit cards. On the other hand, delinquency rates in general prevailed at relatively low levels, even though the adjusted index due to the write-offs accumulated over the last twelve months has increased. reflecting the deterioration in the payroll segment (Chart 37b).

Commercial banks' housing credit includes that for acquisition of new and used housing, remodeling, payment of mortgage liabilities, credit for liquidity, acquisition of land and construction of own housing.



2/ It includes credit for payable leasing operations and other consumer credits3/ It includes auto loans and credit for acquisition of other movable properties.

4/The delinquency rate is defined as the stock of non-performing loans divided by the stock of total loans.

5/The adjusted delinguency rate is defined as the non-performing portfolio plus debt write-offs accumulated over the last 12 months divided

by the total portfolio plus debt write-offs accumulated over the last 12 months.

Source: Banco de México.

In this context, and given the recent publication of the document on the compliance with the provisions contained in Article 42, Section I of the Federal Budget and Fiscal Responsibility Law (*Pre-Criterios*) and the outlook on the PSBR in 2017 that is reflected there, it is relevant to prepare a prospective exercise of the sources and uses of financial resources of the economy. The purpose of this exercise is to analyze the possible impact of the evolution of financing to the public sector in the current environment of tight financing conditions and limited sources of financial resources.

The sources of financial resources are expected to display low dynamism in 2017 (Table 2). In particular, their annual flow is estimated to be 6.1 percent of GDP, which is lower than the figure observed in 2016 (6.7 percent) and is also below the average annual flow registered over the previous five years (8.1 percent). As regards the external sources, an annual flow of 1.0 percent of GDP is expected. This low dynamism would reflect a limited availability of resources in view of a possibility of the persisting uncertainty over the direction of the economic and trade policies in the U.S., with the consequent impact on the Mexican economy and financial markets. With respect to domestic sources, an annual flow of 5.0 percent is forecast for 2017, which is congruent with the expected evolution of economic activity for the year.

In contrast, based on the forecasts for PSBR contained in *Pre-Criterios 2017*, the annual flow of financing to the public sector is forecast to reduce from 2.9 percent of GDP in 2016 to 1.5 percent of GDP in 2017, thus reflecting the fiscal

consolidation effort undertaken by the Federal Government.<sup>8</sup> On the other hand, international reserves are expected to decumulate 0.1 percent of GDP in 2017, which is a figure similar to that observed in 2016. In view of the above, financing to the private sector is estimated to present an annual flow of 2.8 percent of GDP in 2017, which equals the flow observed during the previous year.

In this way, in the current context of tighter financing conditions and given the possibility that the sources of financial resources of the economy will maintain low dynamism, the fiscal consolidation effort of the public sector is fundamental. Besides strengthening the macroeconomic framework of the country, this would allow to limit the pressures on loanable funds' markets, by generating the necessary room to maintain the dynamism of financing to the private sector even in this environment.

Table 2
Total Funding of the Mexican Economy (Sources and Uses)
Percentage of GDP

	Annual flows						
	2012	2013	2014	2015	2016	2017 e/	
Total sources	10.0	8.6	10.2	5.1	6.7	6.1	
Domestic sources	4.4	4.7	5.8	3.9	5.6	5.0	
Foreign sources	5.7	3.8	4.4	1.2	1.1	1.0	
Non-resident M4	4.5	1.3	2.3	-0.2	-0.6	0.0	
Securities and foreign credit <sup>1/</sup>	1.2	2.5	2.2	1.4	1.7	1.0	
Total uses	10.0	8.6	10.2	5.1	6.7	6.1	
International reserves <sup>2/</sup>	1.8	1.0	1.3	-1.5	0.0	-0.1	
Public sector financing	4.2	4.1	4.8	4.2	2.9	1.5	
Public Sector Borrowing Requirements (PSBR) <sup>3/</sup>	3.8	3.7	4.6	4.1	2.9	1.4	
States and municipalities	0.0	0.1	0.1	0.0	0.0	0.1	
Private sector financing	3.2	3.9	2.5	2.9	2.8	2.8	
Households	1.4	1.1	1.1	1.3	1.6	1.4	
Firms	1.8	2.8	1.4	1.6	1.2	1.4	
Other <sup>4/</sup>	0.9	-0.5	1.7	-0.6	1.0	1.8	

Note: Figures may not add up due to rounding. Figures expressed in percent of nominal average annual GDP. The information on (revalued) flows is stripped from the effect of the exchange rate fluctuation.

e/Estimated data, expressed in percent of nominal average annual GDP estimated by Banco de México.

1/ It includes the external debt of the federal government, public entities and firms, and external PIDIREGAS, external liabilities from commercial banks and financing to the non-financial private sector.

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

3/ From 2010 to 2016, Public Sector Borrowing Requirements (PSBR) correspond to the data published by the Ministry of Finance. The data of 2017 correspond to those published in GCEP 2017 and consider the impact of the use of Banco de México's operational surplus.

4/ It includes capital accounts and results and other assets and liabilities of commercial and development banks, non-bank financial intermediaries, of the National Housing Fund (Infonavit) and Banco de México –including securities placed by this Central Institute for the purposes of monetary regulation, highlighting those related to the sterilization of its operational surplus from the monetary impact-. Likewise, it includes non-monetary liabilities from the Institute for the Protection of Bank Savings (IPAB), as well as the effect of the change in the valuation of public debt instruments, among other concepts.

Source: Banco de México.

