



# Quarterly Report

October - December 2015

March 03, 2016



BANCO DE MÉXICO

# Outline

## **1** Monetary Policy

## **2** External Conditions

## **3** Economic Activity in Mexico

## **4** Inflation and its Determinants

## **5** Forecasts and Balance of Risks

# Monetary Policy Conduction

- In line with its constitutional mandate, the monetary policy conducted by Banco de México aims at **procuring the stability of the national currency's purchasing power**, at the lowest cost to society in terms of economic activity.
- The efforts undertaken by this Central Bank to attain an environment of low and stable inflation in Mexico contributed to:
  - ✓ The convergence of headline inflation to the permanent 3 percent target in the first months of 2015.
  - ✓ The fact that since May 2015 it has located below the aforesaid target, concluding 2015 at 2.13 percent.
    - **This is the lowest level it has reached since the CPI is measured.**
  - ✓ As expected, inflation rebounded during this year, and persists below 3 percent.

## The evolution of inflation has taken place in a highly difficult juncture.

### Domestic environment:

✓ Moderate economic growth.

→ No aggregate demand-related pressures on prices were registered.

✓ Well-anchored inflation expectations.

### External environment:

✓ Weak growth of the global economy.

✓ A persistent downward trend in oil prices.

✓ A high degree of uncertainty concerning the normalization of the U.S. monetary policy stance.

✓ The expectation of a marked divergence among advanced economies' monetary policy stances.

→ This has been reflected in:

- Recurrent episodes of **financial volatility**.
- **Generalized depreciations** of emerging economies' currencies.

In this context, in each monetary policy decision the Board of Governors has procured to carefully weigh the influence of both internal and external factors on inflation and its expectations.

- **Internal factors:** were relatively similar in the decisions covered by this Report.
- **External factors:** were deteriorating over time.

**October 29, 2015**

**Rate unchanged at 3.00%.**

**December 17, 2015**

**25 bp increment to 3.25%.**  
Following the first rise in the federal funds rate by the Federal Reserve, Banco de México's Board of Governors sought to **prevent a compression of the risk-adjusted interest rate spread against that of the U.S.**

**February 4, 2016**

**Rate unchanged at 3.25%.**

Since the monetary policy meeting of February 4, 2016, volatility in international financial markets significantly increased and the external environment faced by the Mexican economy kept deteriorating.

- Given the additional adverse impact on the exchange rate, as a result of the deterioration of the external environment, the probability that inflation expectations would deviate from the consolidation to the permanent 3 percent target, would increase.

February 17, 2016  
An extraordinary meeting

50 bp increment to 3.75%.

- ✓ Board of Governors clarified that this measure does not initiate a cycle of monetary contraction.

- This adjustment was part of a set of coordinated measures seeking to **contribute to strengthening the country's economic fundamentals and help anchor the value of the national currency.**

In particular, in view of the deterioration in the external environment faced by the Mexican economy, on February 17, 2016 the Mexican authorities acted in a timely and coordinated manner.

### **Banco de México**

**50 bp reference rate increase in an extraordinary meeting.**

### **Foreign Exchange Commission**

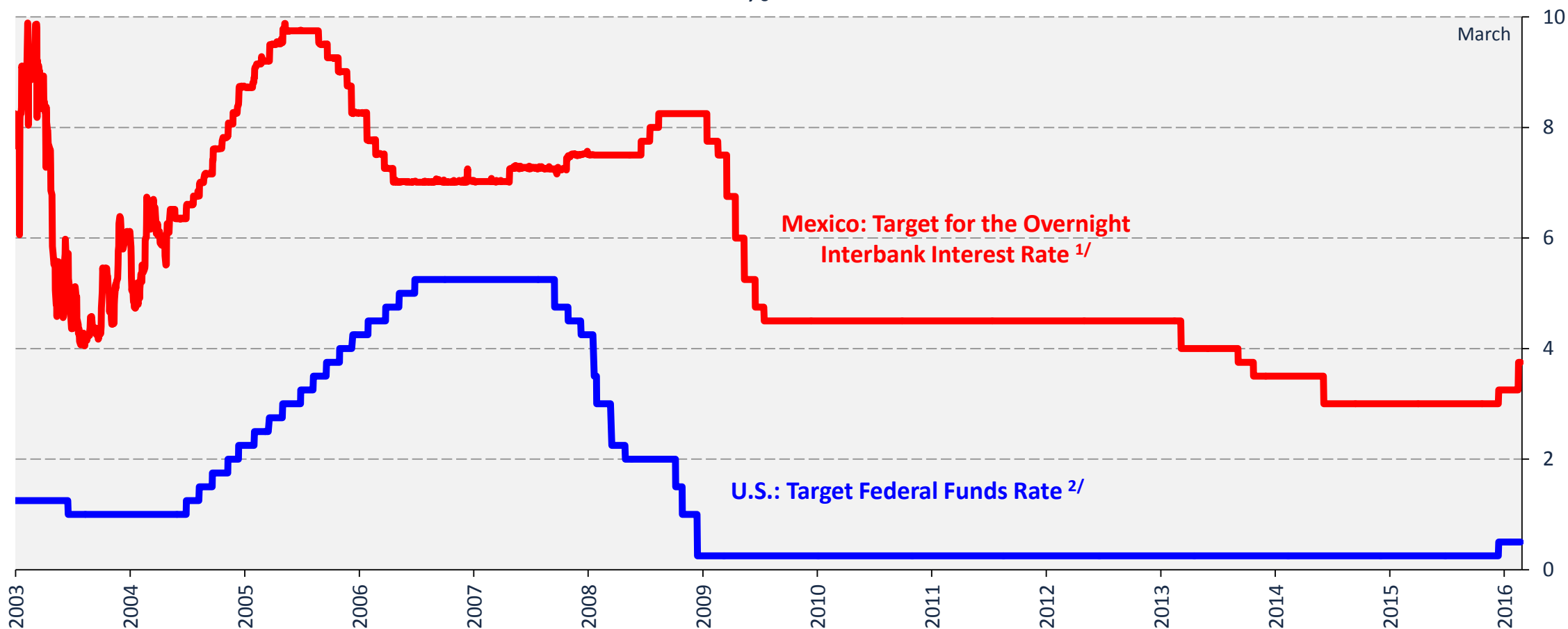
**Suspended auctions of U.S. dollars, leaving open the possibility to intervene discretely in the exchange market in exceptional cases.**

