

**Quarterly Report**  
October – December 2016  
March 1, 2017



# Outline

## **1** Monetary Policy

## **2** External Conditions

## **3** Evolution of the Mexican Economy

## **4** Inflation and its Determinants

## **5** Forecasts and Final Remarks

# Conduction of Monetary Policy

- During 2016, the Mexican economy faced a complex environment, characterized by high volatility as a consequence of uncertainty regarding the process of **the monetary policy normalization** in the U.S. and **the electoral process** that took place in that country and its outcome, among other factors.

- **The impact of this environment on domestic financial markets was notorious** at the end of the year and in early 2017. The Mexican peso observed high volatility and a number of episodes of depreciation, while peso-denominated interest rates increased across all terms.
  - ✓ As of the end of January, these variables notably reverted their trajectories. The **monetary policy actions** have contributed to a better performance of the exchange rate, as well as the measures announced by the **Foreign Exchange Commission**.
- Furthermore, in early 2017 inflation was affected by the **liberalization of energy prices**, in particular, gasoline prices.

The actions of the Board of Governors have been seeking to **better anchor inflation expectations** in this challenging environment.

Thus, in order to prevent the price formation process in the economy from contaminating, to anchor inflation expectations, and to reassure inflation convergence to its target, the Board of Governors decided to increase the target for the Overnight Interbank Interest Rate.

November, 2016

50 bp increment to 5.25 percent.

December, 2016

50 bp increment to 5.75 percent.

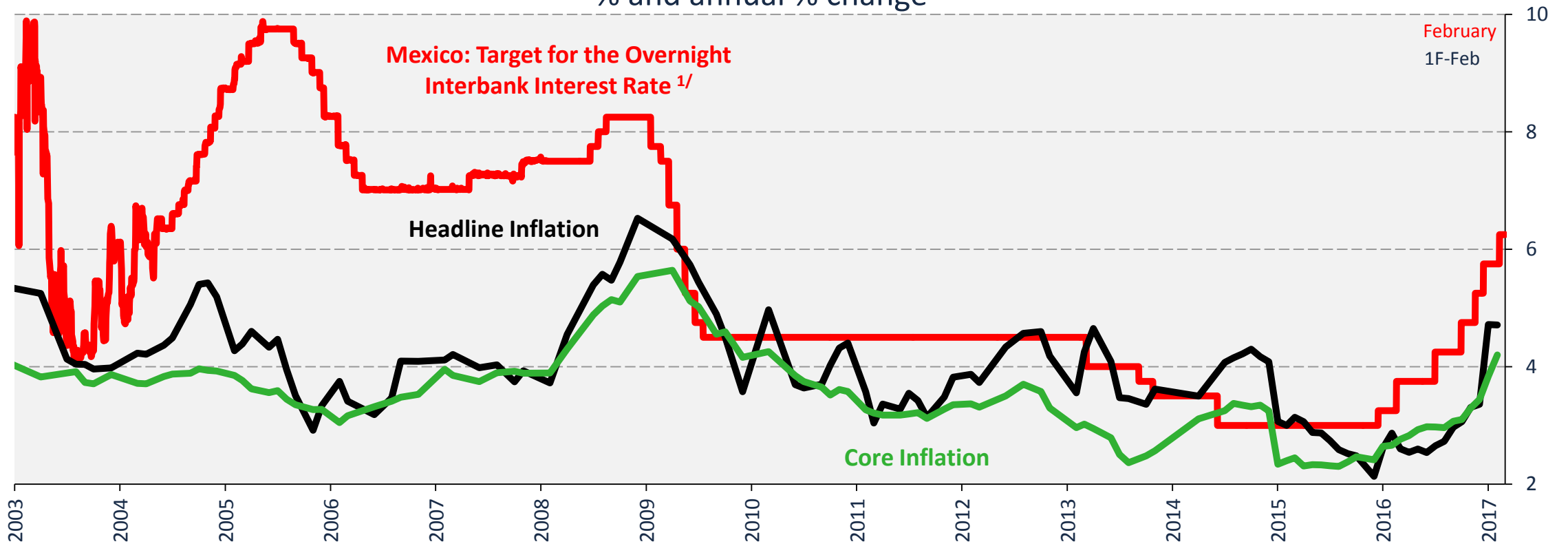
February, 2017

50 bp increment to 6.25 percent.

- These actions were carried out so that the **adjustment in relative prices** derived from the real exchange rate depreciation, and, in the case of the latter decision, also from the impact generated by the liberalization of gasoline prices, **would take place in an orderly manner.**

Considering the monetary policy decisions described above, the Central Bank increased its reference rate by a total of 300 basis points between 2016 and so far in 2017.

### Monetary Policy Rate and Consumer Price Index % and annual % change



1/ Before January 20, 2008 it refers to the observed Overnight Interbank Interest Rate.

Source: INEGI and Banco de México.

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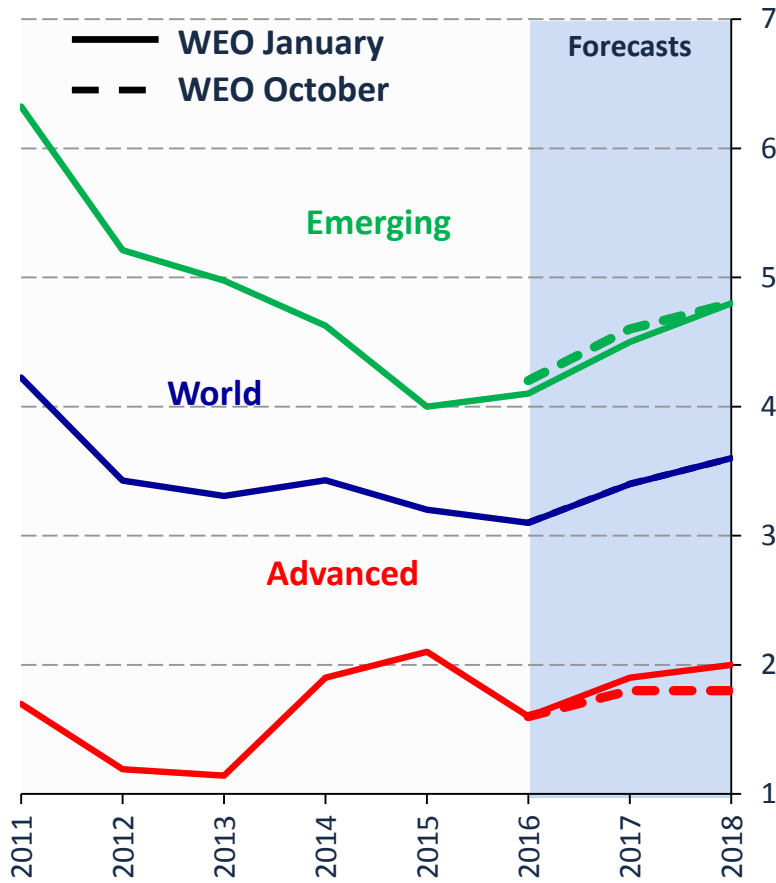
**Inflation and its Determinants**

**5**

**Forecasts and Final Remarks**

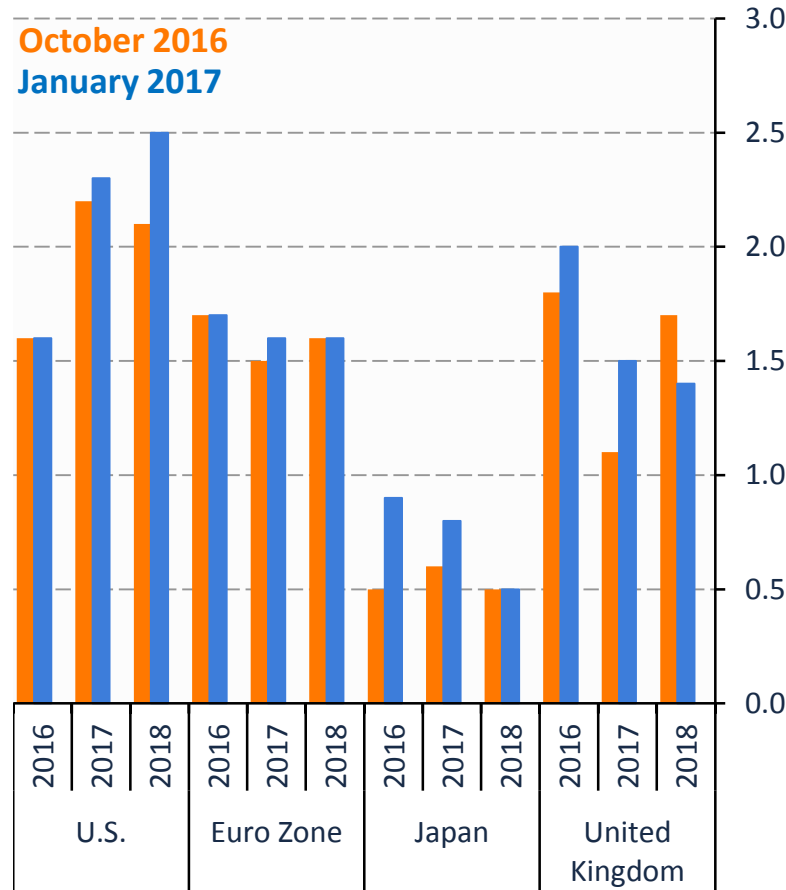
# During 4Q 2016, world economic activity and its outlook kept recovering. In this context, global trade somewhat reactivated.

**World GDP Growth Forecast**  
Annual % change



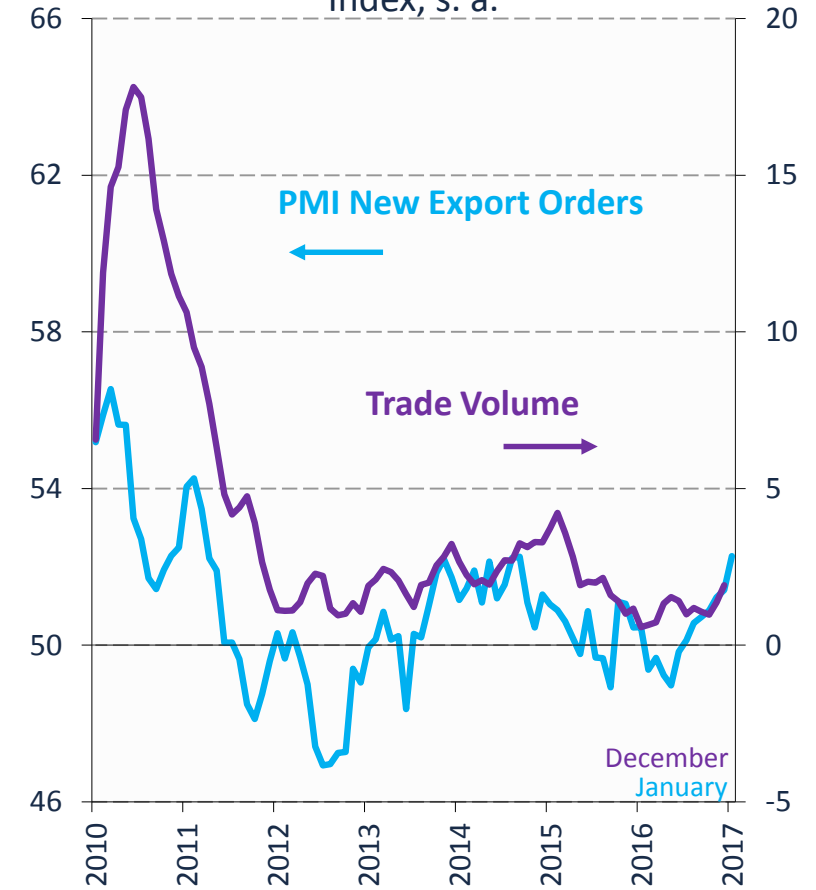
Source: IMF, WEO October 2016 and January 2017.

**Advanced Economies GDP Growth Forecasts**  
Annual % change



Source: IMF, WEO October 2016 and January 2017.

**Global Trade of Goods<sup>1/</sup> and Markit Global PMI Manufacturing**  
Annual % change of 3-month moving average and Index, s. a.



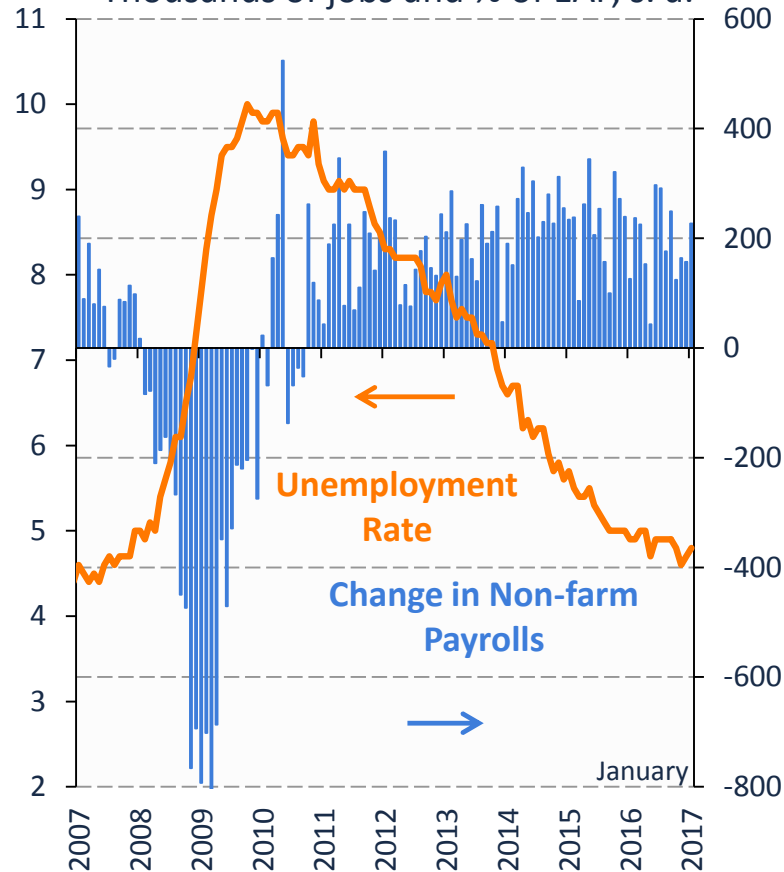
1/ Refers to the sum of imports and exports.  
s. a. / Seasonally adjusted data.  
Source: CPB Netherlands and Markit.

The U.S. economy kept expanding and its labor market conditions continued strengthening. In turn, inflation increased, despite still remaining below the Federal Reserve's target.

## United States

### Change in Non-farm Payrolls and Unemployment Rate

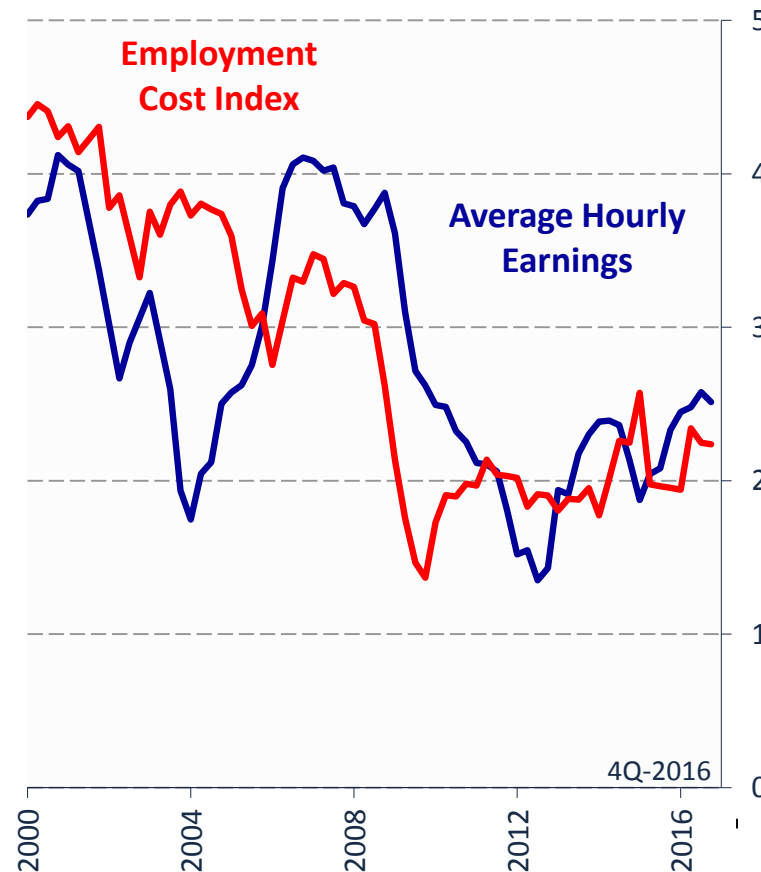
Thousands of jobs and % of EAP, s. a.



EAP / Economically Active Population.  
s. a. / Seasonally adjusted data.  
Source: Bureau of Labor Statistics (BLS).

### Wage Indicators

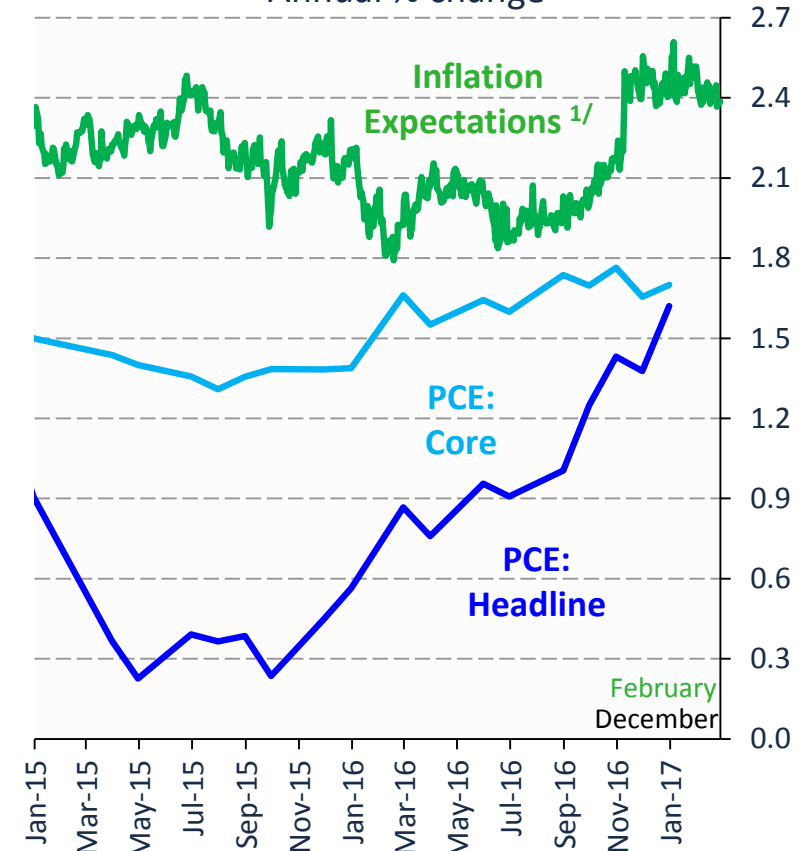
Annual % change, s. a.



s. a. / Seasonally adjusted data.  
Source: Bureau of Labor Statistics.

### Personal Consumption Expenditures Price Index and Inflation Expectations

Annual % change

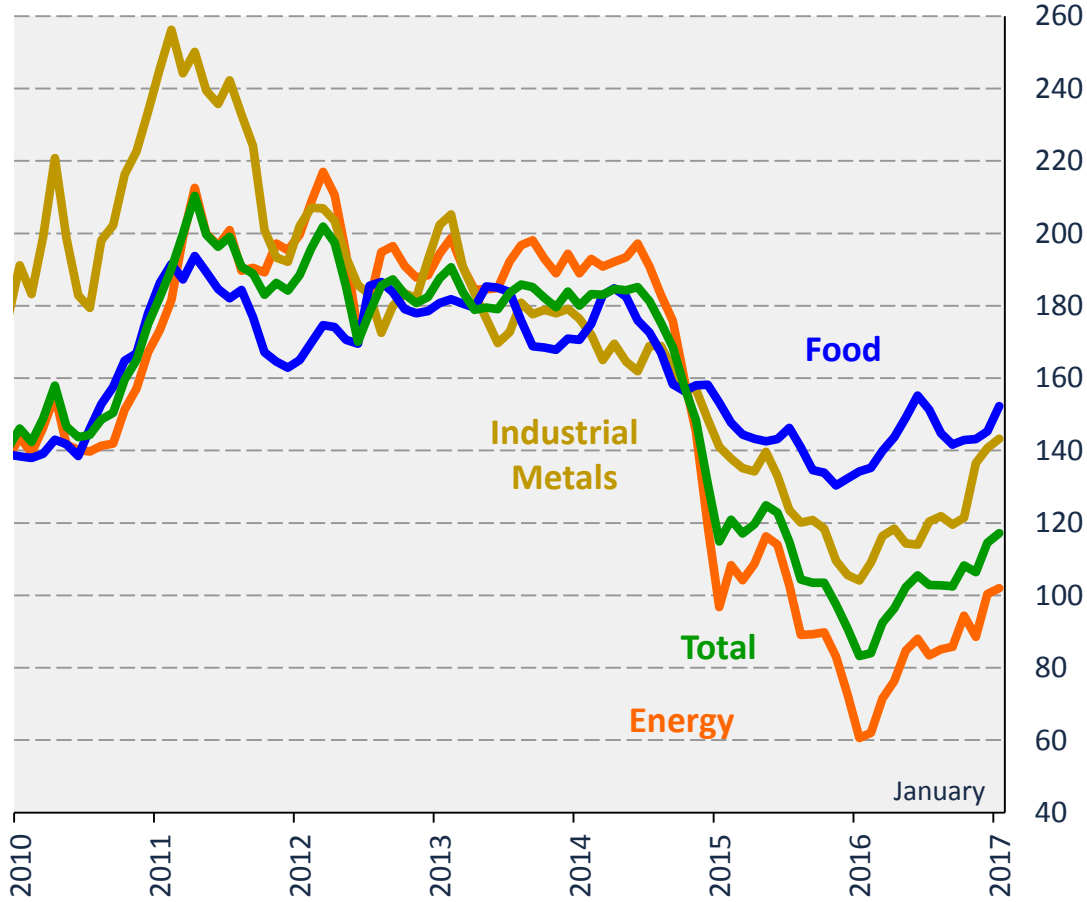


1/ Expected inflation over the five-year period that begins five years from today. Obtained from swap contracts in which one counterparty agrees to pay a fixed rate in exchange for receiving a referenced payment at an inflation rate over a specified period.  
Source: Bloomberg and Bureau of Economic Analysis.