<sup>&</sup>lt;sup>8</sup> These figures include extraordinary revenues of the Federal Government received in 2016, amounting to 1.2 percent of GDP, and in 2017 to 1.5 percent of GDP, which stemmed from the operational surplus of the 2015 and 2016 fiscal years, respectively.

# 4. Monetary Policy and Inflation Determinants

Since mid-2014, the Mexican economy has been facing different shocks, which could imply important consequences for the performance of inflation. In this context, the monetary authority has been acting in a preemptive and timely manner, considering both the transitory nature of the referred shocks and the horizon at which the monetary policy transmission channels operate, and seeking to maintain the anchoring of inflation expectations in the medium and long terms. In particular, in the second half of 2014, there were volatility episodes in international financial markets, in an environment of a major divergence among the monetary policy outlooks of the main advanced economies, as well as significant oil price drops, which was complemented by the outlook that these will remain low, in view of a decrease in observed and expected global growth and supply conditions that featured this energy product's market. This led to a considerable depreciation of the national currency and increased its volatility. As a result of that, during 2015 an important adjustment in relative prices began. However, its effect on annual headline inflation in 2015 was offset by the fading of the effects onto prices generated by 2014 fiscal adjustments, along with lower telecommunication services prices and some energy prices. Thus, even though at the end of 2015 inflation dropped to its historic low of 2.13 percent, the said depreciation of the exchange rate exercised pressure onto inflation and represented a risk to its expectations' anchoring. In this context, after maintaining the Overnight Interbank Interest Rate at 3 percent since June 2014, Banco de México's Board of Governors decided to raise it by 25 basis points to a level of 3.25 percent, in late 2015. This action also considered the 25-basis-point increment in the target range for the reference rate carried out by the Federal Reserve.

During 2016, the external environment faced by the Mexican economy continued worsening. Thus, the exchange rate kept exhibiting high volatility, as well as depreciation episodes, in particular reflecting the progress of the U.S. election process and, in November, in light of its outcome. Despite the absence of demandrelated pressures onto prices, core inflation exhibited a gradual upward trajectory, even though it was from low levels, as a consequence of the effect of the real exchange rate depreciation on the relative prices of merchandise with respect to services. On the other hand, in 2016, there was no favorable arithmetic effect of the fading of the shock that took place during the previous year, like in 2015, and price decreases in telecommunication services were lower. Thus, inflation concluded 2016 at 3.36 percent, after persisting below the 3 percent target over most of the year. Furthermore, in late 2016 and in early 2017, supply shocks of a considerable magnitude were registered, which strongly affected inflation, bringing it to the 6.17 percent level in the first fortnight of May. Further depreciation of the Mexican peso in the last months of 2016 is noteworthy, as well as the increment in energy prices, above all gasoline and LP gas, which derived from the process of their liberalization at the beginning of 2017. The latter led to an important deterioration in inflation.

That said, practically all described phenomena that led to an increment in measured inflation are changes in relative prices, that should not imply a sustained and widespread increase in prices, which is, incidentally, the definition of inflation. Precisely to prevent relative price increments from becoming generalized, it is essential for this Central Bank to act in a timely manner, in order to avoid the contamination of the price formation process in the economy, that is, to prevent

these increments in relative prices from generating second round effects. Also, as we know, the monetary policy has a lagged effect on inflation, reason why the Central Bank has to act in a timely manner. Once the shock occurs, it immediately affects the measured inflation and frequently impacts short-term inflation expectations. Now, by virtue of the monetary policy actions, this shock would have a transitory impact on inflation, but the expectations over its future performance in the medium and long terms should not be essentially affected. In fact, this should be procured by a central bank that operates under an inflation-targeting regime.

Banco de México has been adjusting its monetary policy following the above principles. Therefore, from December 2015 to May 2017, it increased its Overnight Interbank Interest Rate by 375 basis points from 3.00 to 6.75 percent, considering the simultaneity, the magnitude and the persistence of shocks in relative prices that affected inflation data (Chart 38). The results obtained so far are in line with the above. Even though the measurements of contemporaneous inflation across different points of time and short-term inflation expectations spiked, this was not the case for medium- and long-term expectations. In fact, the latter two have remained stable at 3.5 percent. This reflects that, given the above described environment, economic agents anticipate that an increment in inflation –even above the upper limit of the variability interval defined by the Board of Governors– will be temporary, expecting that in the second half of the year headline inflation will start to decrease, will locate below the said upper limit in early 2018 and will head toward the 3 percent target over the course of the subsequent months.

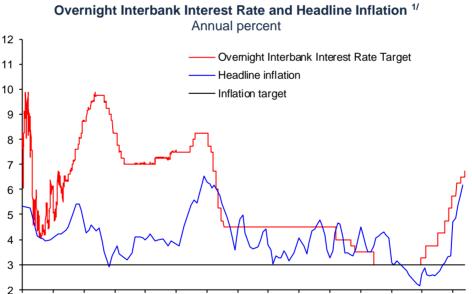


Chart 38

2 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 1/ The Overnight Interbank Interest Rate is shown until January 20, 2008. The latest inflation figure corresponds to the first fortnight of May. Source: Banco de México.