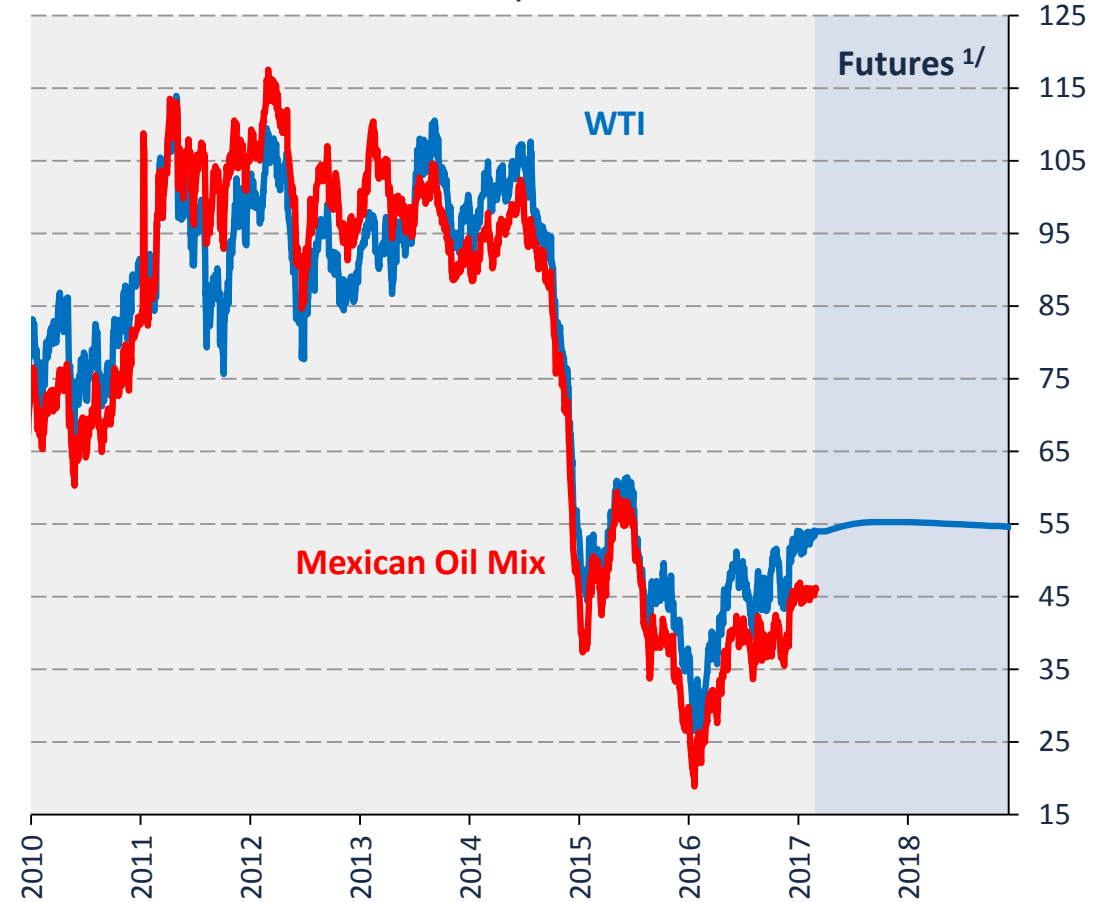
# Commodity prices recovered moderately over the period covered by this report.

**Commodity Prices**  
Index 2005=100



Source: International Monetary Fund.

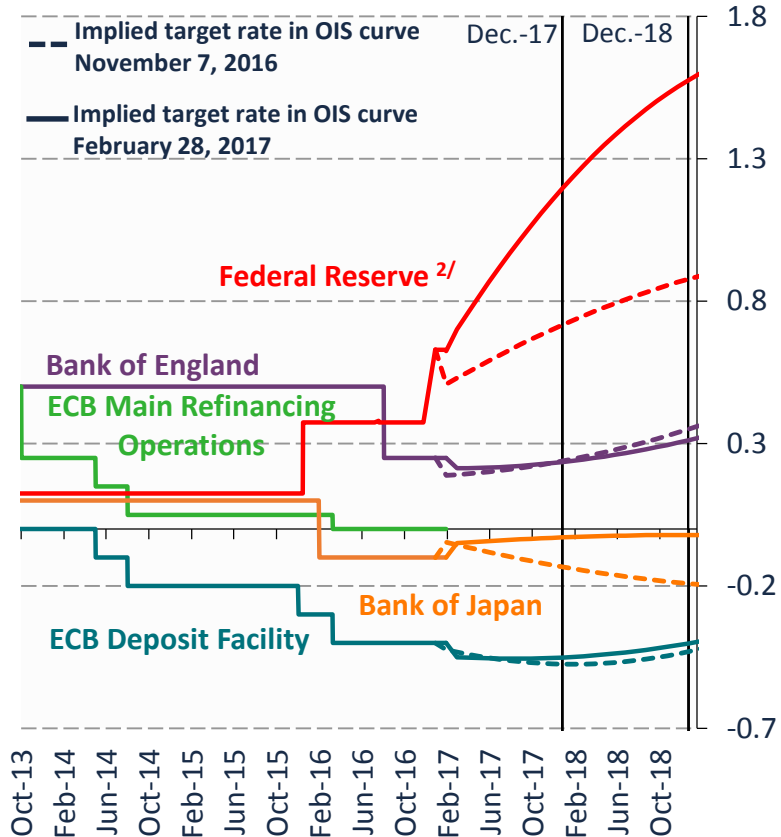
**Crude Oil Prices**  
USD per barrel



1/ Data up to February 28, 2017.  
Source: Bloomberg.

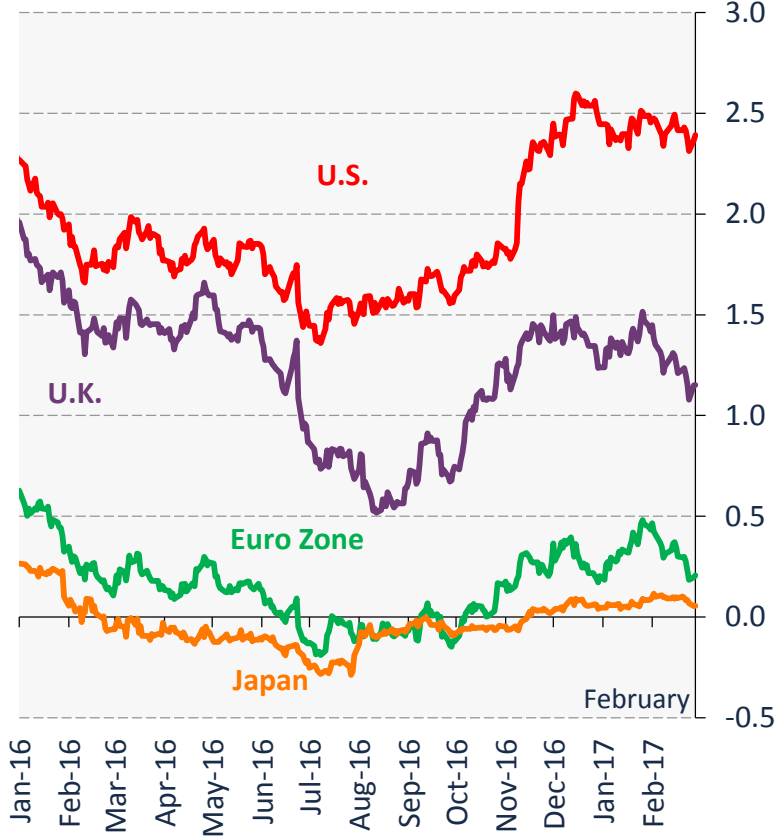
# The expected path for the federal funds rate signals a faster-than-anticipated pace of monetary normalization, in part, due to the expected considerable fiscal expansion in the U.S.

**Advanced Economies: Expected Monetary Policy Rates Implicit in OIS Curve <sup>1/</sup>**  
%



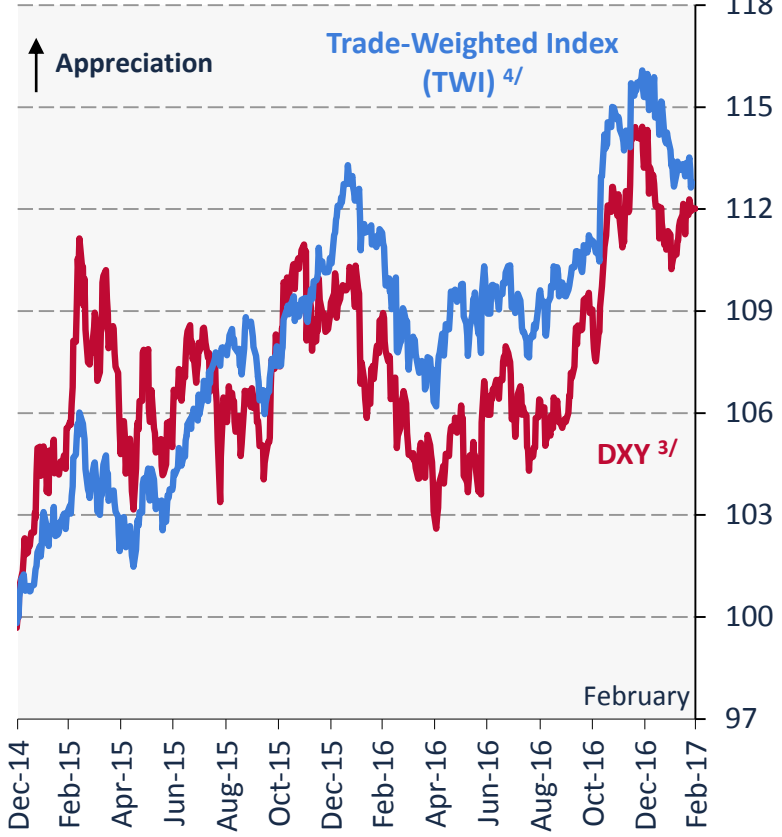
1/ OIS: Fixed-For-Floating swap where the fixed interest rate is the reference rate.  
 2/ Data for the observed federal funds rate corresponds to the average between the lower and upper bounds of the range (0.50% - 0.75%).  
 Source: Banco de México with data from Bloomberg.

**Advanced Economies: 10-Year Government Bond Interest Rates**  
%



Source: Bloomberg.

**United States: DXY and Trade-Weighted US Dollar Index**  
Index 01-Jan-2015 = 100

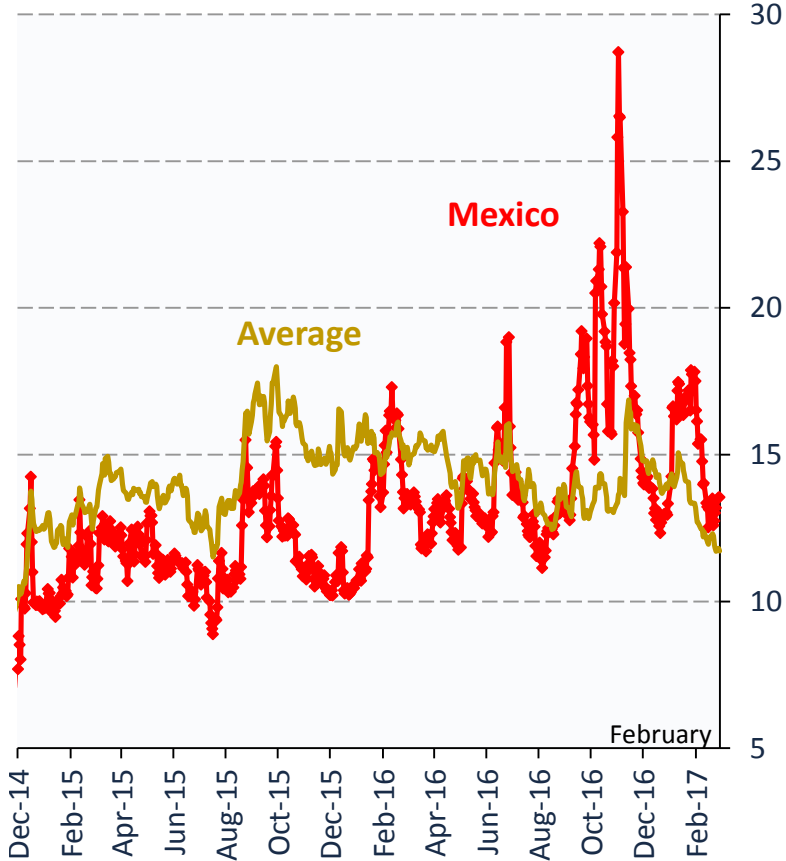


3/ DXY index is estimated by the Intercontinental Exchange (ICE) based on the weighted geometric mean of the dollar's value compared with a basket of 6 other major currencies which are: EUR: 57.6%, JPY: 13.6%, GBP: 11.9%, CAD: 9.1%, SEK: 4.2% and CHF: 3.6%. Base=100. 4/ Trade-Weighted Index of the Federal Reserve; main trade partners: China (21.3%), Euro Zone (16.38%), Canada (12.7%), Mexico (11.9%), Japan (6.9%), South Korea (3.9%), United Kingdom (3.35%).  
 Source: Bloomberg.

In the last months of 2016, investment portfolios registered significant re-compositions, as a result of the expectation of possible fiscal stimuli in the U.S. In contrast, in 2017, greater stability has been observed so far, and in some cases these effects reverted.

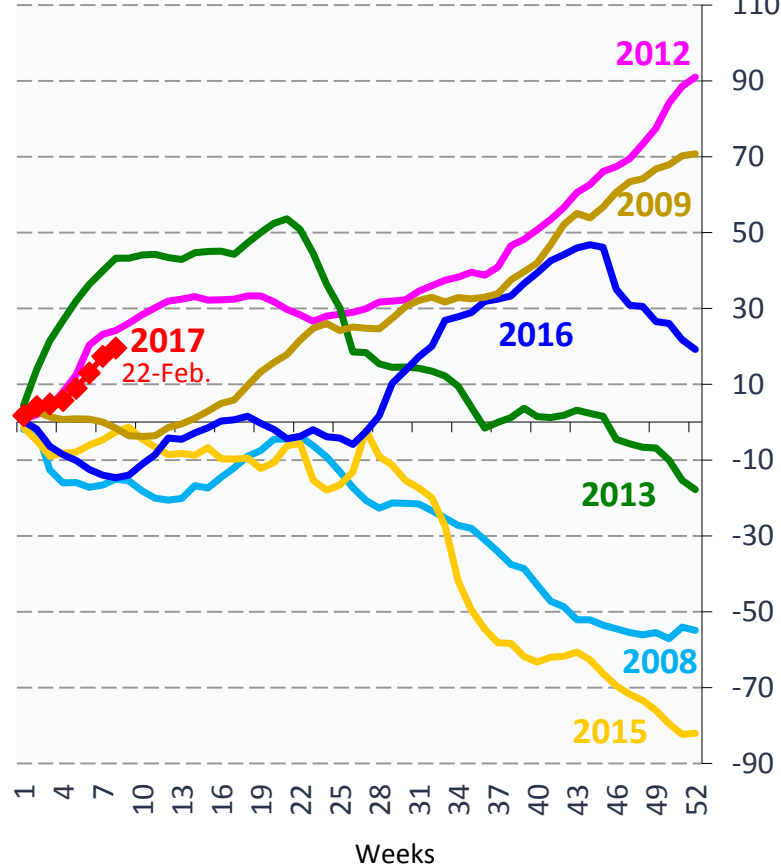
### Emerging Markets

Currency Option Implied Volatility <sup>1/</sup>  
%



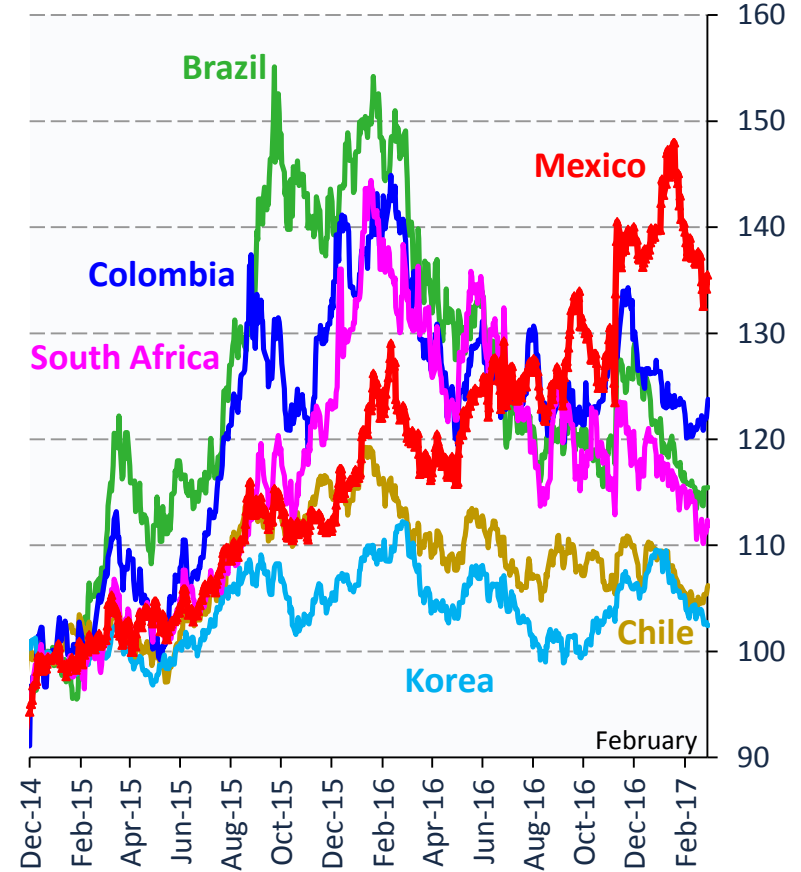
<sup>1/</sup> The average refers to the volatility of currency options for Brazil, Chile, Colombia, Turkey, South Africa, South Korea and Indonesia.  
Source: Bloomberg.

Accumulated Capital Flows (Debt and Equity) <sup>2/</sup>  
Billions of dollars



<sup>2/</sup> The sample covers funds used for the buying-selling of stocks and bonds from emerging countries, recorded in advanced countries. Flows exclude portfolio performance and changes in the exchange rate.  
Source: Emerging Portfolio Fund Research.

Nominal Exchange Rate against USD  
Index 01-Jan-2015 = 100



Source: Bloomberg.

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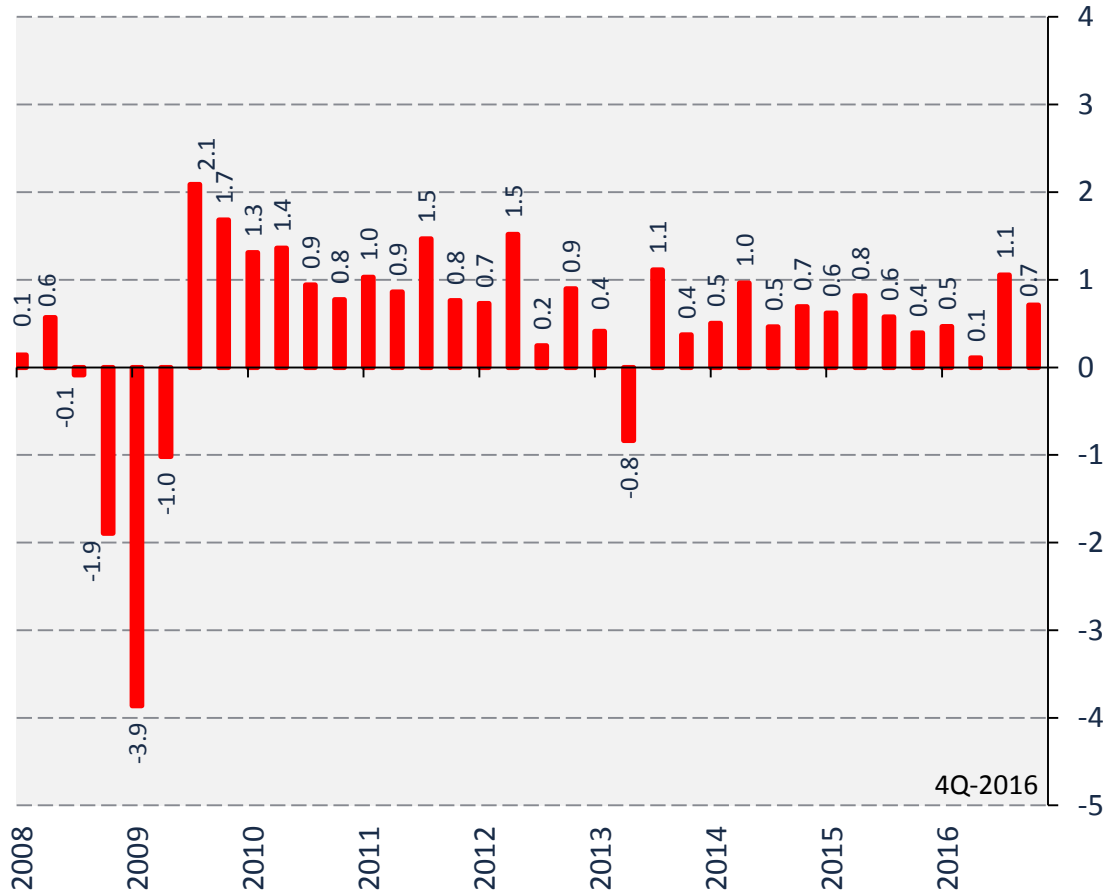
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**Forecasts and Final Remarks**

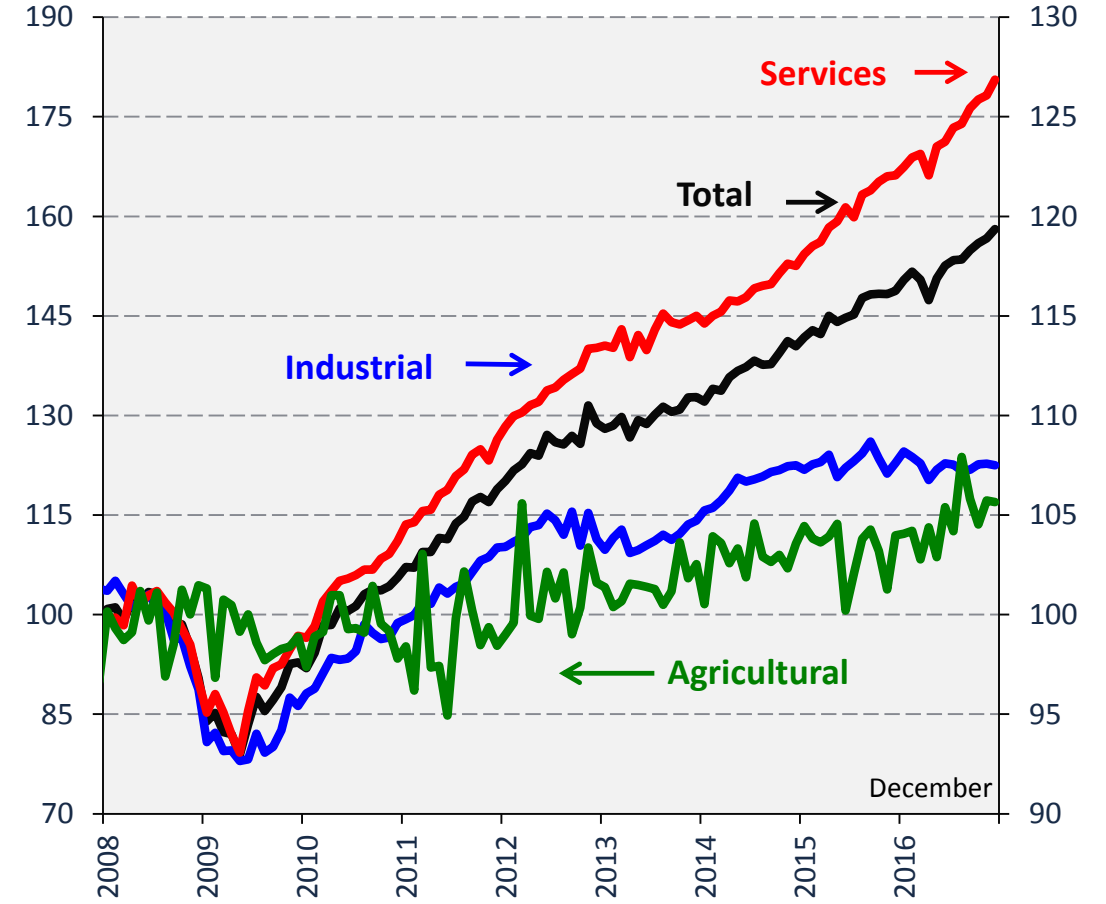
In 4Q 2016 the Mexican economy kept expanding, although at a lower growth rate than in the previous quarter.

**Gross Domestic Product**  
Quarterly % change, s. a.



s. a. / Seasonally adjusted data.  
Source: Mexico's System of National Accounts, INEGI.

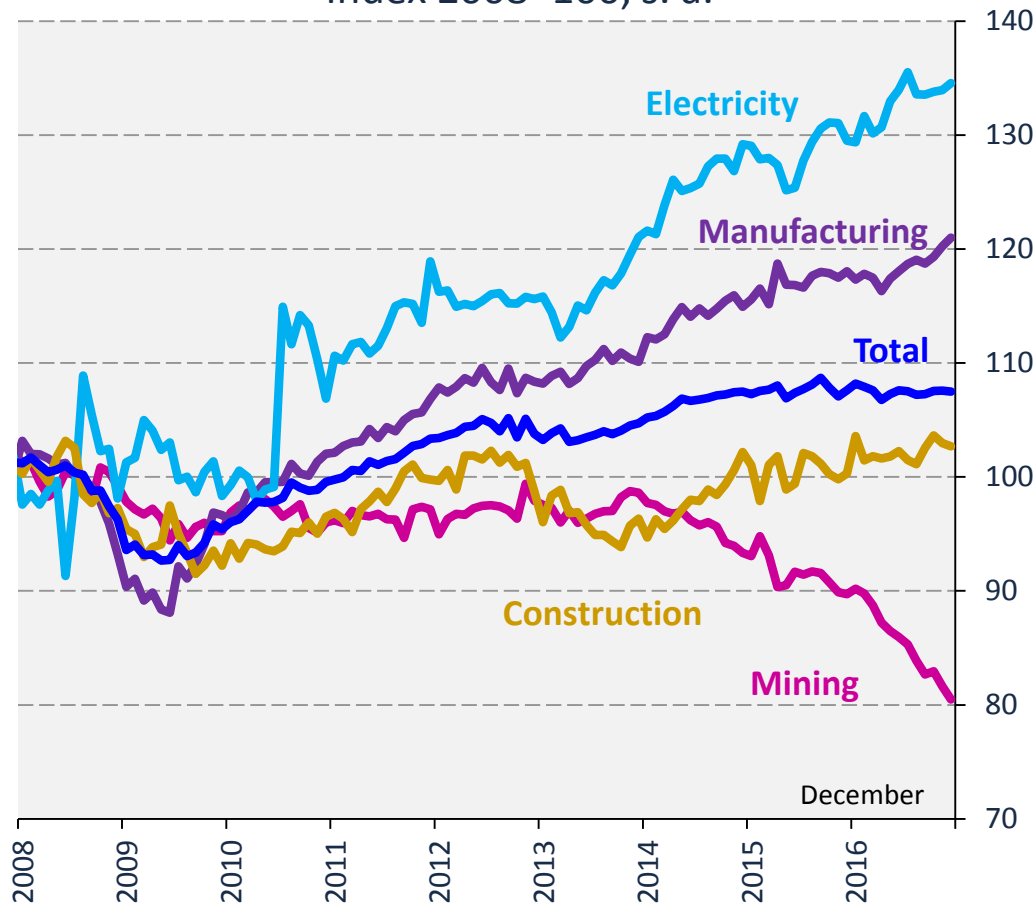
**Global Indicator of Economic Activity**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.  
Source: Mexico's System of National Accounts, INEGI.

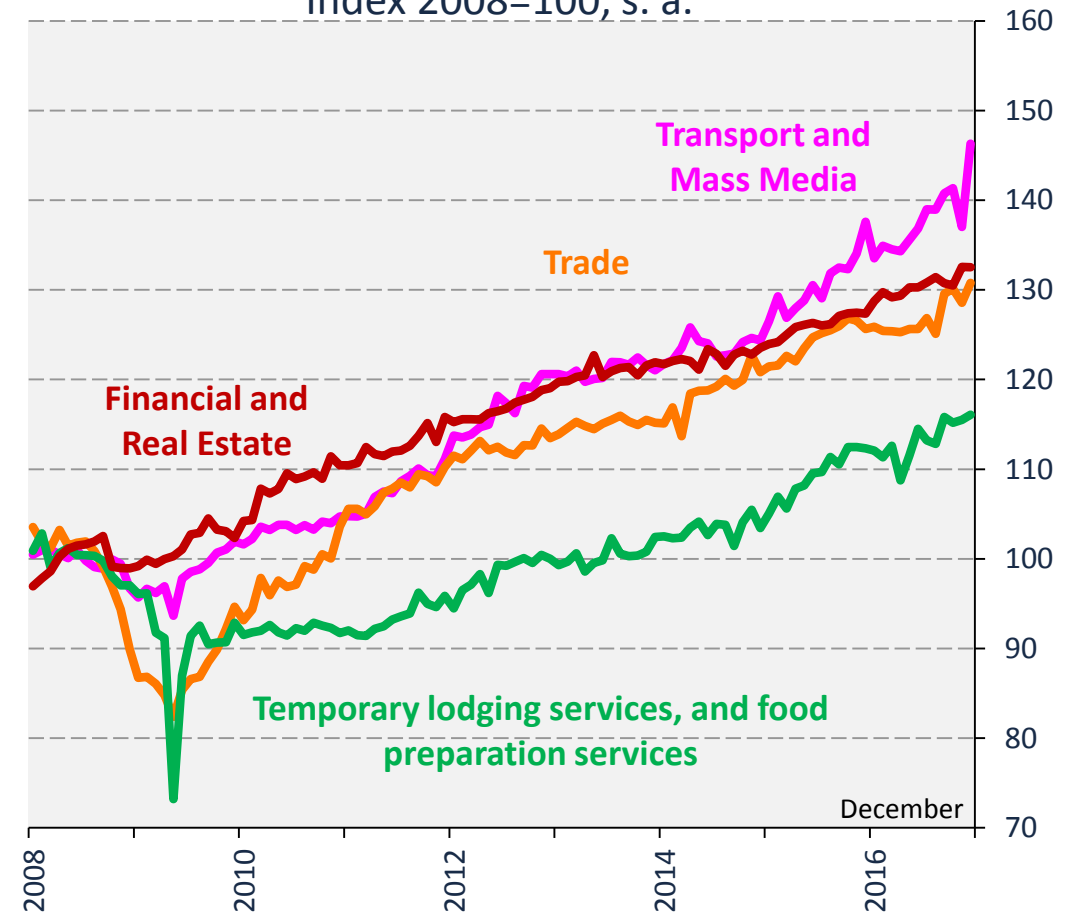
**Within the industrial production, mining kept falling. In contrast, manufacturing production observed a positive trend. It stands out that the expansion of services has been practically widespread across all of its sectors.**

**Industrial Activity**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.  
Source: Monthly Indicator of Industrial Activity, Mexico's System of National Accounts, INEGI.

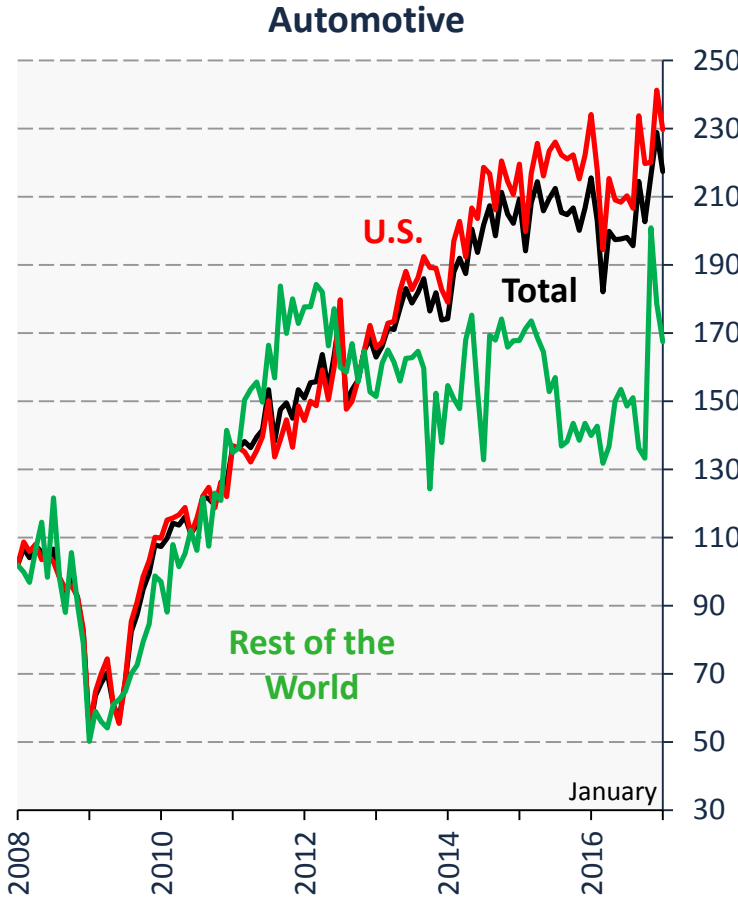
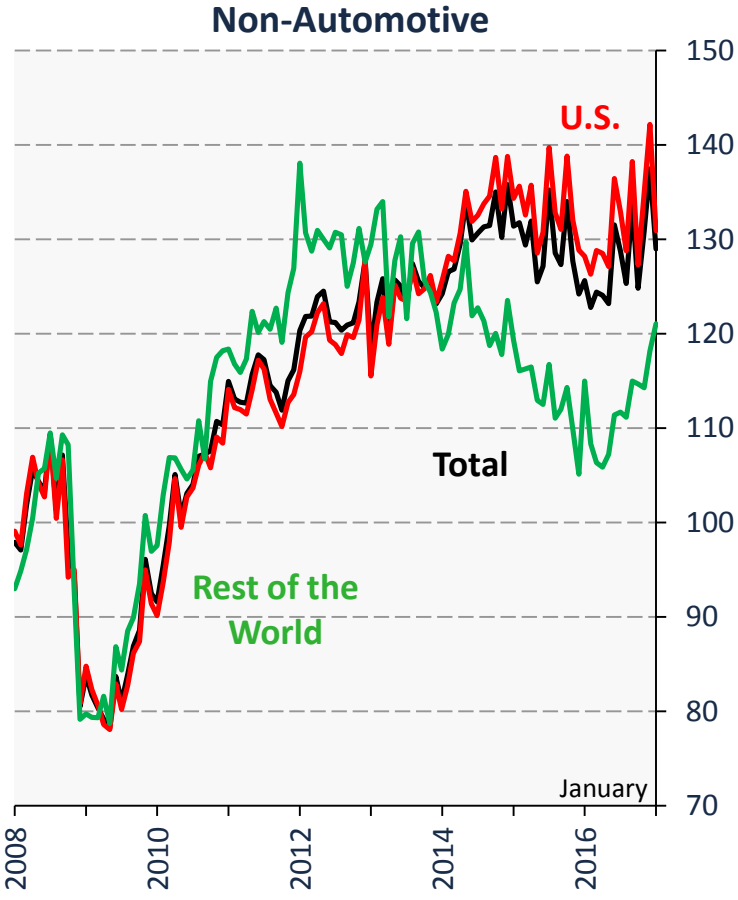
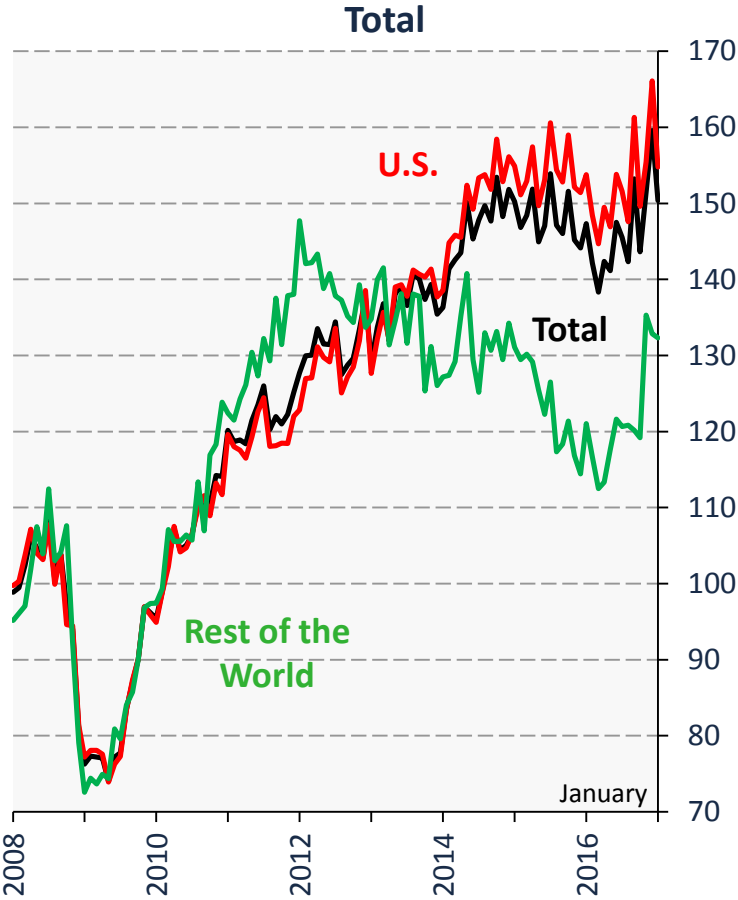
**Global Indicator of Economic Activity: Services**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.  
Source: Mexico's System of National Accounts, INEGI.

# Exports kept improving as a result of both the real exchange rate depreciation and an incipient improvement in the levels of global activity.

**Manufacturing Exports**  
Index 2008=100, s. a.



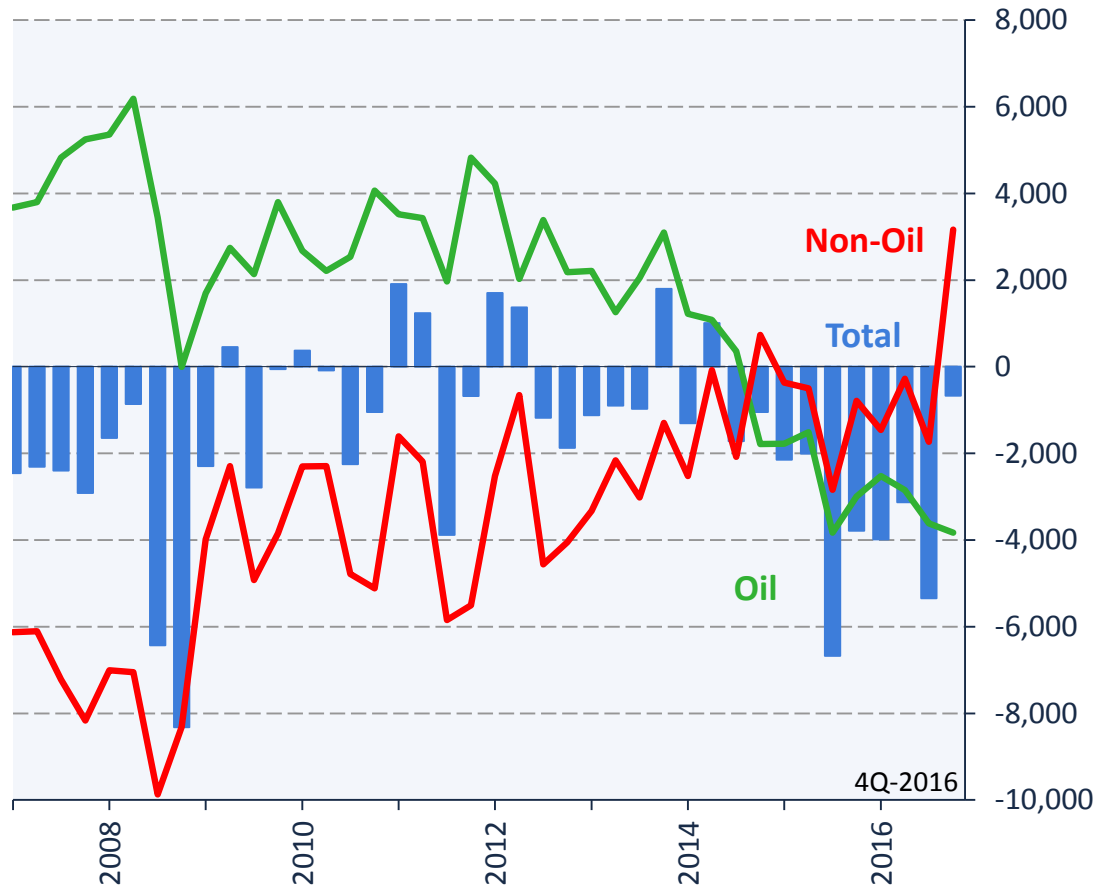
s. a. / Seasonally adjusted data based on information in nominal dollars.  
Source: Banco de México with data from SAT, SE, Banco de México, INEGI.  
Merchandise Trade Balance, SNIEG. Information of National Interest.

s. a. / Seasonally adjusted data based on information in nominal dollars.  
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 data based on information in nominal dollars.  
Source: Banco de México with data from SAT, SE, Banco de México, INEGI.  
Merchandise Trade Balance, SNIEG. Information of National Interest.