With respect to the period covered by this Report, in its meetings of February 9, March 30 and May 18, 2017, Banco de México's Board of Governors decided to lift the Overnight Interbank Interest Rate by a total of 100 basis points. As noted, these actions sought to prevent the contamination of the price formation process in the economy from the above said shocks, to anchor inflation expectations and to

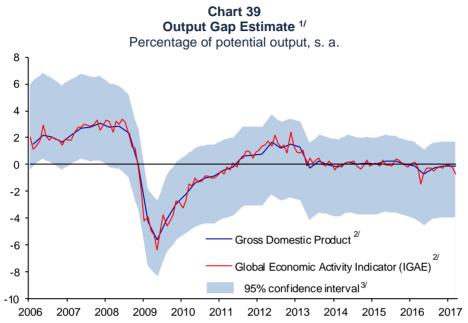
strengthen the monetary policy contribution to the process of inflation convergence to its target. Besides, the 25-basis-point increment in the target range for the U.S. Federal Reserve reference rate carried out in March was considered. With respect to the decisions of March 30 and May 18, the Board of Governors agreed that, given the prevailing current conditions, the estimation that no aggregate-demand related pressures were expected onto inflation and the increments in the monetary policy rate carried out since 2015, the required adjustment was to amount to 25 basis points.

Among the elements considered to justify the monetary policy decisions made in the reference period, the following stood out:

- i. During the first quarter of this year, headline inflation continued rising. In particular, core inflation kept going up in response to the accumulated depreciation of the national currency, the indirect effects due to adjustments in energy prices since the beginning of the year, as well as increments in the minimum wage. All this strongly affected the prices of merchandise and some services. Additionally, non-core inflation kept growing, as a reflection of the effect of the increments registered in energy prices since the beginning of 2017, which was aggravated by the rebound in the prices of some agricultural goods and government approved fares in April 2017, in particular in passenger transport.
- ii. In view of the described shocks and unpleasant surprises in the inflation data with respect to private sector specialists' estimates during the reported period, the median of inflation expectations for the end of 2017, derived from the survey carried out by Banco de México among them, increased notably. On the other hand, inflation expectations for 2018 went up at a much lesser magnitude, which later partially reversed, while longer-term ones remained stable. Thus, the performance of the expectations fundamentally reflects the anticipation of a temporary increment in inflation.
- iii. Given the recent evolution of the economic activity, no significant aggregate-demand related pressures onto the general price level were observed, and, in fact, a certain widening of the negative output gap was anticipated over the following quarters (Chart 39). Despite the above, the labor market no longer seems to exhibit slack. Indeed, the gap between the observed unemployment rate and that congruent with an environment of low and stable inflation is negative and significantly different from zero. while the extended measure of this indicator that includes informal salaried workers is not significantly different from zero (Chart 40a and Chart 40b).<sup>9</sup> The performance of wages and labor productivity during the reference period was reflected in an upward trend in unit labor costs, both for the economy as a whole and for the manufacturing sector in particular, albeit starting from low levels. It should be pointed out that all of the above has not translated into wage pressures, as stated in Section 3.2 (Chart 41).

<sup>&</sup>lt;sup>9</sup> For a description of the estimations of slackness in the labor market, see Box "Considerations on the Recent Evolution of NAIRU and Slackness in the Mexican Labor Market", in the Quarterly Report October -December 2016.

The process of the monetary policy normalization in the U.S., which, in iv. accordance with the Federal Reserve, will continue at a gradual rate.

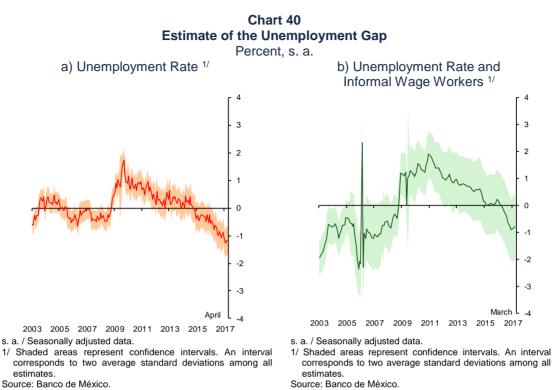


s. a. / Estimated with seasonally adjusted data.

1/ Estimated using the Hodrick-Prescott (HP) filter with tail correction; see Banco de México Inflation Report, April-June 2009, p.69.

2/ GDP figures as of the first quarter of 2017; IGAE figures as of March 2017.
 3/ Confidence interval of the output gap calculated with an unobserved components' method.

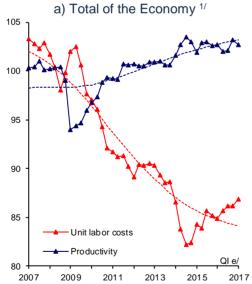
Source: Estimated by Banco de México with data from INEGI.

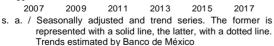


Source: Banco de México.



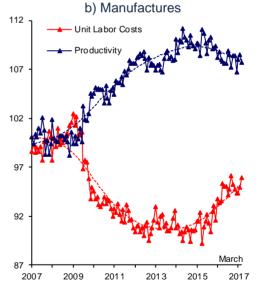






e/ The first quarter of 2017 is the estimation of Banco de México. 1/ Labor productivity based on hours worked.

Source: Unit cost prepared by Banco de México based on data from INEGI. The Global Index of Labor Productivity in the Economy (IGPLE), as released by INEGI. Mexico's System of National Accounts, INEGI.



s. a. / Seasonally adjusted and trend series. The former is presented with a solid line, the latter, with a dotted line. Source: Prepared by Banco de México with seasonally adjusted data from the Monthly Manufacturing Business Survey and the Monthly Indicator of Industrial Activity of the Mexico's System of National Accounts, INEGI.