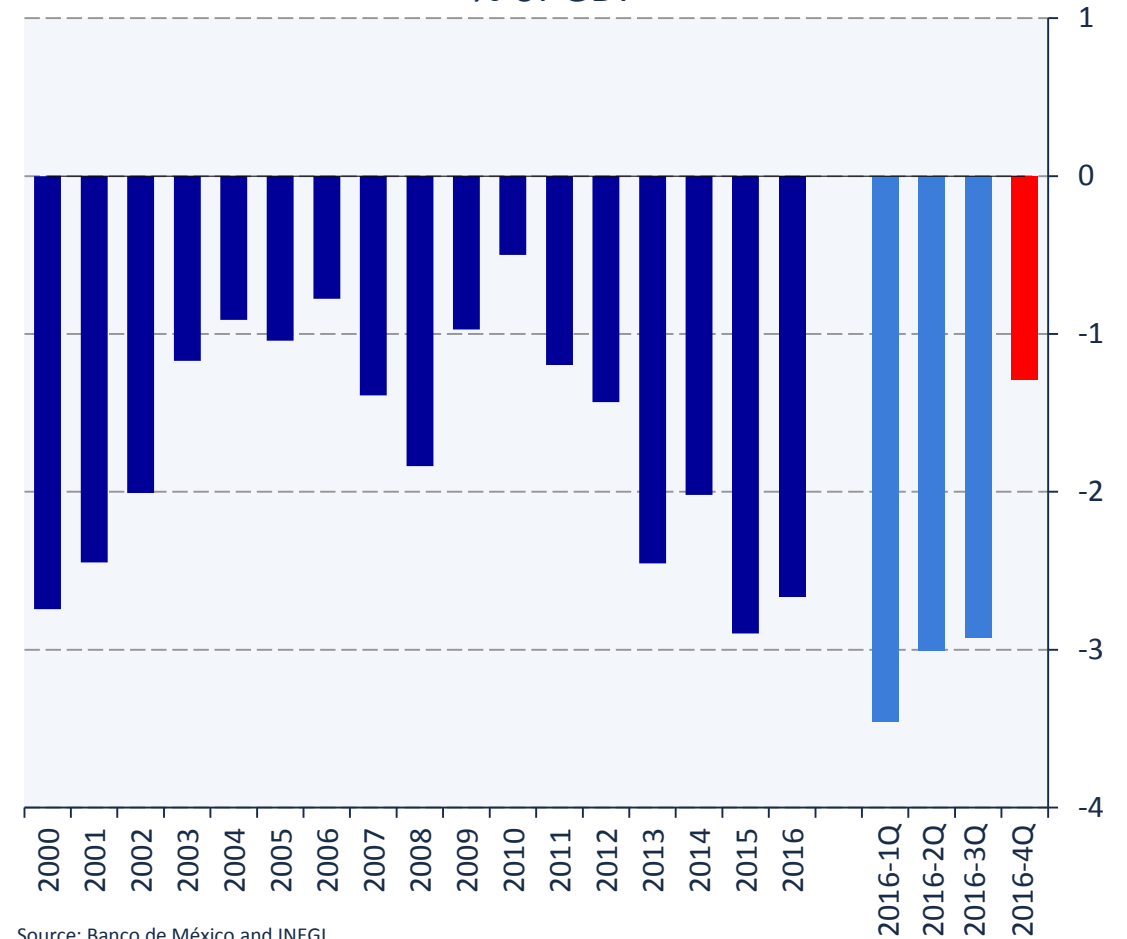
Thus, in 4Q 2016, there was a significant correction in the current account, derived from the adjustment of the trade balance, high dynamism of workers' remittances, and a greater amount of international travelers.

**Trade Balance**  
USD millions



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

**Current Account**  
% of GDP

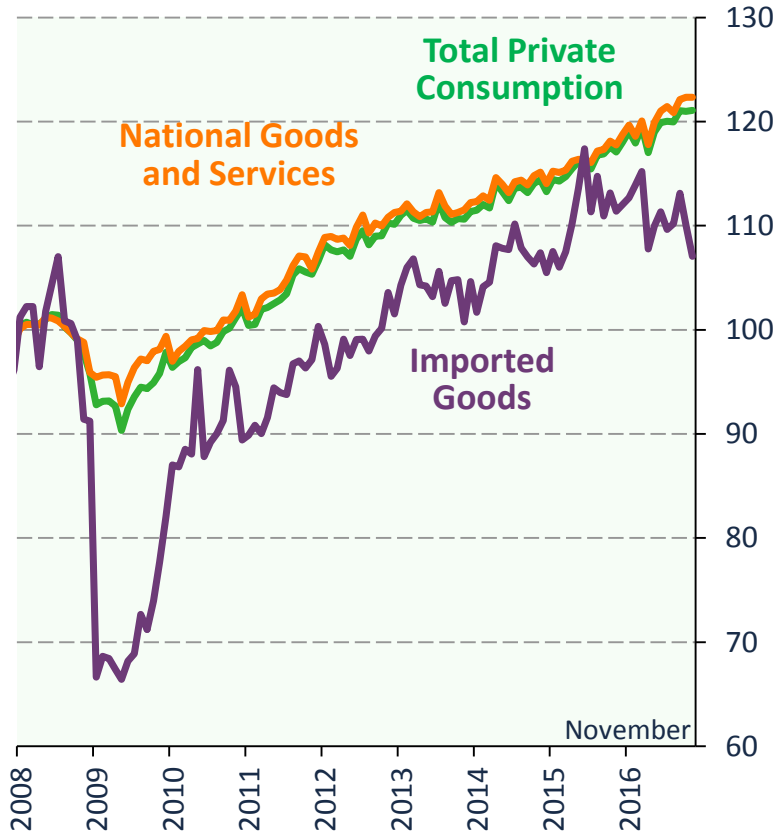


Source: Banco de México and INEGI.



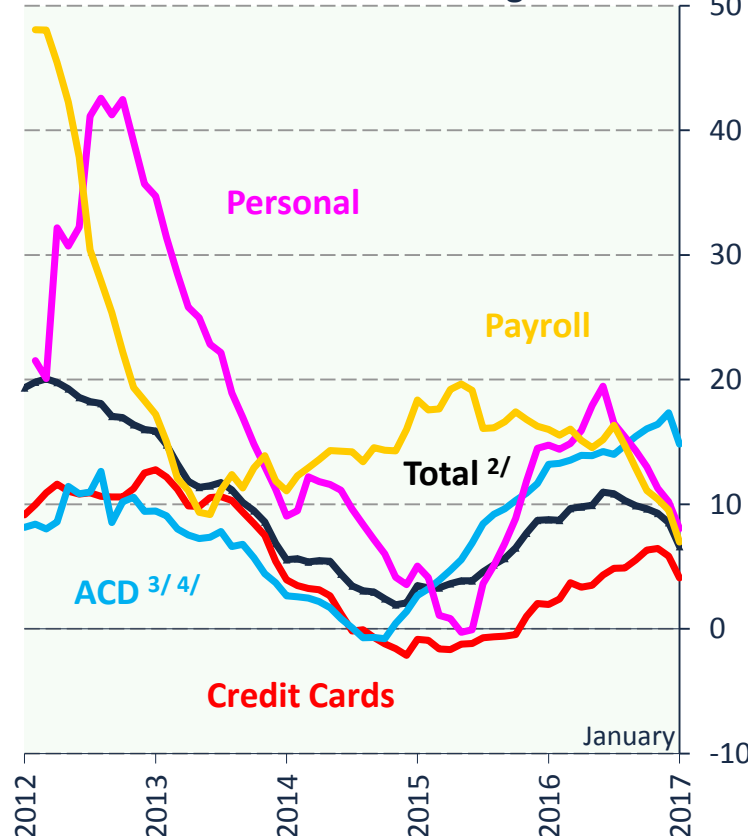
Private consumption kept exhibiting a positive trajectory, as a reflection of the dynamism observed in the component of domestic goods and services, while the consumption of imported goods and services remained weak.

**Domestic Private Consumption**  
Index 2008=100; s. a.



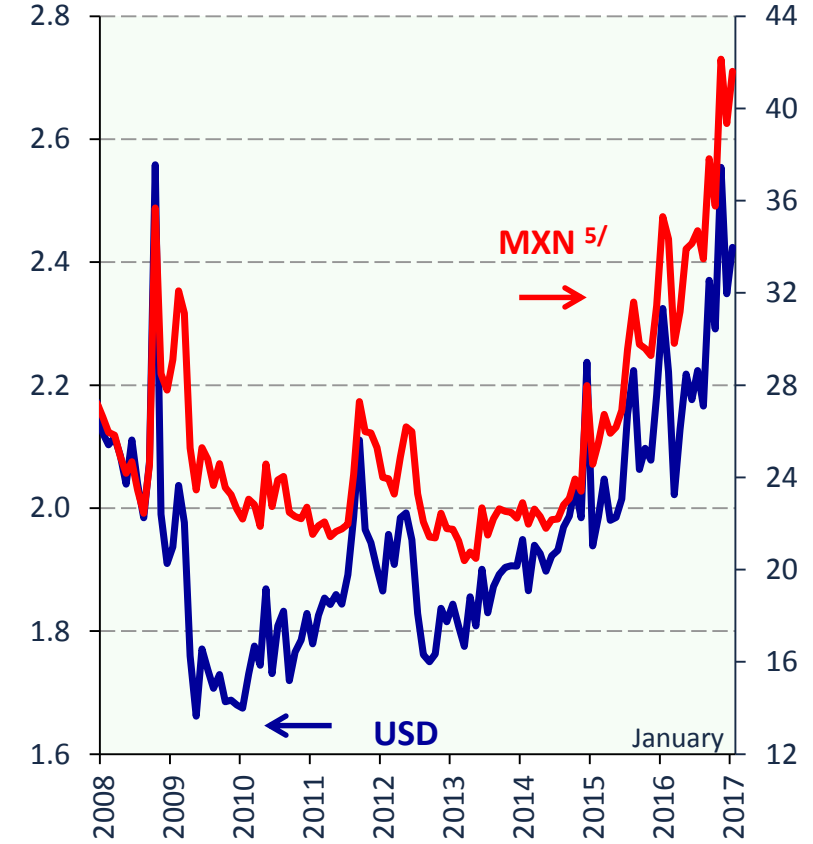
s. a. / Seasonally adjusted data.  
Source: INEGI.

**Commercial Banks' Consumer Performing Credit <sup>1/</sup>**  
Real annual % change



1/ It includes Sofomes ER subsidiaries of bank institutions and financial groups.  
2/ It includes credit for payable leasing operations and other consumer credits.  
3/ From July 2011 onwards, figures are adjusted in order to avoid distortions due to the reclassification from acquisition of consumer durables to other consumer credits by one banking institution.  
4/ It includes credit for movable property acquisition and auto loans.  
Source: Banco de México.

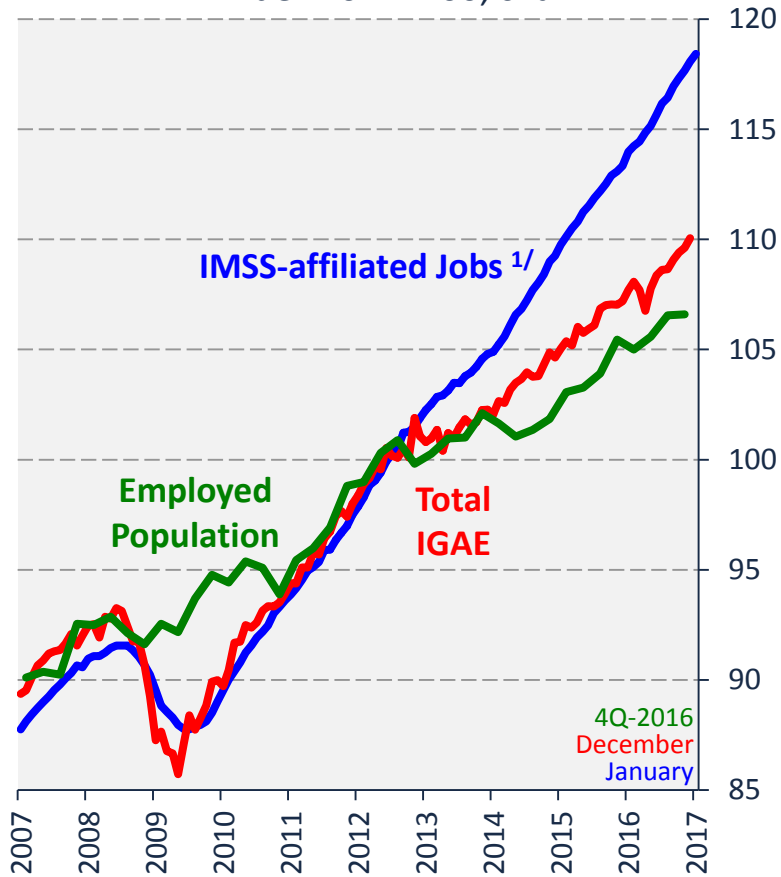
**Workers' Remittances**  
USD billions and constant MXN billions; s. a.



s. a. / Seasonally adjusted data.  
5/ Prices as of the second fortnight of December 2010.  
Source: Banco de México.

# In 4Q 2016 and in January 2017, labor market conditions kept improving.

**IMSS-Insured Jobs, Employed Population and Total IGAE**  
Index 2012=100, s. a.



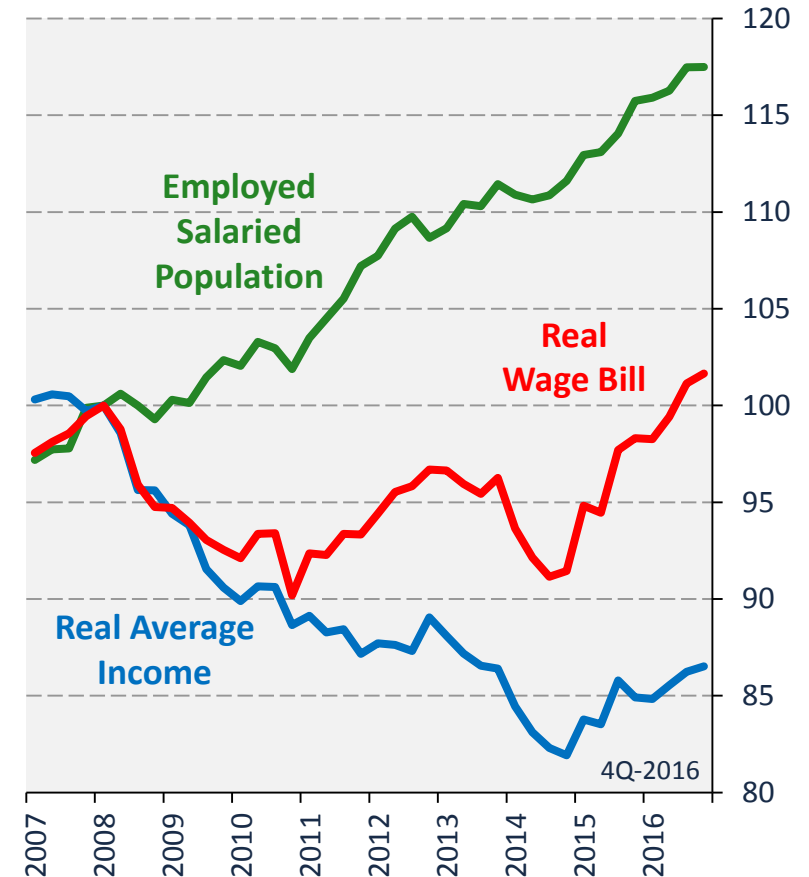
s. a. / Seasonally adjusted data.  
1/ Permanent and temporary workers in urban areas. Seasonally adjusted by Banco de México.  
Source: Calculated by Banco de México with data from IMSS and INEGI (SCNM and ENOE).

**National Unemployment Rate**  
% of EAP, s. a.



EAP / Economically Active Population.  
s. a. / Seasonally adjusted data.  
Source: National Employment Survey (*Encuesta Nacional de Ocupación y Empleo*), INEGI.

**Real Total Wage Bill**  
Index Q1-2008 =100, s. a.

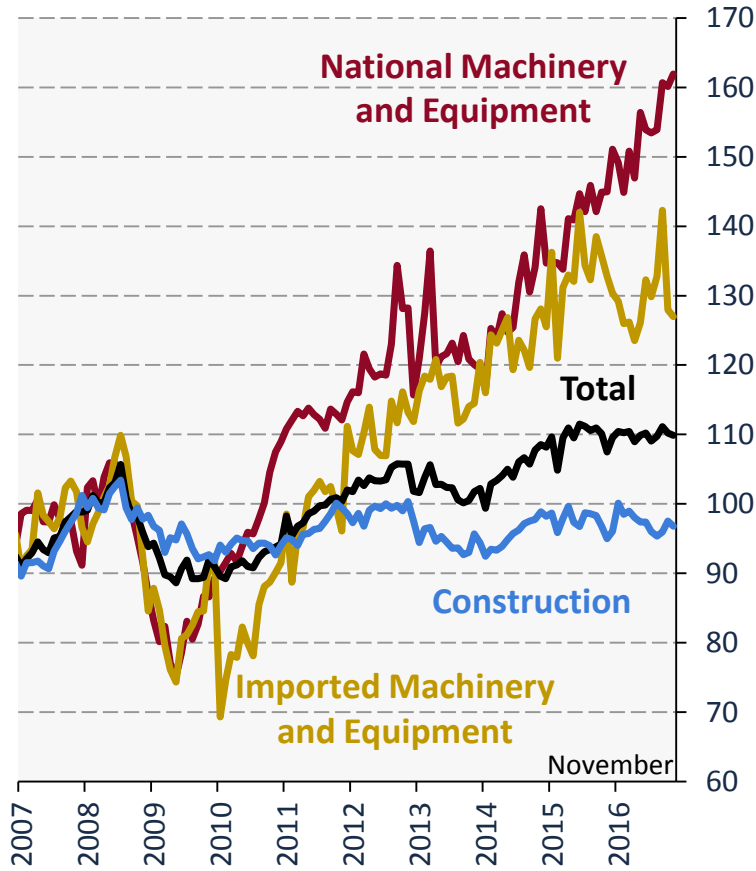


s. a. / Seasonally adjusted data.  
Source: Elaborated by Banco de México with data from National Employment Survey (*Encuesta Nacional de Ocupación y Empleo*), INEGI.

# In turn, gross fixed investment remained stagnant.

### Investment and its Components

Index 2008=100, s. a.

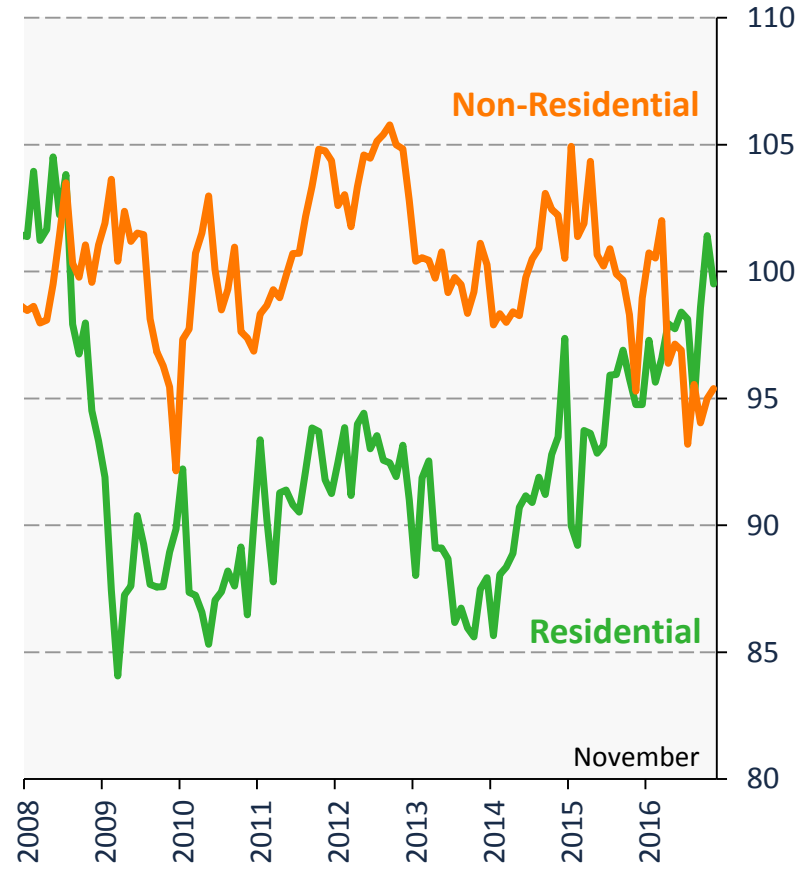


s. a. / Seasonally adjusted data.

Source: Mexico's System of National Accounts, INEGI.

### Residential and Non-Residential Construction Investment

Index 2008=100, s. a.

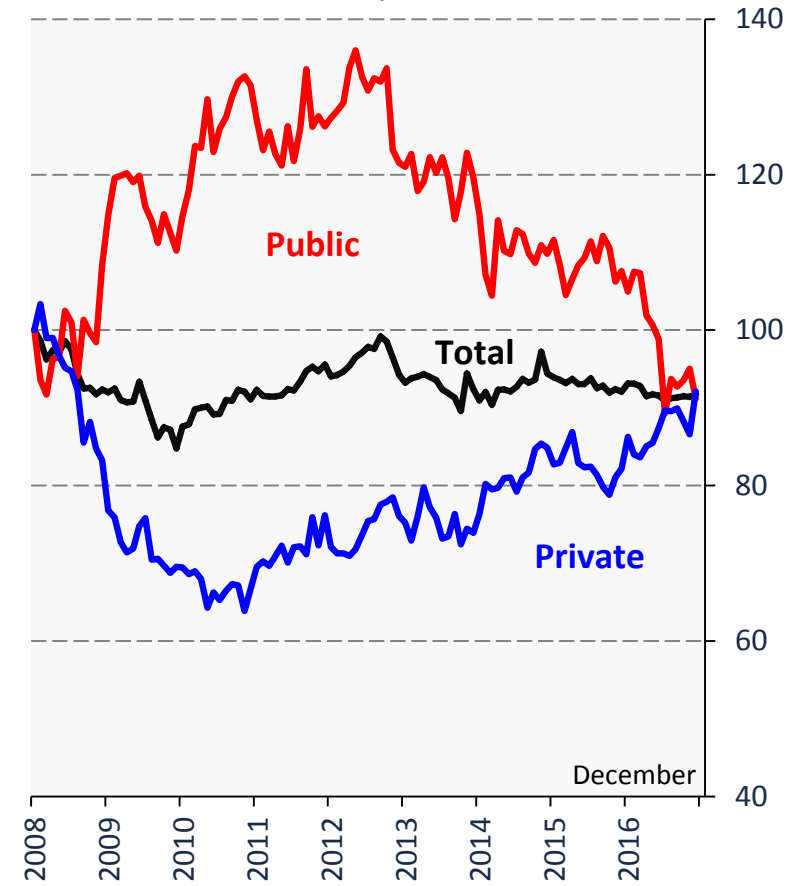


s. a. / Seasonally adjusted data.

Source: Mexico's System of National Accounts, INEGI.

### Real Value of Production in the Construction Industry by Contracting Institutional Sector

Index January 2008=100, s. a.

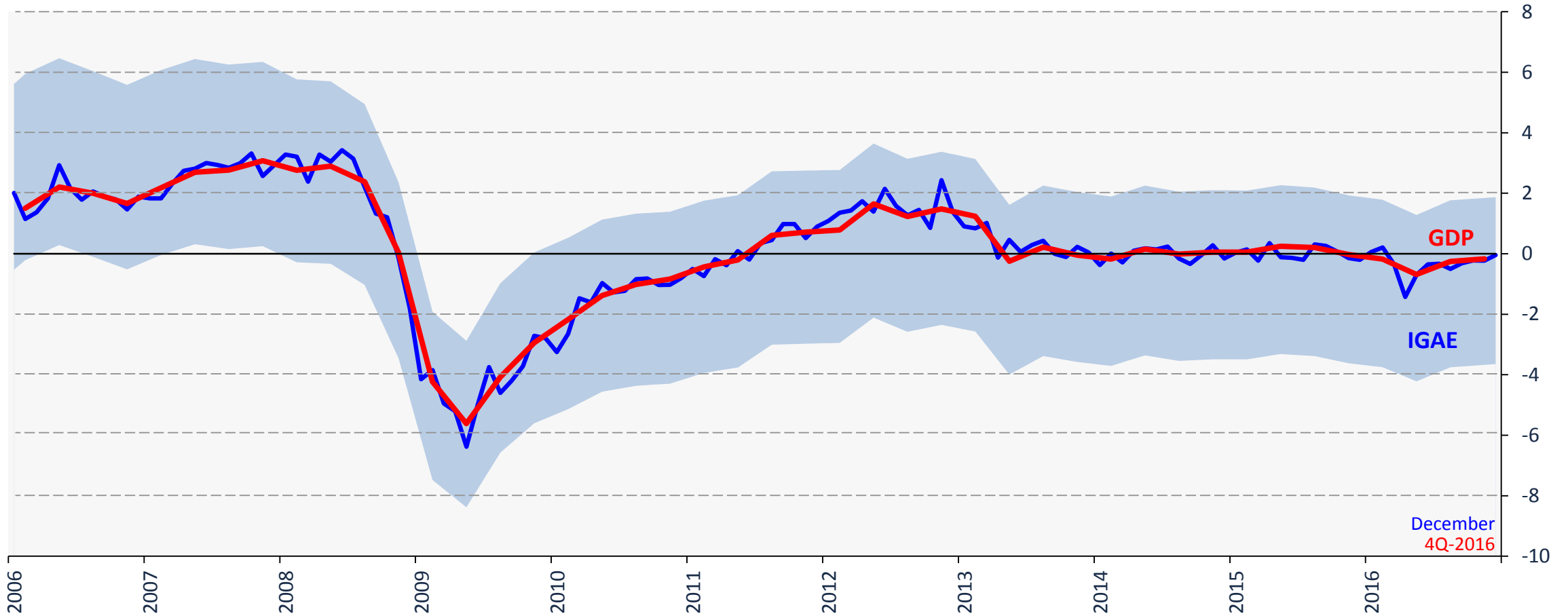


s. a. / Seasonally adjusted data. For private and public construction, the seasonal adjustment was elaborated by Banco de México with data from INEGI.

Source: ENEC, INEGI.

As a result of the recent evolution of economic activity, no aggregate demand-related pressures onto prices have been observed.

**Output Gap <sup>1/</sup>**  
% of potential output; s. a.



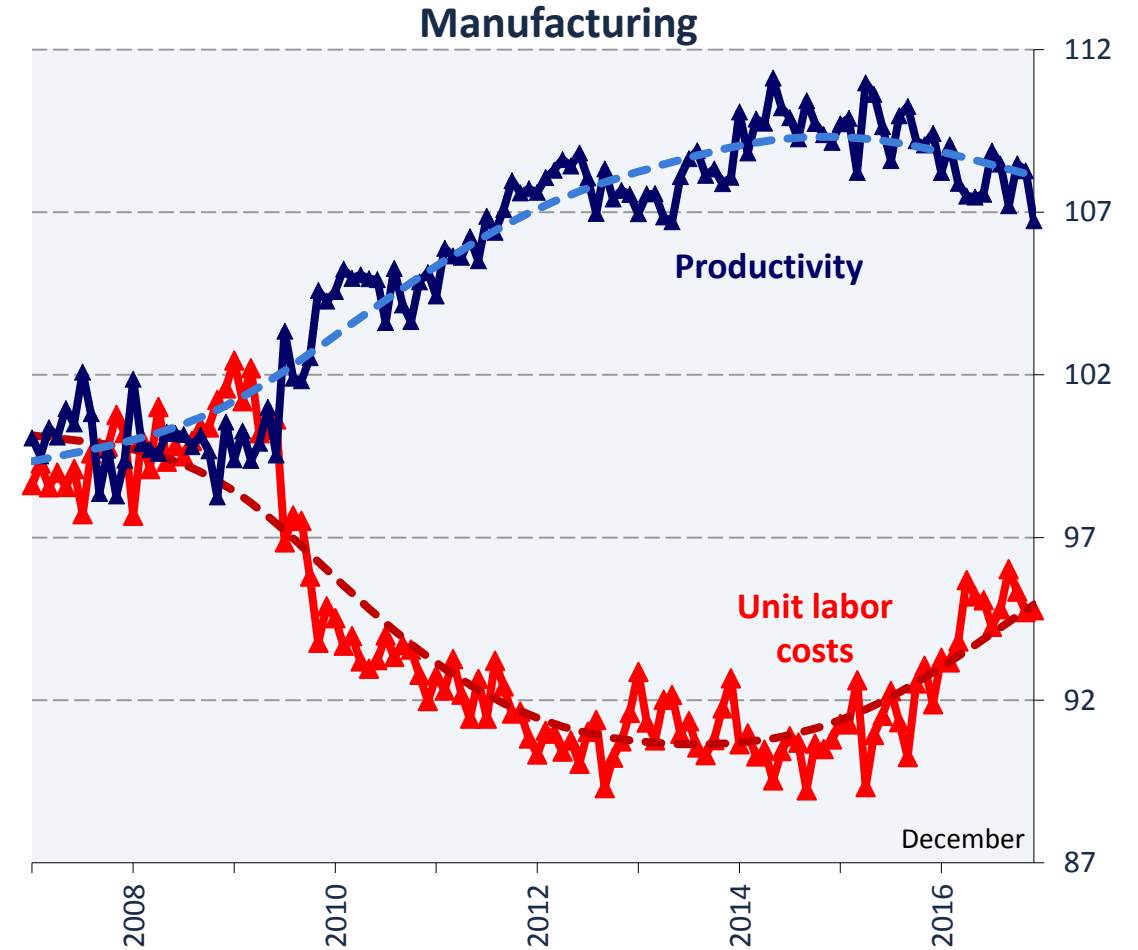
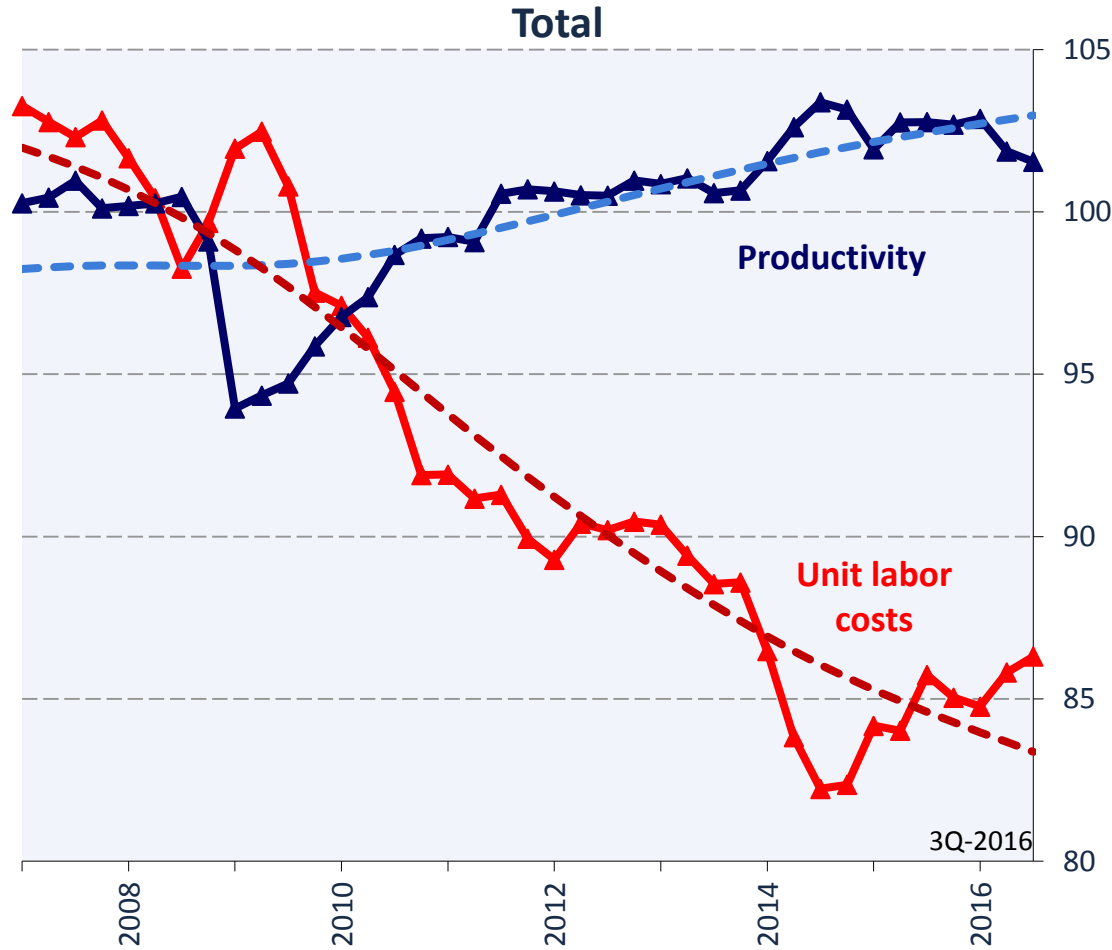
s. a. / Calculated with seasonally adjusted data.

1/ Estimated using the Hodrick-Prescott (HP) filter with tail correction method; see Banco de México (2009), "Inflation Report April-June 2009", p. 69. The shaded area is the 95% confidence interval of the output gap, calculated with an unobserved components method.

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

The improvement in the labor market has translated into higher unit labor costs, even though these remain at lower levels with respect to those observed prior to the global financial crisis.

**Productivity and Unit Labor Cost**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted and trend series. The former is represented with a solid line, the latter, with a dotted line. Trends estimated by Banco de México.  
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.

s. a. / Seasonally adjusted and trend series. The former is represented 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 Indicator of Industrial Activity of the Mexico's System of National Accounts, INEGI.

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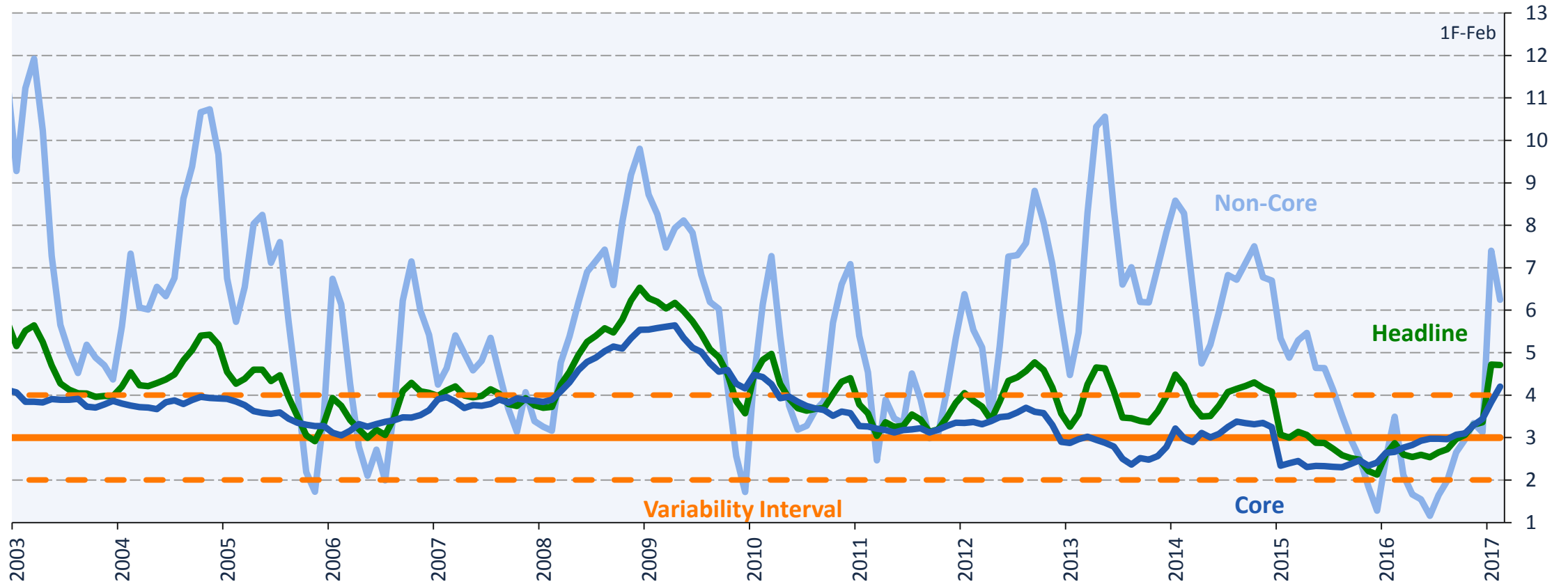
**Inflation and its Determinants**

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**Forecasts and Final Remarks**

During 4Q 2016, the slightly upward trend in inflation persisted. Then in January, this trend intensified after the impact of the adjustment in some energy prices.

### Consumer Price Index Annual % change

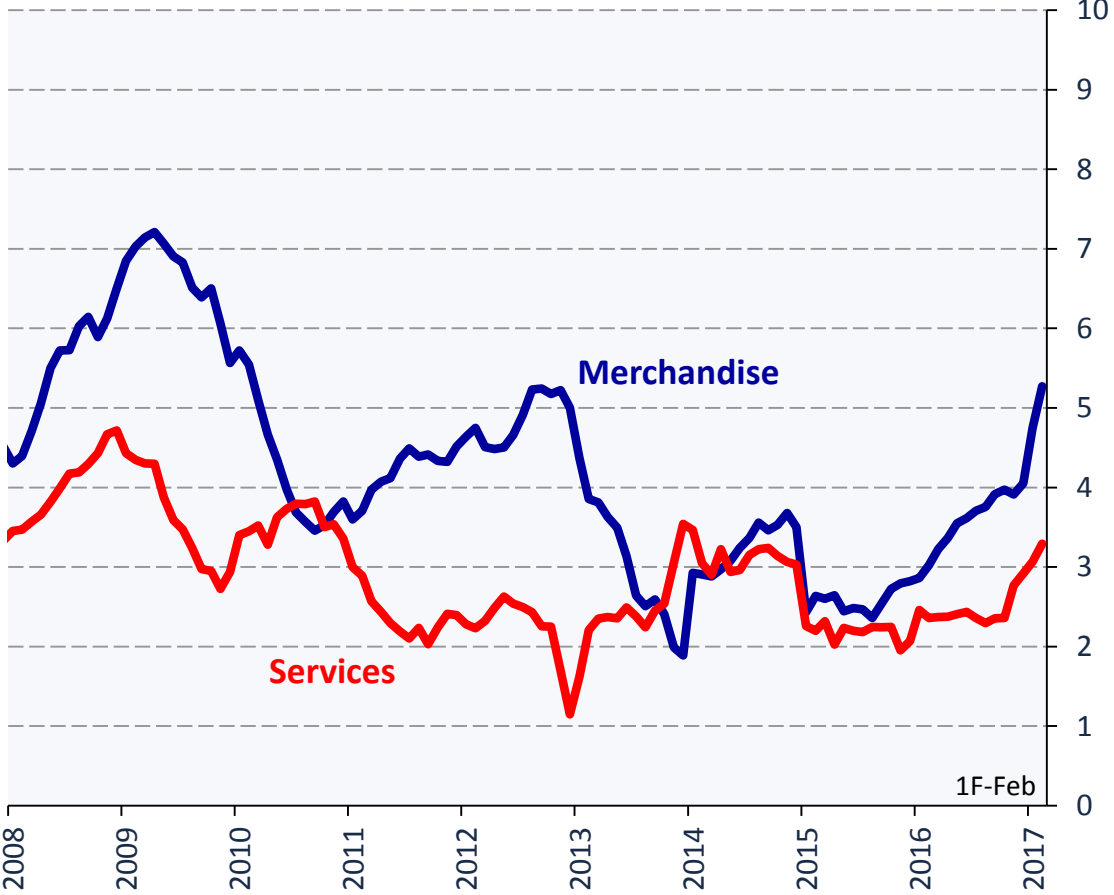


Source: Banco de México and INEGI.

The depreciation of the Mexican peso in 4Q 2016 was reflected in the adjustment of relative prices of merchandise with respect to services, contributing to the upward trend in core inflation.