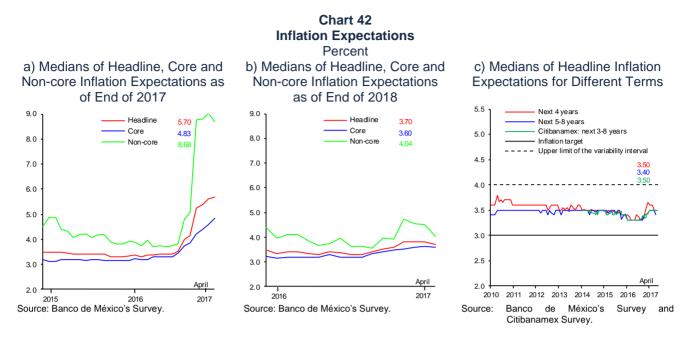
Delving in the performance of inflation expectations based on Banco de México's survey among private sector specialists, it is notable that their medians for different terms showed a differentiated performance, which is compatible with the transitory increase in inflation. In particular, it stands out that between December 2016 and April 2017:

- i. The median of headline inflation expectations spiked at the end of 2017, from 4.1 to 5.7 percent, as a reflection of the above referred inflation shocks (Chart 42a).<sup>10</sup> With respect to this evolution it stands out that the median for the core component shifted from 3.9 to 4.8 percent, while the implicit expectation for the non-core component adjusted from 5.0 to 8.7 percent.
- ii. The median of expectations at the end of 2018 remained below 4 percent, despite a certain variability, as it went up from 3.6 to 3.7 percent between the referred surveys, after reaching 3.8 percent in the first months of 2017.<sup>11</sup> Within it, the median for the core component adjusted from 3.5 to 3.6 percent, while the implicit expectation for the non-core component went up from 3.9 to 4.0 percent, even though it registered a level up to 4.7 percent in January of that year (Chart 42b).
- iii. In relation to the above described performance, it should be noted that by considering the monthly trajectory of the medians of inflation expectations for each one of the next twelve months, it can be observed that, despite the fact that business agents who participated in this survey were surprised when higher-than-expected readings were obtained during the months covered by this Report, the estimated dynamics for the monthly inflations for the period from May 2017 to April 2018 remain without significant changes with respect to the previous surveys (Chart 43a). Thus, the evolution of annual inflation implicit in these expectations still registers a decrease in the last months of 2017, a significant downward adjustment in January 2018, due to the vanishing of the comparison base effect that will impact the measured annual inflation during this year, and exhibits a trend in the same direction over the subsequent months (Chart 43b).
- iv. Expectations for longer-term horizons remained anchored around 3.5 percent (Chart 42c).<sup>12</sup>

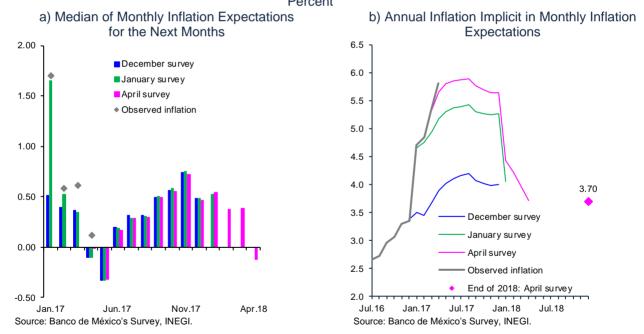
<sup>&</sup>lt;sup>10</sup> The median of headline inflation expectation for the end of 2017, based on the Citibanamex survey, went up from 4.0 to 5.7 percent between the surveys of December 20, 2016 and May 22, 2017.

<sup>&</sup>lt;sup>11</sup> The median of headline inflation expectation for the end of 2018, based on the Citibanamex survey increased from 3.6 to 3.7 percent between the surveys of January 20 and May 22, 2017.

<sup>&</sup>lt;sup>12</sup> As regards the median of long-term inflation expectations, based on the Citibanamex survey (for the next 3-8 years), it went up from 3.4 to 3.5 percent between the surveys of December 20, 2016 and May 22, 2017.

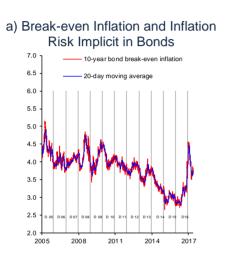


## Chart 43 Inflation Expectations Percent



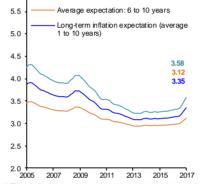
As regards the break-even inflation (the difference between long-term nominal and real interest rates), it moderated in the reference period, after increasing considerably at the beginning of the said period (Chart 44a). As regards its components, it stands out that, on the one hand, long-term inflation expectations implicit in market instruments (taken from government instruments with maturities of 10 years) somewhat increased and are still above 3 percent. This principally derived from upward adjustments in shorter-term inflation expectations, as it is

shown by the average of the first 1-5 years, which lies at 3.6 percent, in contrast to the average of the next 6-10 years that persists close to 3 percent, at 3.1 percent (Chart 44b). On the other hand, the estimate of the inflation risk premium seems to have dropped from 87 to 25 basis points between December 2016 and April 2017, following a spike in January 2017 (Chart 44c).<sup>13</sup> It should be noted that considering the liquidity spreads between Bonds M and Udibonos, the information provided by the above referred instruments via this estimation has become more uncertain.