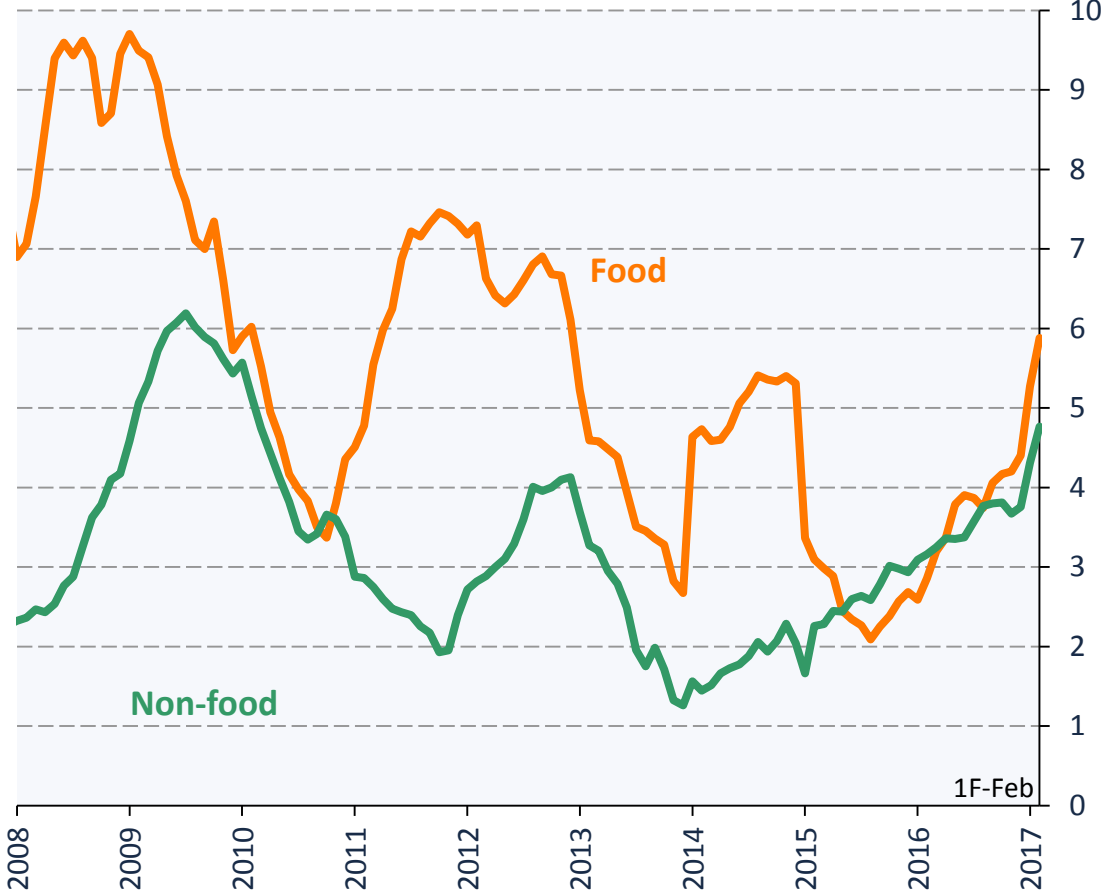
**Core Price Index**  
Annual % change

**Merchandise and Services**



Source: Banco de México and INEGI.

**Merchandise**

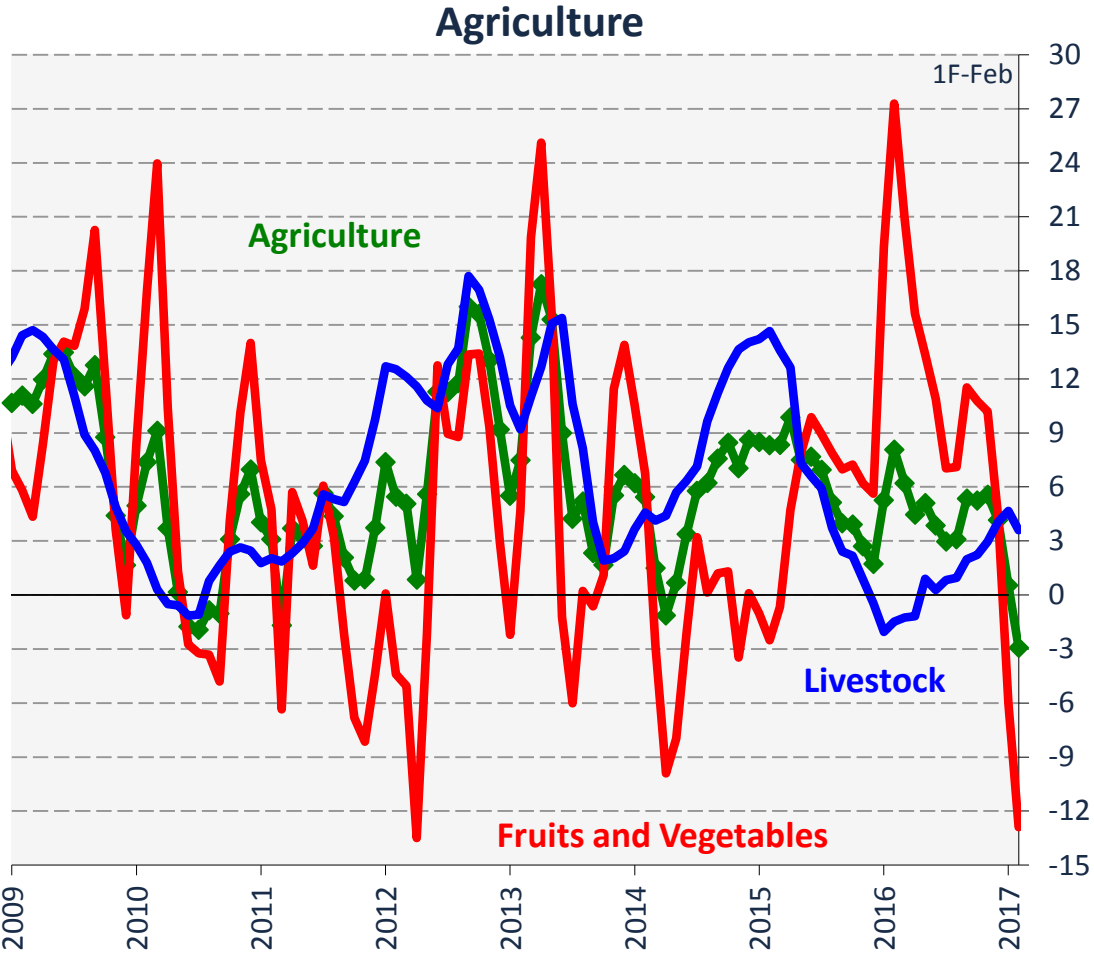


Source: Banco de México and INEGI.

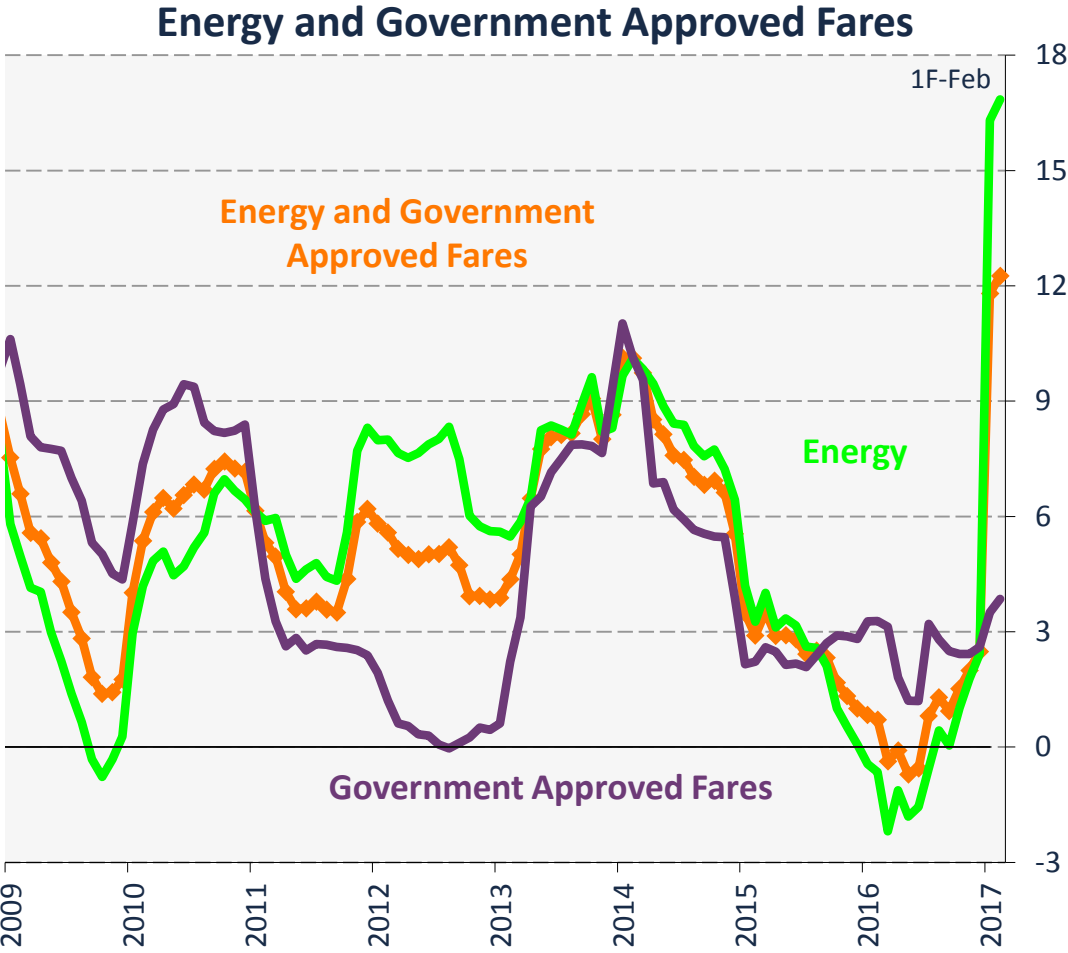


During 4Q 2016, the non-core component increased, due to higher prices of some agricultural products and to higher gasoline prices at the Northern border. In January, it was further affected by the increments in energy prices.

**Non-Core Index**  
Annual % change



Source: Banco de México and INEGI.

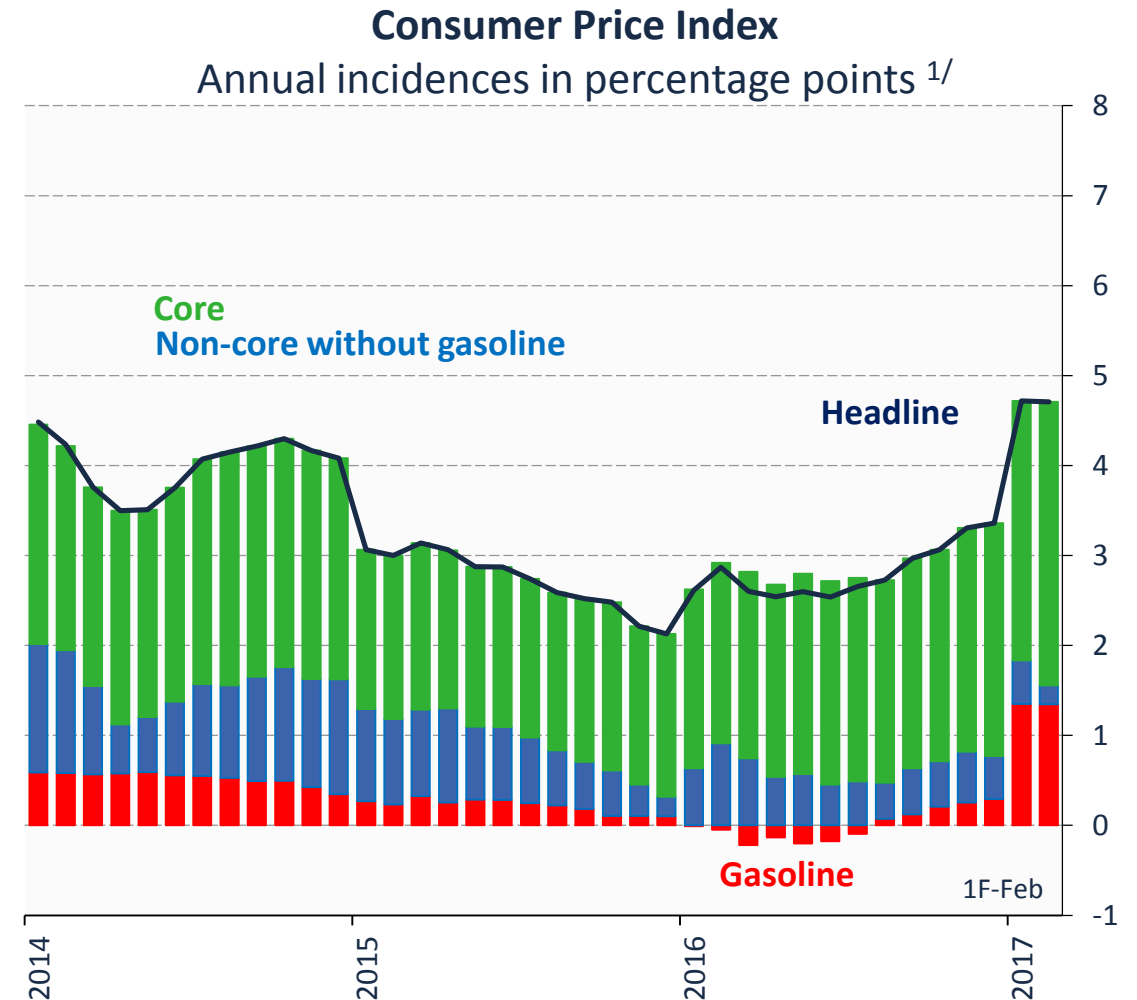


Source: Banco de México and INEGI.

At the beginning of the year, the measures aimed to liberalize some energy prices strongly affected the CPI.

It should be pointed out that:

- ✓ *Even though the impact of the liberalization of energy prices onto inflation in the short term was significant, it is expected to be transitory.*
- ✓ *This measure represents progress in strengthening the macroeconomic fundamentals of the country, as it reduces the vulnerabilities it represents for public finances, given that maintaining public prices misaligned to their international reference is not sustainable.*

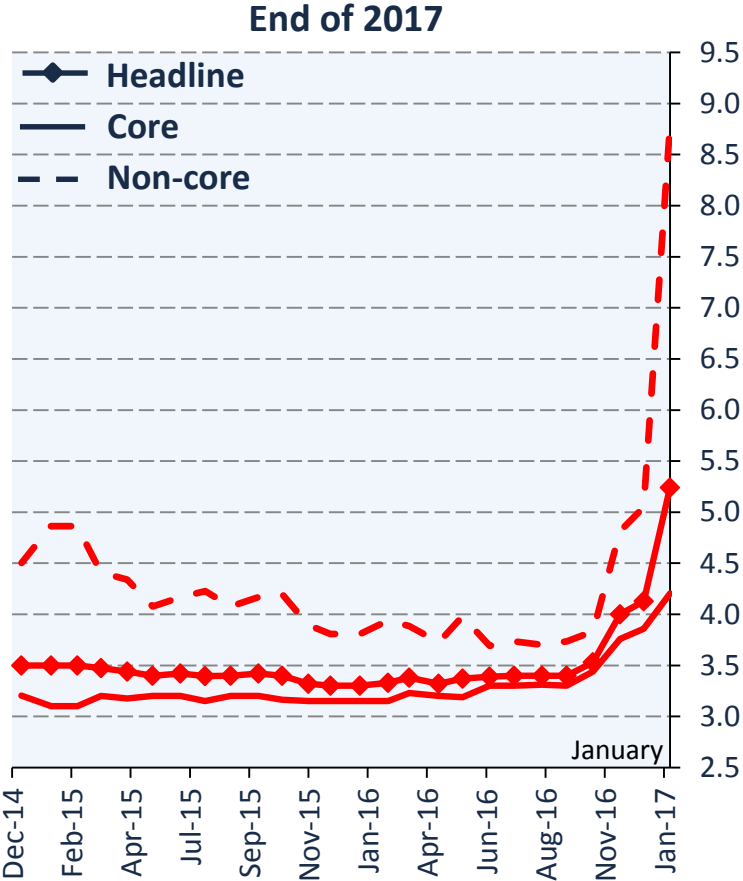


1/ Incidence refers to the contribution of each component of the CPI on percentage points to the general inflation. In some cases the sum of the respective components may have some discrepancy due to rounding effects.

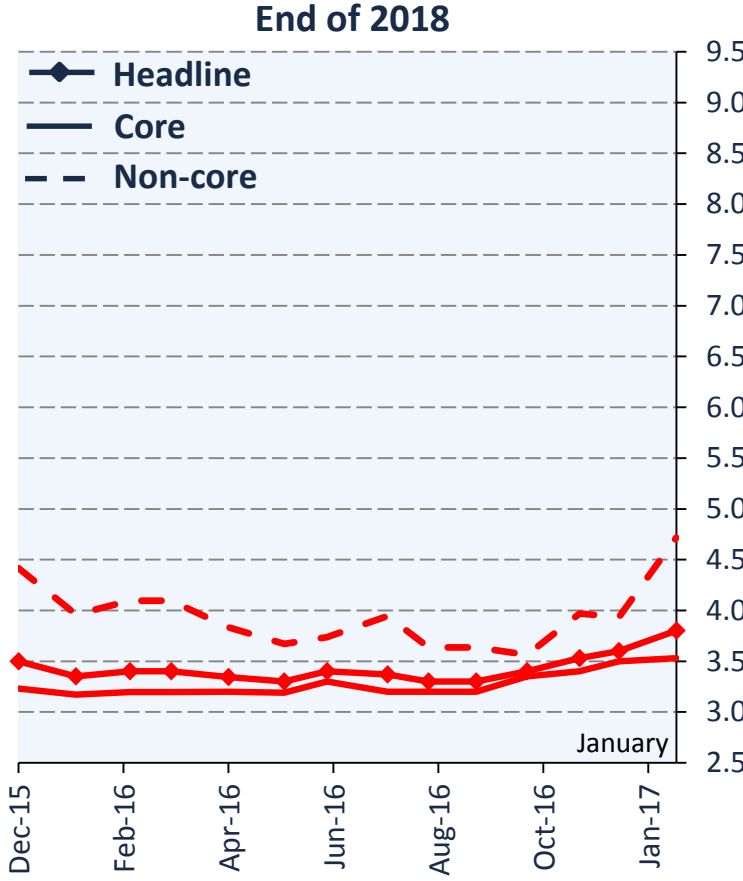
Source: Elaborated by Banco de México with data from INEGI.

In this context, and in view of the temporary shocks that are expected to affect inflation this year, inflation expectations increased across all terms, even though they fundamentally still reflect a transitory increment in inflation, as medium- and long-term expectations increased to a much lesser extent as compared to short-term ones.

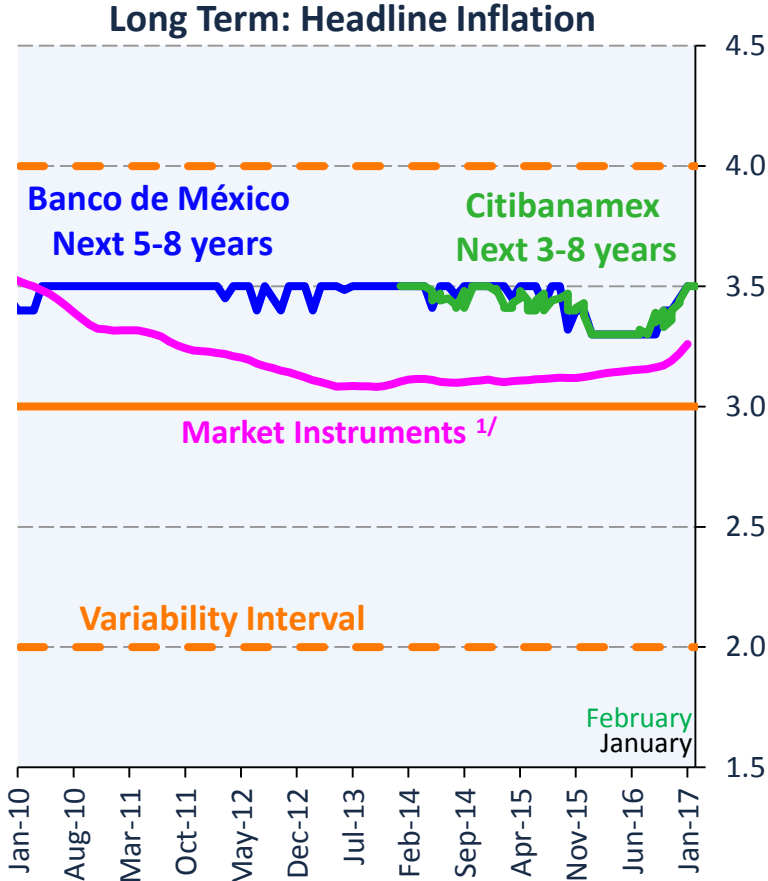
### Inflation Expectations Median, %



Source: Banco de México.



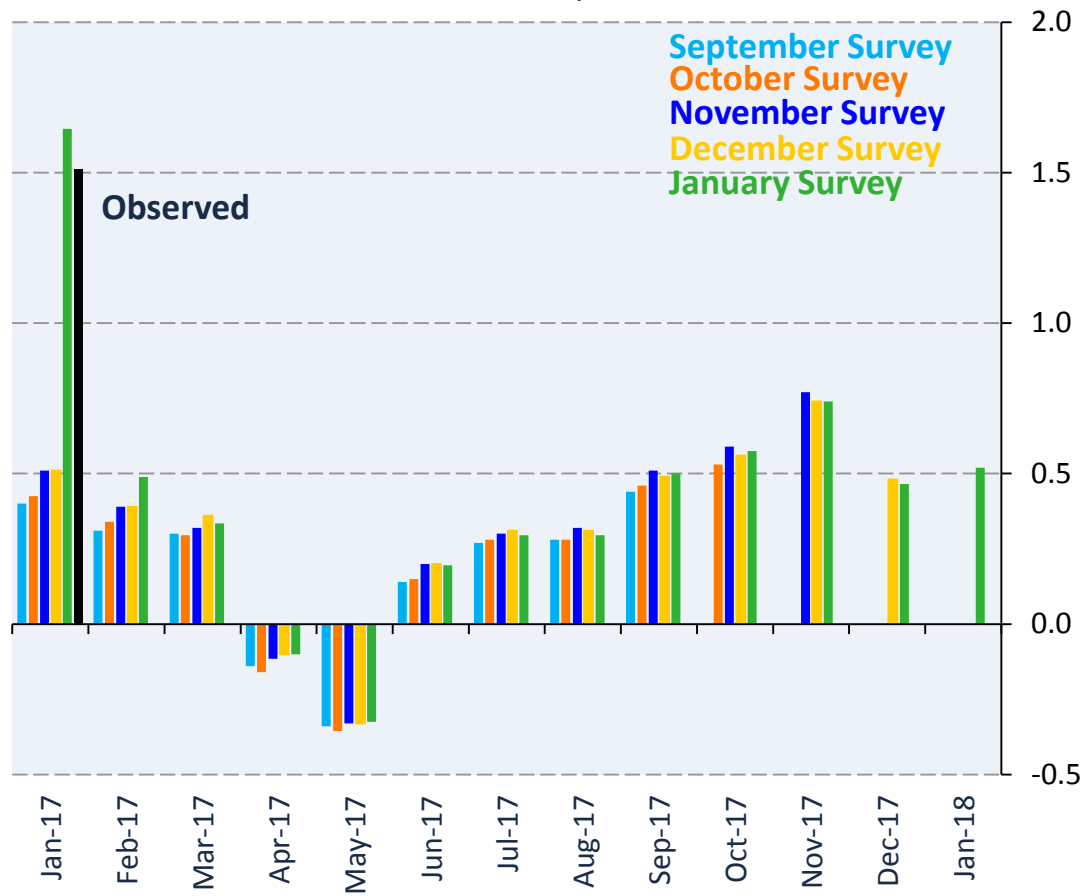
Source: Banco de México.



1/ For a description of the estimation of long-term inflation expectations, see the Box "Decomposition of Break-even Inflation" in the Quarterly Report, October - December 2013. For the current Report, the estimate was updated by including data as of December 2015.  
Source: Banco de México and Citibanamex survey.

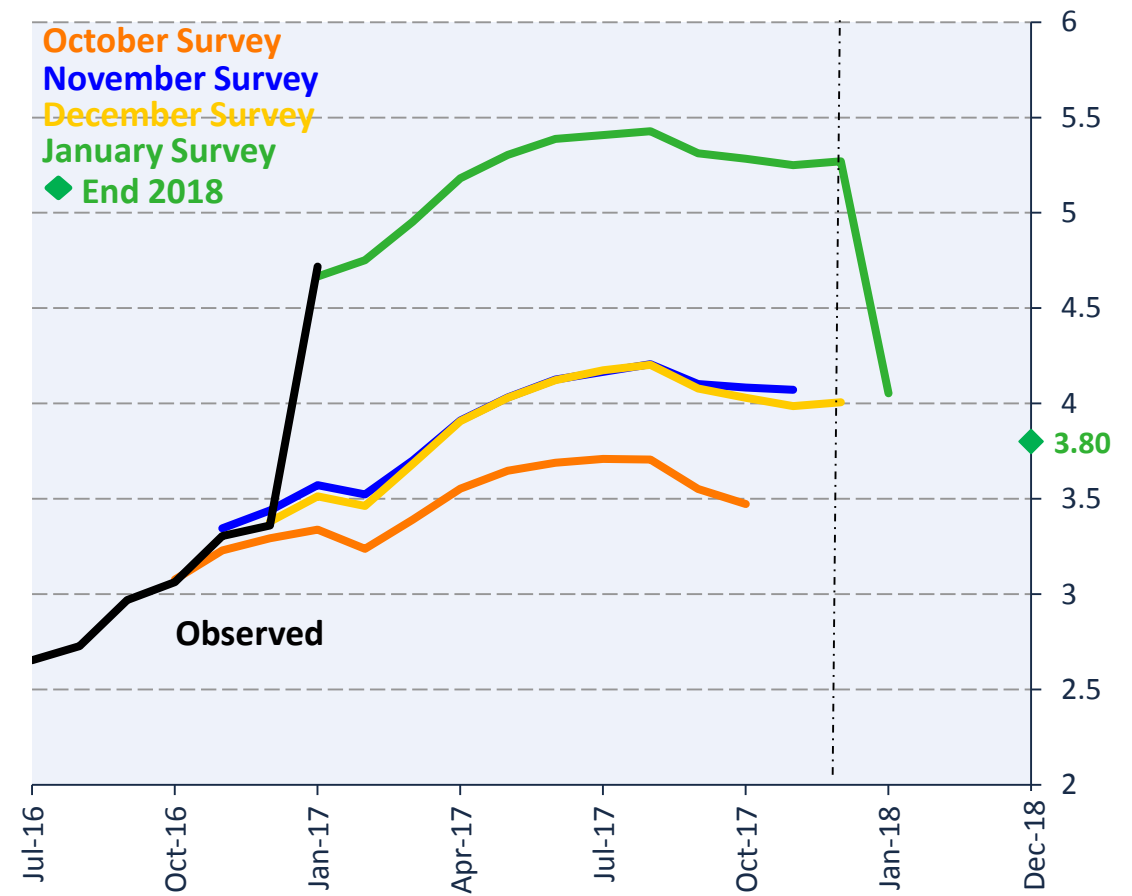
Since February, the evolution of the monthly expected inflation derived from surveys did not change after the shock in January, and, therefore, the implicit annual inflation expected for January 2018 presents a significant downward adjustment.

**Monthly Inflation Expectations for 2017**  
Median, %



Source: Banco de México and INEGI.

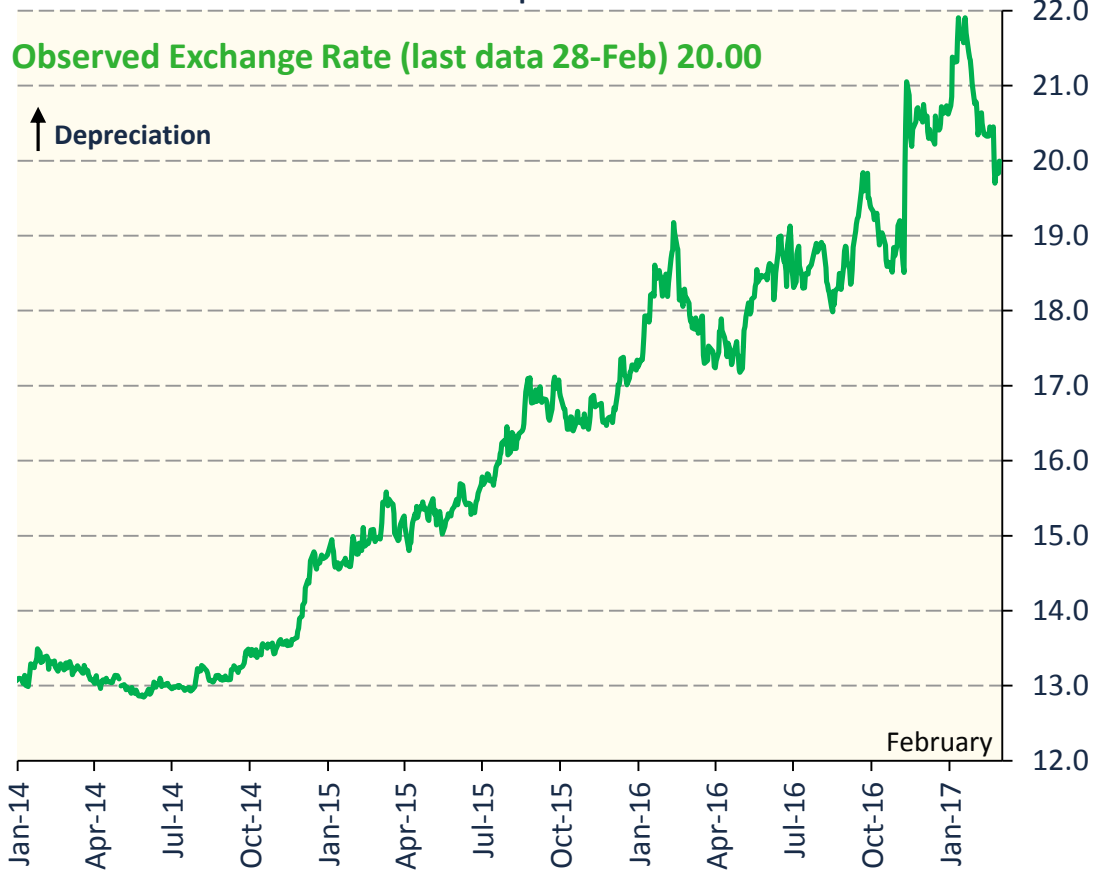
**Annual Inflation Expectations**  
%



Source: Banco de México and INEGI.

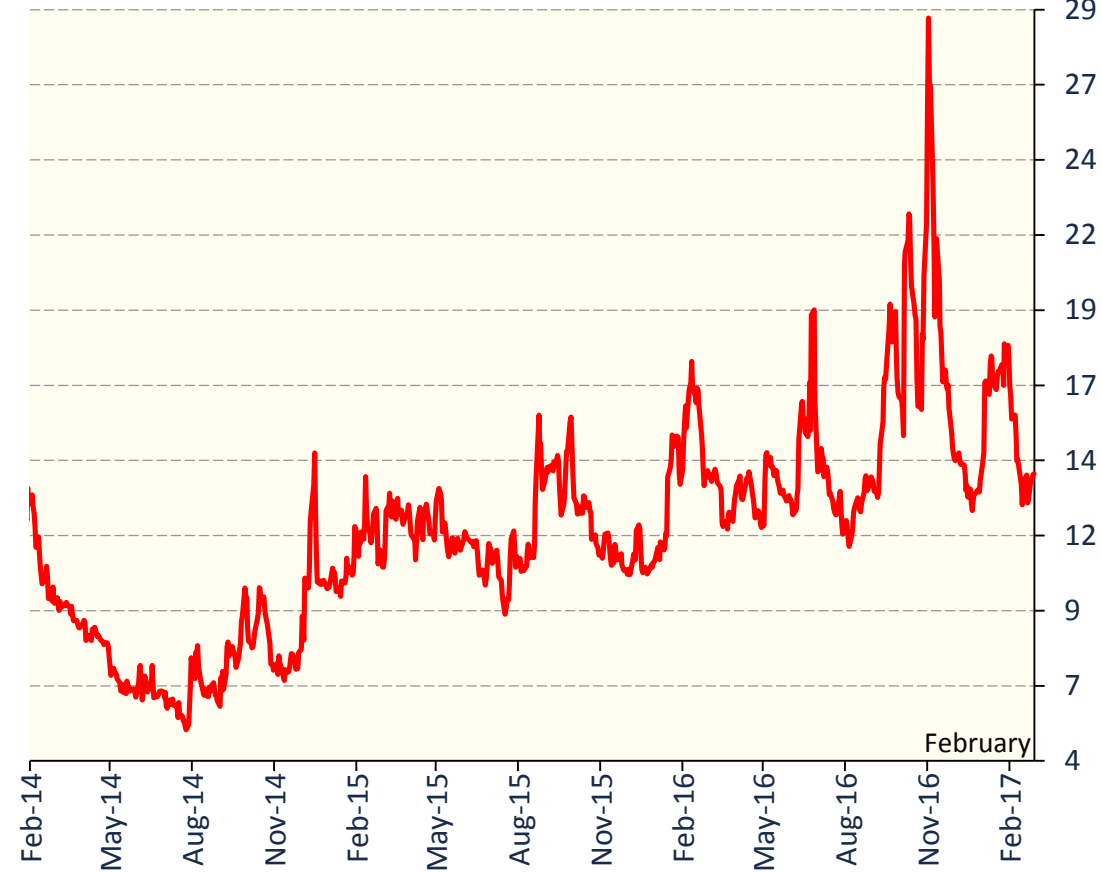
In light of the outcome of the U.S. elections and the risk of adjustments in the Mexico-U.S. relations, the exchange rate and its volatility went up, while more recently the Mexican peso has considerably appreciated. To this development, monetary policy actions have contributed significantly, as well as the measures announced by the Foreign Exchange Commission.

**Nominal Exchange <sup>1/</sup>**  
Pesos per USD



1/ Refers to FIX Exchange rate.  
Source: Banco de México.

**Implied Volatility in Exchange Rate Options <sup>2/</sup>**  
%

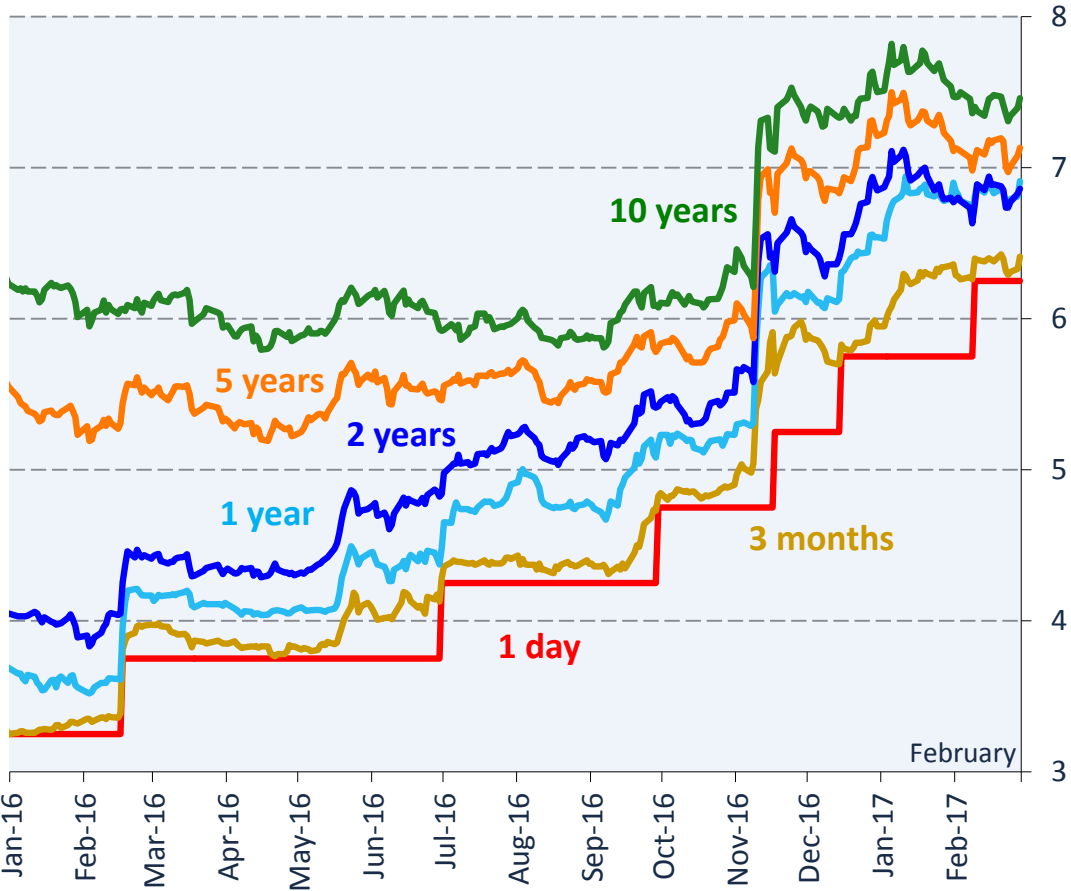


2/ Currency option implied volatility refers to one-month options.  
Source: Bloomberg.

In turn, interest rates across all terms went up, although there has recently been a reversal. Furthermore, the slope of the yield curve diminished during this period.

**Government Bond Interest Rates**

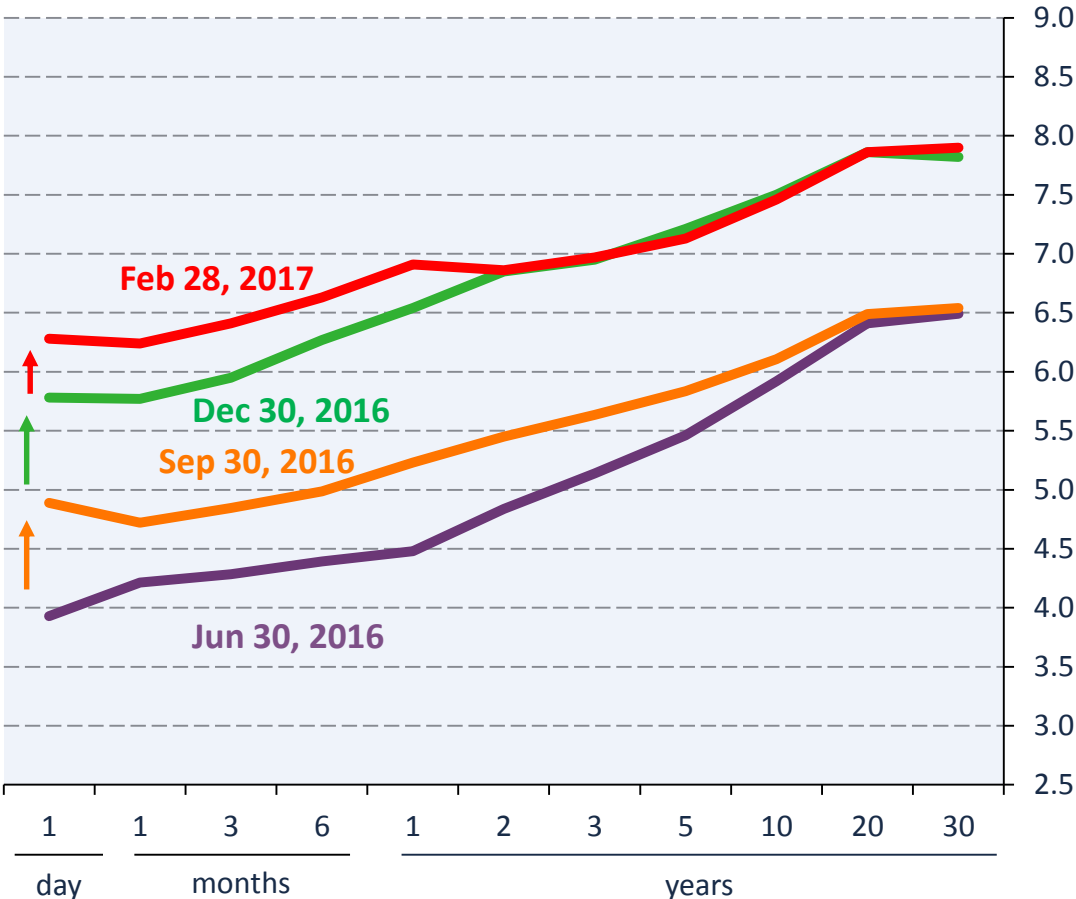
%



Source: Banco de México and *Proveedor Integral de Precios (PiP)*.