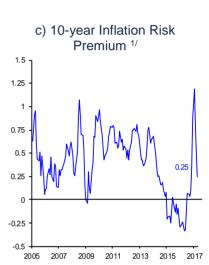
Source: Estimated by Banco de México with data from Valmer and Bloomberg





1/ The inflation expectation is calculated based on a similar model using data from Bloomberg, PiP and Valmer, based on Aguilar, Elizondo and Roldán (2016).

Source: Estimated by Banco de México with data from Bloomberg, Valmer and PIP.

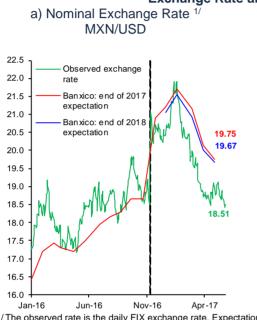


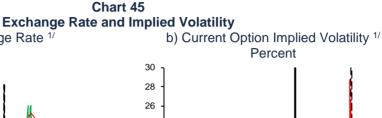
1/ The inflation risk premium is calculated based on a similar model using data from Bloomberg, PiP and Valmer, based on Aguilar, Elizondo and Roldán (2016). Source: Estimated by Banco de México with

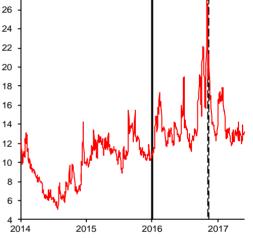
data from Bloomberg, Valmer and PIP. Despite the decrease in volatility in international markets at the beginning of the first quarter of the year, domestic financial markets were pressured due to the uncertainty over the impact on the Mexican economy generated by trade and migratory policies of the incoming U.S. administration. With that, the quote of the national currency, which started the year around USD/MXN 21.10, reached a new historic maximum of USD/MXN 21.91 on January 11, even marking a maximum intraday level of USD/MXN 22.03. Subsequently, as of the second half of January, and in accordance with lower volatility levels in international markets, domestic asset prices performed more favorably. Indeed, their volatility declined, despite persisting at high levels. In this context, as a reflection of the implemented monetary policy actions and the measures announced by the Foreign Exchange Commission. the national currency appreciated considerably, marking approximately USD/MXN 18.50, thus dropping to its lowest level since the day of the elections in the U.S., and the operating conditions in the exchange market improved (Chart 45a and Chart 45b). The above referred performance has also been contributed to by some constructive comments of the U.S. government members regarding the future bilateral U.S. - Mexico relation. It should be noted that, even though more recently there have been a number of episodes in which a greater risk to the U.S. - Mexico

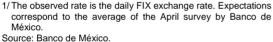
<sup>&</sup>lt;sup>13</sup> For a description of the estimation of long-term inflation expectations, see Box "Decomposition of the Breakeven Inflation" in the Quarterly Report October - December 2013.

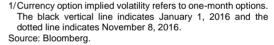
bilateral relation has been perceived, which generated certain exchange rate volatility, the effects on the quote of the Mexican peso against the U.S. dollar derived from the changes in the referred rhetoric by the U.S. authorities seem to have diminished. In this juncture, the expectations for the quote of the Mexican peso at the end of 2017 and in 2018, derived from surveys, decreased considerably. The exchange rate expected at the end of 2017 remains above the levels that are currently observed, of USD/MXN 19.75 (Chart 45a).





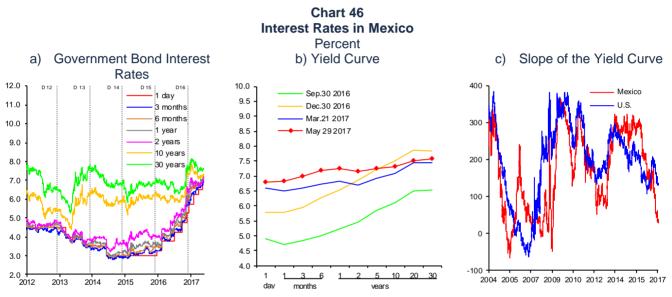






With regard to the measures announced by the Foreign Exchange Commission that are seeking to provide liquidity to the foreign exchange market and to attenuate the above mentioned episodes of exchange rate volatility registered in early 2017, it is relevant to stress that in the first week of January it ordered a direct sale of USD 2 billion to the market. Subsequently, on February 21, the Foreign Exchange Commission announced the implementation of a new foreign exchange market mechanism, which consists in non-deliverable forward (NDF's) auctions, which will be settled in Mexican pesos. The program can size up to USD 20 billion. Accordingly, on March 6, 2017 Banco de México carried out auctions of foreign exchange hedges for a total amount of USD 1 billion, which were distributed along 6 maturities: of 30, 60, 101, 178, 283 and 360 days. Meanwhile, on April 5 and on May 5 and May 8, it renewed total maturities of previously agreed operations for an amount of USD 200 million, in each case. Likewise, the Foreign Exchange Commission indicated that it did not rule out a possibility of additional auctions if required, either through the use of exchange rate hedges or through the instruments that had been used in the past, while it reiterated that anchoring of the national currency's value will be procured at all times, by preserving solid economic fundamentals.

On the other hand, interest rates featured differentiated performance during the reference quarter. In particular, short-term ones increased, reflecting increments in the reference rate, while longer-term ones declined, after having increased during the first half of January. Nevertheless, it is noteworthy that interest rates for all terms remain at levels above those registered prior to the U.S. elections, in early November. Thus, between late December 2016 and mid-May 2017, 3-month and 10-year interest rates shifted from 5.9 to 7.0 percent and from 7.5 to 7.3 percent, respectively (Chart 46a and Chart 46b). As a result of the above described evolution of interest rates, the slope of the yield curve (measured as the difference between 10-year and 3-month rates) decreased considerably, from 160 to 30 basis points in this interval, possibly reflecting a tighter expected monetary policy stance (Chart 46c).



Source: Proveedor Integral de Precios (PiP) and U.S. Department of the Treasury.

Consistent with the above performance, and given that short-term interest rates in the U.S. increased to a lower degree, and the decrease of long-term ones was of the same magnitude as the Mexican ones, spreads between Mexican and U.S. interest rates increased in their short-term horizons and remained stable in longterm ones. In particular, from the end of December 2016 to mid-May 2017, the spread of short-term rates (3 months) went up from 540 to 600 basis points, while the 10-year spread persisted around 500 basis points. It should be noted that the level of these spreads (which is higher for short-term ones as compared to longterm rates) points to a differentiation between the monetary policy stances of both countries, given that the increment in the reference interest rate in Mexico has amounted to 375 basis points, while in the U.S. it was 75 basis points (Chart 47). The difference between the relative monetary stances in part responds to the current inflation spreads and those expected in the short term between the two countries. Indeed, in Mexico the most recent estimate of inflation is 6.17 percent, while in the U.S. it lies at 2.20 percent, which represents a 397-basis-point difference. Similarly, inflation expectations for the end of 2017 lie at 5.7 and 2.4 percent in Mexico and the U.S., respectively (a 330-basis-point difference).

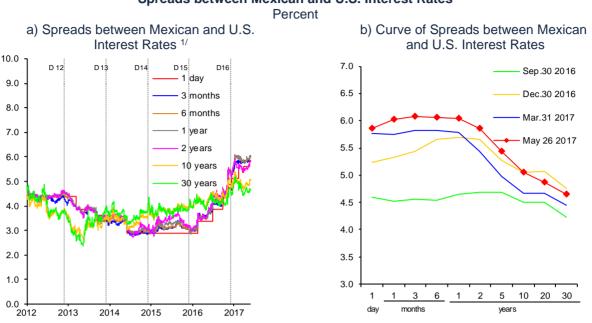


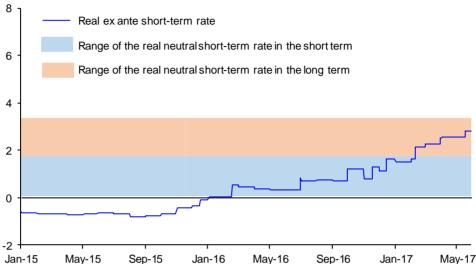
Chart 47 Spreads between Mexican and U.S. Interest Rates

1/ For the U.S. target rate, an average interval considered by the Federal Reserve is considered. Source: *Proveedor Integral de Precios* (PiP) and U.S. Department of the Treasury.

It is relevant to stress that, even though the current levels of both the slope of the yield curve and the short-term interest rate spread between Mexico and the U.S. reflect a tighter monetary stance in Mexico, adjustments in the reference rate implemented by this Central Institute since the end of 2015 were carried out starting from a historic low of 3 percent. The reference rate reached this minimum level in June 2014 and persisted there for 18 months, until November 2015. In this regard, the 375 basis-point increment in the reference rate, registered from December 2015 to this date, fundamentally constitutes a monetary stimulus withdrawal that prevailed in the previous period, while the current real ex-ante short-term rate appears to be close to the neutral level that is anticipated to prevail in the long run (Chart 48).<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> For a description of the estimation of the short-term neutral interest rate, see Box "Considerations on the Evolution of the Neutral Interest Rate in Mexico", in the Quarterly Report, July - September 2016.





1/ Real ex ante short-term rate is calculated as the difference between the Overnight Interbank Interest rate and the median of inflation expectations for the next 12 months, derived from Banco de México's Survey. Source: Banco de México.

Additionally, as mentioned in Section 3.1, it stands out that market indicators that measure the sovereign credit risk decreased in a generalized manner in the group of emerging economies. In particular, in the case of Mexico, the 5-year Credit Default Swap premium declined by approximately 50 basis points and marked its minimum levels in the last twelve months, after significantly increasing during the fourth quarter of 2016. It should be pointed out that this reduction is greater than that registered for the average of the group of emerging economies.

Despite the better performance in domestic financial markets, the Mexican economy is still facing a complex environment, which makes it especially relevant to continue promoting the adequate implementation of structural reforms and for the authorities to persevere in the strengthening of the country's macroeconomic fundamentals, adjusting the monetary policy stance in a timely manner and consolidating public finances. In this sense, the ratification of the availability of the FCL for Mexico approved by the IMF Executive Board on May 22, 2017 acknowledges the resilience that had been demonstrated by the Mexican economy given the volatility episodes in financial markets and it generates strong incentives to preserve a sound macroeconomic framework.