**Yield Curve**

%

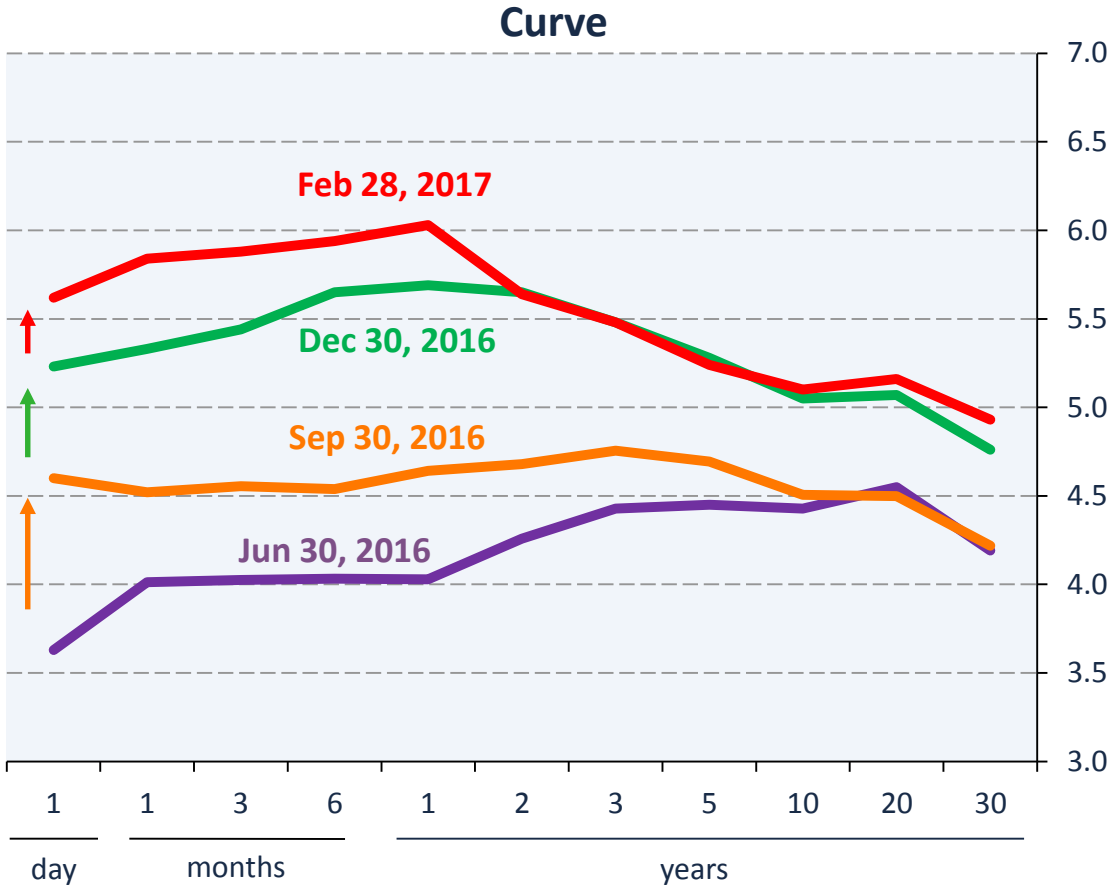
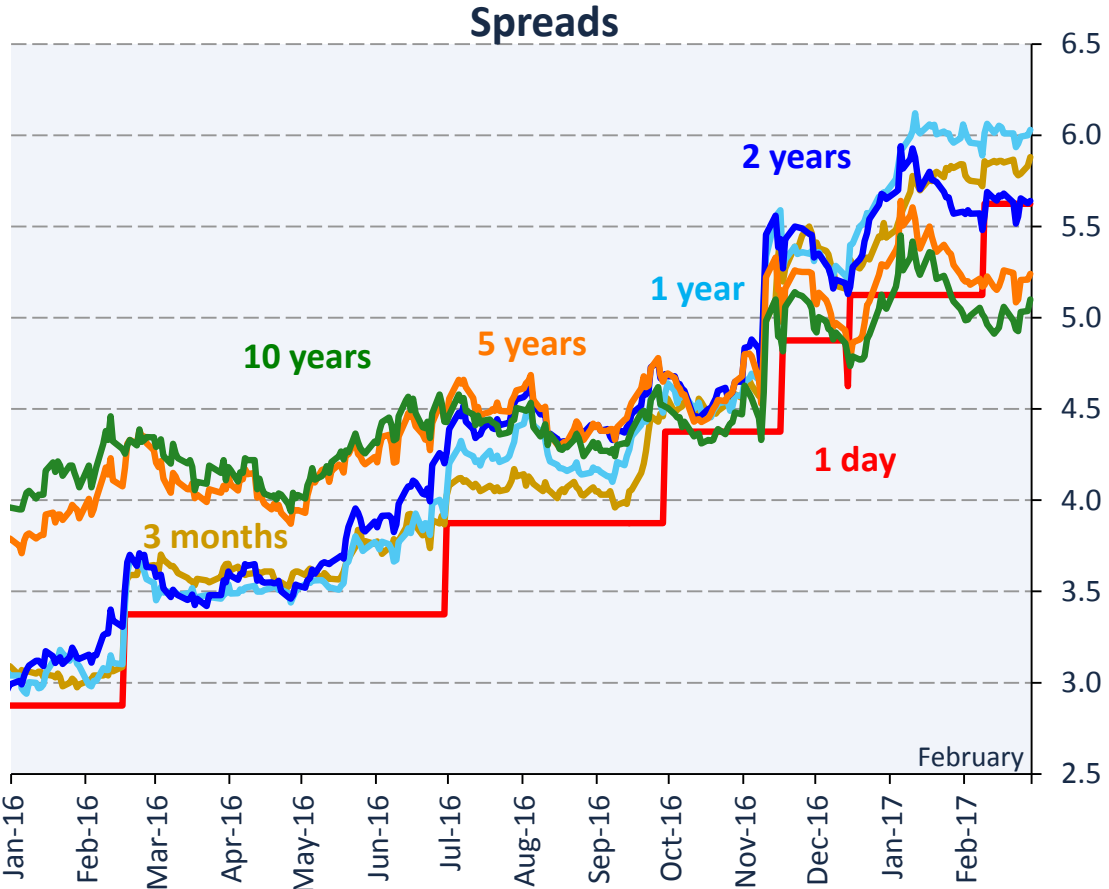


Source: Banco de México and *Proveedor Integral de Precios (PiP)*.

Mexico and U.S. interest rate spreads have been increasing, given that interest rates in the U.S. increased to a lesser extent. It is noteworthy that during this period the spread curve reversed.

### Mexico and United States Interest Rate Spreads <sup>1/</sup>

%



<sup>1/</sup> The United States objective rate is the average of the interval considered by the Federal Reserve. Source: Proveedor Integral de Precios (PiP) and U.S. Treasury Department.

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

# Outline

**1**

**Monetary Policy**

**2**

**External Conditions**

**3**

**Evolution of the Mexican Economy**

**4**

**Inflation and its Determinants**

**5**

**Forecasts and Final Remarks**



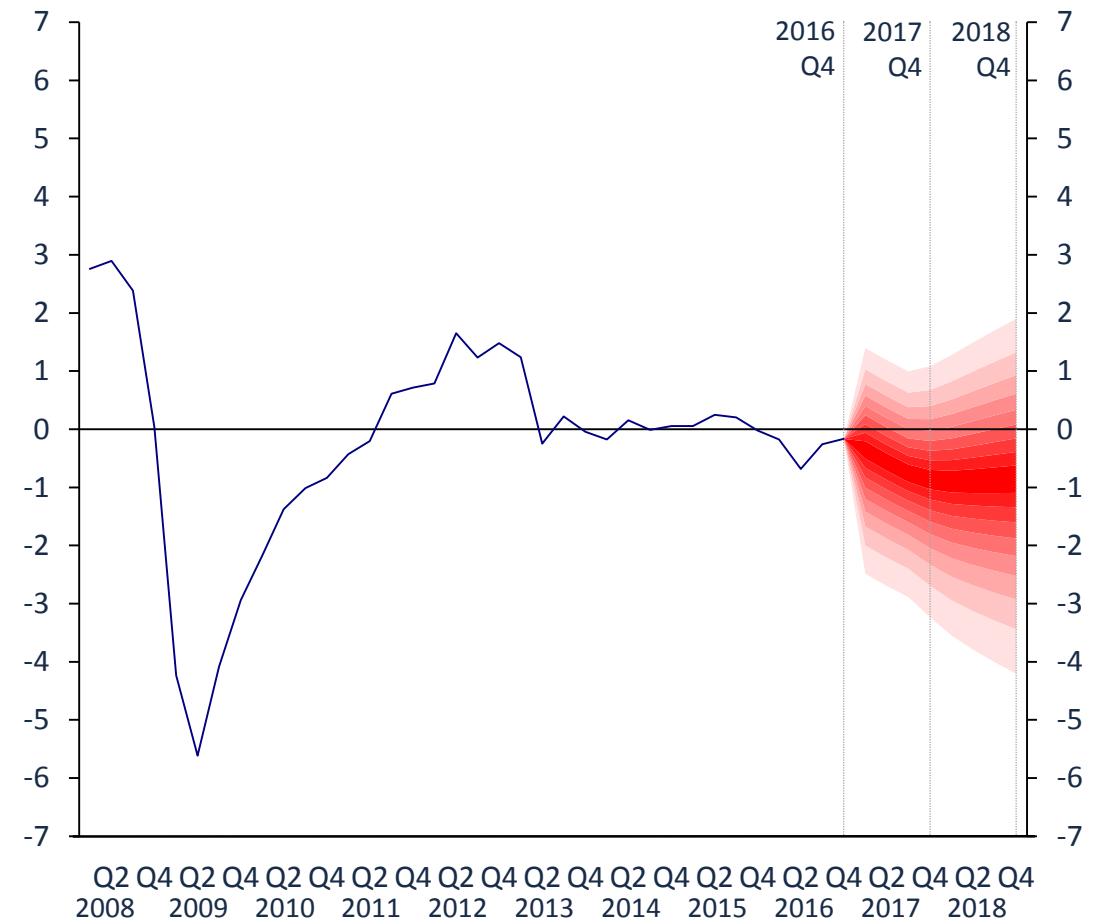
# Economic Activity Outlook

GDP Growth (%)		
Report	Previous	Revised
2017	1.5 – 2.5	1.3 – 2.3
2018	2.2 - 3.2	1.7 – 2.7

Increase in the Number of IMSS-insured jobs (Thousands)		
Report	Previous	Revised
2017	600 - 700	580 – 680
2018	650 - 750	620 – 720

Current Account Deficit (% of GDP)		
Report	Previous	Revised
2017	3.0	2.7
2018	3.0	2.7

**Fan Chart: Output Gap**  
% of potential output, s. a.



s. a. / Seasonally adjusted data.

Source: Banco de México.

## Risks to the Growth Outlook

### Upward:

- ✓ That the implementation of structural reforms would render greater-than-expected results.
- ✓ That, given the recent depreciation of the exchange rate, non-oil exports would present a more notorious reactivation.
- ✓ That the implementation of the expansionary fiscal policy in the U.S. would have a net positive impact on the Mexican industrial production and on the transfer of workers' remittances to the country.
- ✓ That the forthcoming negotiations of the Free Trade Agreement with the U.S. would reach a favorable outcome.

## Risks to the Growth Outlook

### Downward:

- ✓ That different enterprises would decide to cancel or postpone their investment plans in light of the recent events in the U.S.
- ✓ That a highly protectionist trade or fiscal policy would be implemented in the U.S., leading to a further deterioration of consumers' and businesses' confidence.
- ✓ That the rating agencies would reduce the credit rating of the country, affecting investment flows to Mexico.
- ✓ That workers' remittances to Mexico would be lower than expected, possibly as a consequence of the policies impeding their transfers or of a lower level of employment among Mexicans in the U.S.
- ✓ That episodes of high volatility in international financial markets would be observed.

# Inflation Outlook

## Headline inflation

## Core inflation

2017

- It is estimated to lie above the upper limit of the variability interval, while it is expected to resume its tendency of convergence towards its target during the last months of this year.

- It is expected to persist at levels above the permanent 3 percent target, although it is estimated to resume its trend of convergence towards its target at the end of this year.

2018

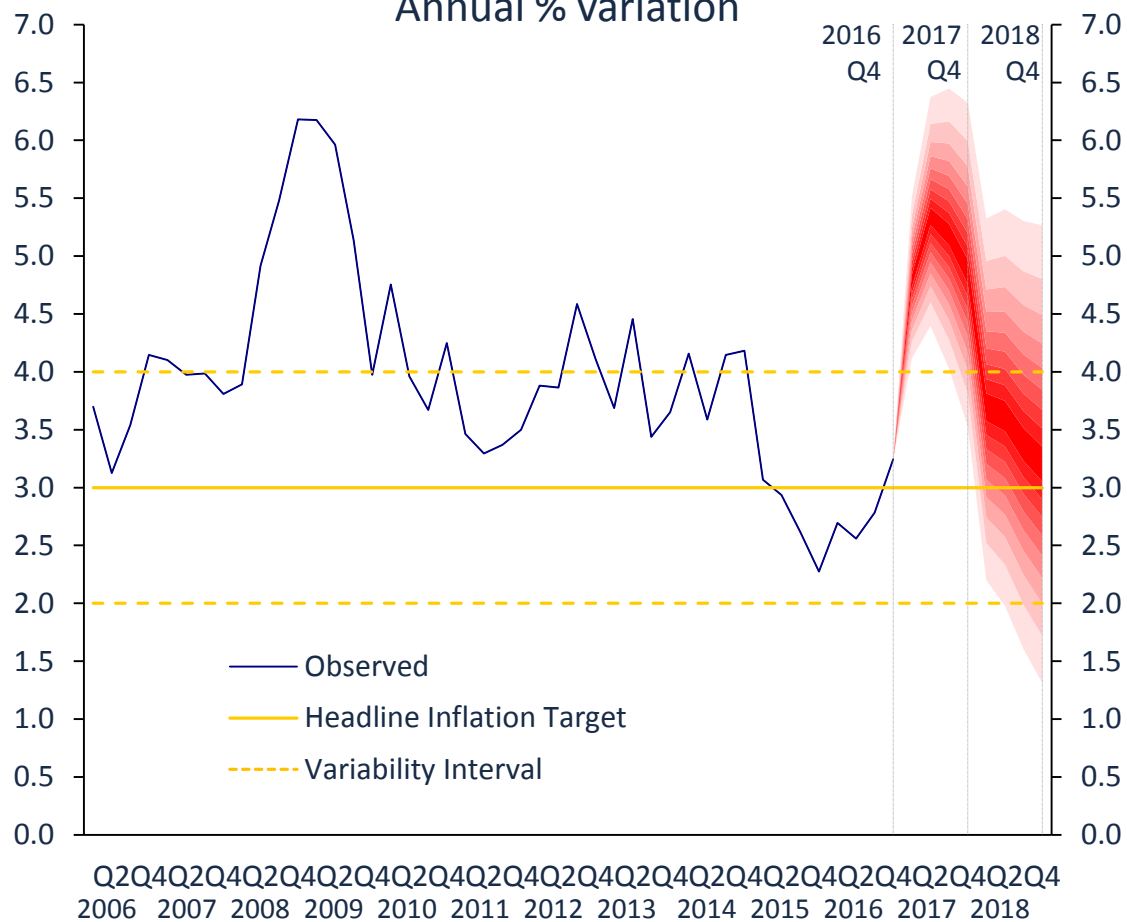
- They are expected to lie around 3 percent at the end of the year.

Thus, during this year inflation is expected to be temporarily affected both by changes in the relative prices of merchandise with respect to services, as a result of the depreciation of the real exchange rate, and by the transitory impact of gasoline prices liberalization.

### Fan Charts

**Annual Headline Inflation <sup>1/</sup>**

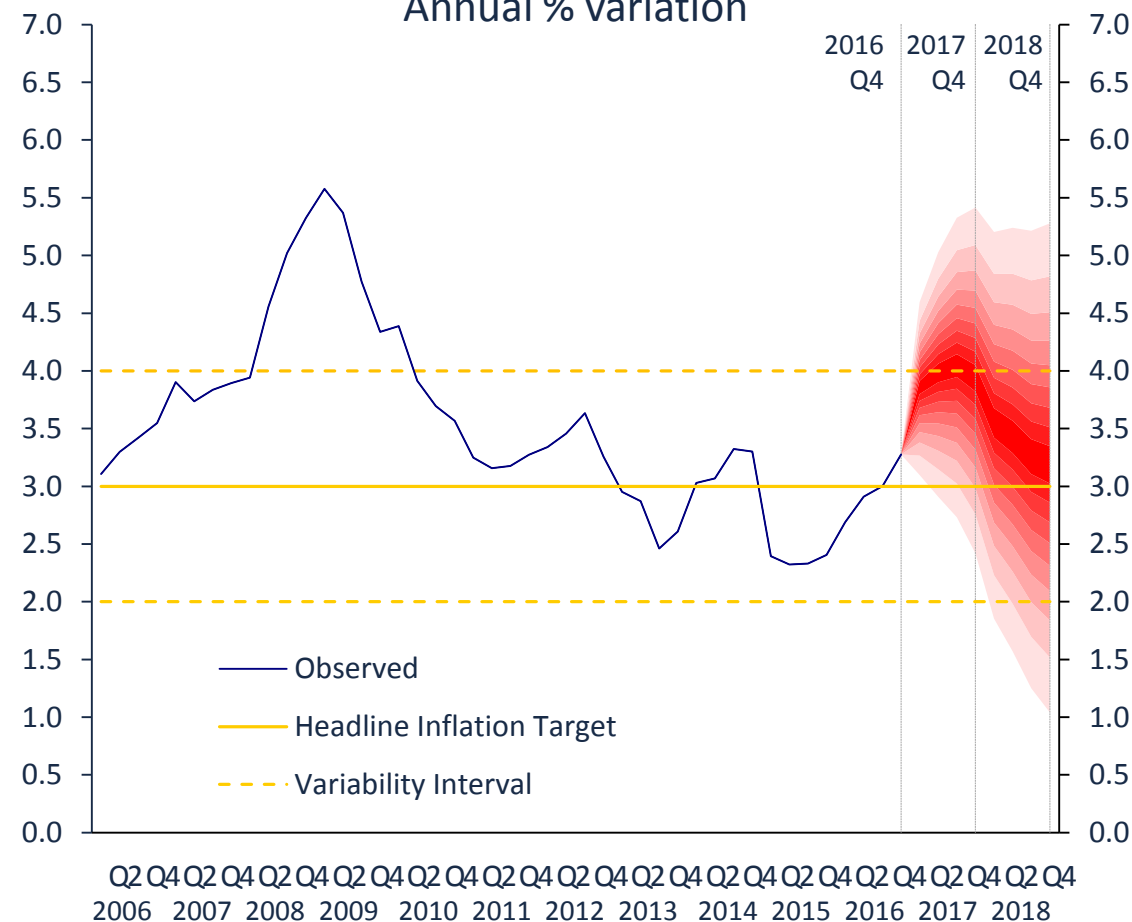
Annual % variation



<sup>1/</sup> Quarterly average of annual headline inflation.  
Source: Banco de México and INEGI.

**Annual Core Inflation <sup>2/</sup>**

Annual % variation



<sup>2/</sup> Quarterly average of annual core inflation.  
Source: Banco de México and INEGI.

# Risks to the Inflation Outlook

## Downward

- ✓ The possibility that the national currency continues appreciating.
- ✓ Further reductions in different prices of the economy, as a consequence of structural reforms.
- ✓ That the future performance of the international reference prices and a higher competition among gasoline and other fuels' suppliers in the country would lead to lower prices of these products.
- ✓ That the national economy would decelerate more than estimated.

## Upward

- ✓ That the number of shocks that have taken place would increase the probability of second round effects onto inflation.
- ✓ That inflation expectations would rise even further as a consequence of a further depreciation of the national currency, or that, given the already observed depreciation, its pass-through onto prices would increase.
- ✓ Higher prices of agricultural goods, even though their impact onto inflation would tend to be transitory.

## Monetary Policy Stance

The monetary authority at all times considers that its actions affect the price formation process of the economy with a certain lag.

✓ *In this sense, trying to **offset, in the very short term, the shocks that temporarily affect inflation by adjusting the reference rate, would be inefficient and costly** in terms of economic activity.*

✓ *However, through its actions, the Central Bank seeks to prevent the various supply shocks previously mentioned from contaminating the price formation process in the economy.*

Thus, this Central Institute will monitor that the referred increments in the reference rate and those that could be required in 2017 should be reflected in the dynamics of future inflation.

This will be done considering that the main challenge faced by the Board of Governors in the future is to **prevent second round effects onto inflation** and to **maintain medium- and long-term inflation expectations anchored**.

## Monetary Policy Stance

- The Board of Governors will closely monitor the evolution of all inflation determinants and its medium- and long-term expectations.

- ✓ Especially, the potential pass-through of exchange rate adjustments and gasoline prices onto the rest of the prices.

- ✓ The monetary position of Mexico relative to that of the U.S.

- ✓ The evolution of the output gap.

→ This will be done in order to be able to continue taking the necessary measures to **consolidate the efficient convergence of inflation to its 3.0 percent target.**



## Strengthening Confidence in the Mexican Economy

- **Mexico should continue boosting its competitiveness** in the international arena and enhance its growth potential in the domestic market.
  - *In this sense, the commitment to adequately **implement the approved structural reforms and in a timely manner, and to continue with fiscal consolidation efforts** should be a priority. The strengthening of both the microeconomic functioning of the economy and its macroeconomic soundness will allow Mexico to become a more attractive investment destination.*
- Moreover, it is imperative to strengthen the rule of law and to guarantee legal certainty so as to propitiate a more favorable environment for growth. This has **gained even more relevance** in the current juncture.
- It is also mandatory to seek greater diversification of both destination markets for Mexican exports and the sources of foreign direct investment and imports to the country.



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