# 5. Inflation Forecasts and Balance of Risks

GDP Growth Rate: Despite the relatively favorable performance of the Mexican economy in the first guarter of 2017, it continues to face a complex international environment derived, among other factors, from the persisting uncertainty over the future trade relationship among the members of the North American region, in particular between Mexico and the U.S. This uncertainty has led to a deterioration in business confidence, which seems to be negatively affecting investment decisions in Mexico. This situation was incorporated in the previous Report's economic growth forecast, which considered certain negative effects on commercial flows and fewer incentives for investing in Mexico, even though they have somewhat attenuated. On the other hand, the slightly higher economic growth in the first guarter of the year relative to what was expected in the previous Report implies a greater expansion of productive activity for 2017 as a whole (Chart 49a). As a consequence, the interval of the GDP growth forecast for 2017 is adjusted upwards from an interval of 1.3 to 2.3 percent in the previous Report to an interval of 1.5 to 2.5 percent. This forecast incorporates a deceleration for the remainder of 2017 with respect to what has been observed in the second half of 2016 and in early 2017, which is congruent with the most recent data pointing to a loss of dynamism in economic activity in the next quarters. As mentioned above, this seems to be partially associated to the effects of the uncertainty over the future economic relationship between Mexico and the U.S. on investment and consumption decisions. However, a certain recovery is still expected in 2018, in line with the expected greater dynamism of U.S. industrial production in the forecast horizon.<sup>15</sup> Additionally, it is anticipated that the ongoing strengthening of the macroeconomic framework by the monetary and fiscal authorities, as well as the implementation of the structural reforms will encourage more favorable conditions for investment and consumption, so that the domestic market will continue contributing to the economic activity. Thus, for 2018, a higher economic growth rate relative to 2017 is still expected, and, so, the forecast interval for the GDP growth is not modified and remains at 1.7 to 2.7 percent. These expectations assume that there is no major disruption in the Mexico - U.S. economic relationship and that adjustments in the financial markets remain orderly. If a different scenario emerges, it would be necessary to adjust these expectations.

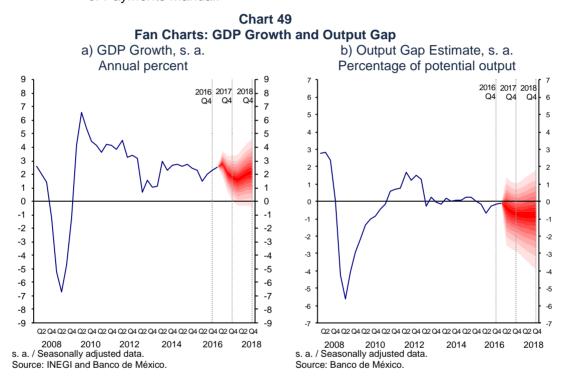
Growth expectations do not point to aggregate demand-related pressures onto prices in the forecast horizon. In particular, the expected deceleration could lead to a widening of the negative output gap over the next quarters (Chart 49b).

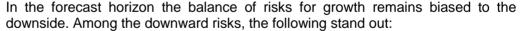
**Employment:** Over the first four months of the year, the number of IMSS-affiliated jobs kept presenting a higher-than-anticipated dynamism. For this reason, the forecast for this indicator is adjusted upwards with respect to the previous Report. In particular, for 2017, the number of IMSS-affiliated jobs is now anticipated to increase between 650 and 750 thousand, compared to the previous forecast of between 580 and 680 thousand jobs. For 2018, the forecast for the number of

<sup>&</sup>lt;sup>15</sup> According to the business analysts surveyed by Blue Chip in May 2017, industrial production in the U.S. is estimated to grow 1.7 percent in 2017 and 2.4 percent in 2018.

IMSS-affiliated jobs has also been revised upwards, to 640 to 740 thousand jobs from 620 to 720 thousand jobs in the previous Report.

**Current Account:** Regarding the external accounts, for 2017 respective deficits in the trade balance and the current account of USD 12.8 billion and 24.7 billion are expected (1.2 and 2.3 percent of GDP, in the same order). For 2018, the trade balance and current account deficits are anticipated to amount to USD 12.1 billion and 25.8 billion, respectively (1.1 and 2.3 percent of GDP, in the same order). It is noteworthy that these expectations were prepared based on the new balance of payment figures that follow the methodology of the sixth edition of the IMF's Balance of Payments Manual.<sup>16</sup>





<sup>&</sup>lt;sup>16</sup> Upon publishing the information of the balance of payments of the first quarter of 2017, these statistics are now released in accordance with the classification criteria of the sixth edition of the IMF's Balance of Payments Manual. Similarly, measurement improvements were implemented, which implied a revision of the historical figures. In particular, the current account deficit in 2016 was adjusted from 2.7 to 2.1 percent as a share of GDP. A note describing the principal modifications to the statistics of the balance of payments can be found on Banco de México's webpage: <u>http://www.banxico.org.mx/documentos/%7b8FA1D7F6-FCEE-7CAD-8DB1-979B1102CD47%7d.pdf</u>.

The Press Release on the information of the balance of payments and statistical tables are available through the following links, respectively:

http://www.banxico.org.mx/informacion-para-la-prensa/comunicados/sector-externo/balanza-de-

pagos/index.html and

http://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=1&accion=consultarDirectorioCuadros

- i. That enterprises decide to postpone their investment plans in Mexico in light of uncertainty regarding NAFTA-related policies that could be implemented by the U.S. government.
- ii. That protectionist policies put into effect by the U.S. indeed generate lower-than-anticipated Mexican Exports to the U.S.
- iii. That workers' remittances to Mexico are lower than expected, as a consequence of the policies that hinder them, of increased deportations of fellow citizens, or as a result of lower employment of Mexicans in the U.S.
- iv. The possibility of new episodes of high volatility in international financial markets that could reduce the sources of financing to Mexico.

Among the upward risks to growth, the following are noteworthy:

- i. That the forthcoming negotiation of the NAFTA is a success and allows the countries in the area to exploit new areas of opportunity.
- ii. That the ongoing implementation of the structural reforms renders betterthan-expected results.
- iii. That consumption shows a higher-than-anticipated dynamism.
- iv. That workers' remittances to Mexico are higher than estimated, as a consequence of a better performance of economic activity and the labor market in the U.S.

Inflation: Over the following months, annual headline inflation is expected to remain temporarily affected by the increment in passenger transport services' and in some agricultural products' prices, as well as adjustments due to the changes in the relative prices of merchandise with respect to services, derived from the accumulated depreciation of the real exchange rate, and the transitory impact of the rise in energy prices and the minimum wage in January 2017. Hence, in 2017 inflation is estimated to considerably exceed the upper limit of the variability interval set by Banco de México, even though during the last months of 2017 and during 2018 it is anticipated to resume the convergence trend to its 3 percent target and to achieve it by the end of the forecast horizon. In line with this estimation, in 2017 annual core inflation will also persist above the referred interval, but significantly below the trajectory of annual headline inflation, and in late 2017 and in early 2018 it is expected to resume the convergence trend towards the inflation target set by this Central Institute. These trajectories would be the result of a number of factors, among which the following are noteworthy: the fading of the shocks described above, the reversal of the exchange rate over the last months, the expected widening of the negative output gap, and significant adjustments in the monetary policy that have been put into place since December 2015, as well as those that may be required in the future, that will continue affecting the inflation performance over the next guarters (Chart 50 and Chart 51).

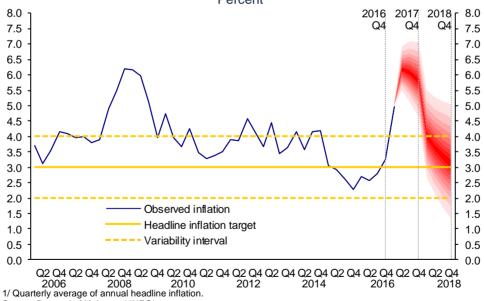
These forecasts are subject to risks. Among upward risks, these should be mentioned:

i. That the number and the magnitude of shocks that have recently occurred may increase the probability of second round effects onto inflation.

- ii. That inflation expectations rise even further, as a consequence of its performance, or if the national currency depreciates abruptly, starting from current levels.
- iii. Increments in agricultural products' prices, even though their impact onto inflation would tend to be transitory.
- iv. Finally, considering that labor market conditions have been tightening, that the upward trend in unit labor costs could start to affect inflation.

Among downward risks, these should be mentioned:

- i. That the recently observed appreciation of the national currency consolidate and deepen.
- ii. That energy prices go down insofar as there are decreases in their international counterparts.
- iii. That the structural reforms lead to reductions in different prices of the economy.
- iv. That the Mexican economic activity grow less than expected, lowering the possibility of aggregate demand-related pressures onto inflation and pressures in the labor market.



#### Chart 50 Fan Chart: Annual Headline Inflation <sup>1/</sup> Percent

Source: Banco de México and INEGI.

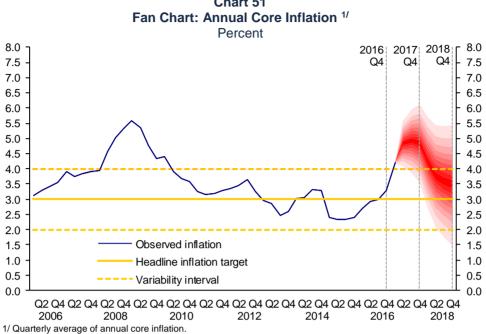


Chart 51

Source: Banco de México and INEGI

In this context, in the future the Board of Governors will closely monitor the evolution of all inflation determinants and its medium- and long-term expectations, especially the possible pass-through of exchange rate adjustments and higher energy prices onto the rest of prices. Likewise, it will be watchful of the evolution of Mexico's monetary position relative to the U.S., and that of the output gap. This will be done in order to continue taking the necessary actions to attain the efficient convergence of inflation to its 3.0 percent target.

In an international environment in which the aftermath of the 2008 global financial crisis has given way to a fragile and slow recovery of the global economy and world trade, and has caused a number of volatility episodes in international financial markets, the Mexican economy has been resilient and has continued to expand, although at a moderate rate. From a longer-term perspective, this performance has been the result of the authorities' commitment to maintain a solid macroeconomic framework, and has been complemented by the approval of a package of structural reforms seeking to push ahead with the modernization process of Mexico. As a result, a greater dynamism has been registered in the domestic market, and the Mexican export sector keeps taking advantage of its close integration to the global value chains. However, Mexico should strengthen the fundamentals that have allowed its economy to expand in spite of the adverse international conditions. In the same vein, it should move forward in approving and implementing policies that address the shortcomings of the economy in order to attain a faster and more sustained growth. In particular, doing so would offset the weakness in investment that has been observed since the onset of the global financial crisis and would achieve a more balanced growth, less dependent on the dynamism of consumption. Indeed, giving a major impetus to investment not only favors the cyclical expansion of the economy, but also, more importantly, allows to attain a greater potential growth, greater competitiveness and a faster increase in employment and labor remunerations in a sustained manner. Therefore, commitment to maintain macroeconomic soundness of the country should prevail. Specifically, it is important to continue implementing the monetary policy in a timely manner and to introduce measures that contribute to the sound functioning of financial markets, thus enhancing the effectiveness of monetary policy. Likewise, it is essential to ensure the implementation of the fiscal consolidation process, and to encourage the reforms. Besides, in order to prevent a lack of safety and corruption from impeding economic growth, as has been mentioned in previous Reports, it is indispensable to strengthen the rule of law and to guarantee legal certainty for all economic agents.