### **Ministry of Finance**

**A preemptive expenditure cut in the Federal Public Administration of MXN 132.3 billion (0.7% of GDP).**

# Monetary Policy Rates

%



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

2/ The upper limit of the target range is shown.

Source: Federal Reserve and Banco de México.



# Outline

**1** **Monetary Policy**

**2** **External Conditions**

**3** **Economic Activity in Mexico**

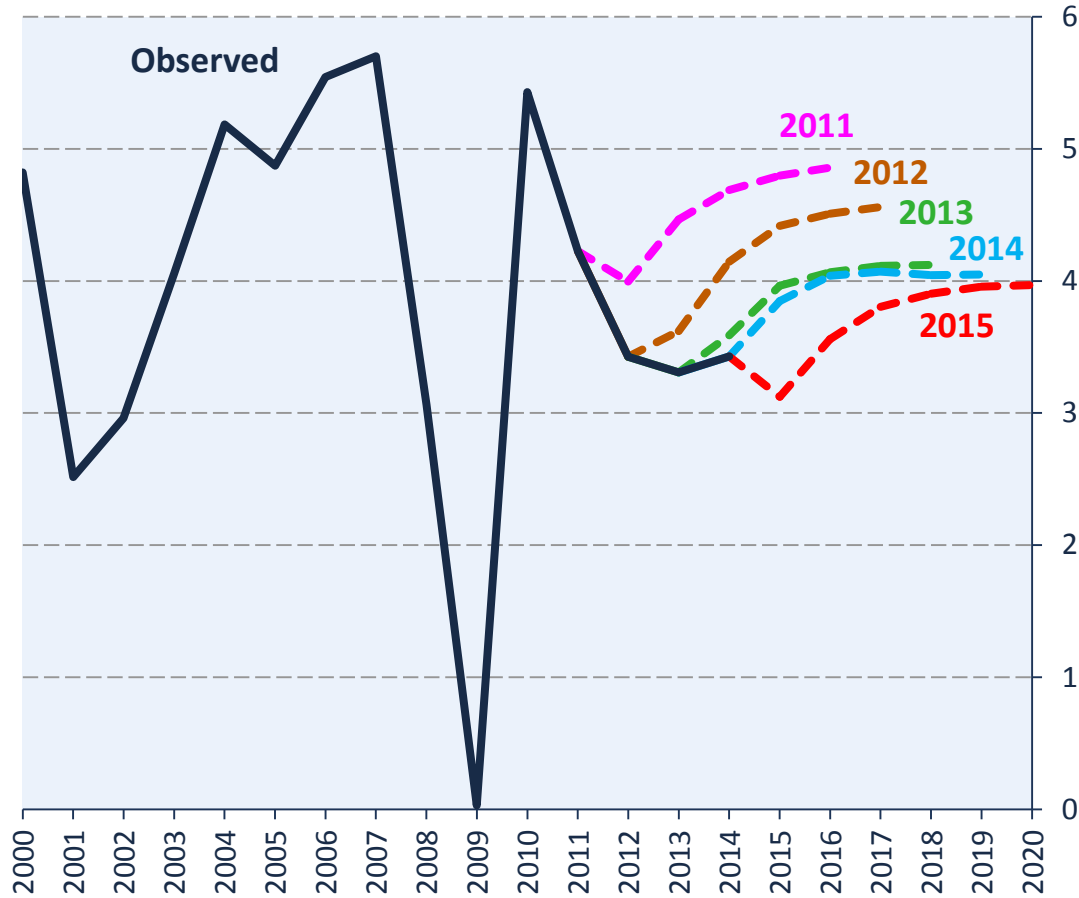
**4** **Inflation and its Determinants**

**5** **Forecasts and Balance of Risks**

The international environment has been characterized by a notable weakness in the global economic activity growth rate, which has been reflected in continuous downward adjustments in growth expectations as well as in a stagnation of global trade.

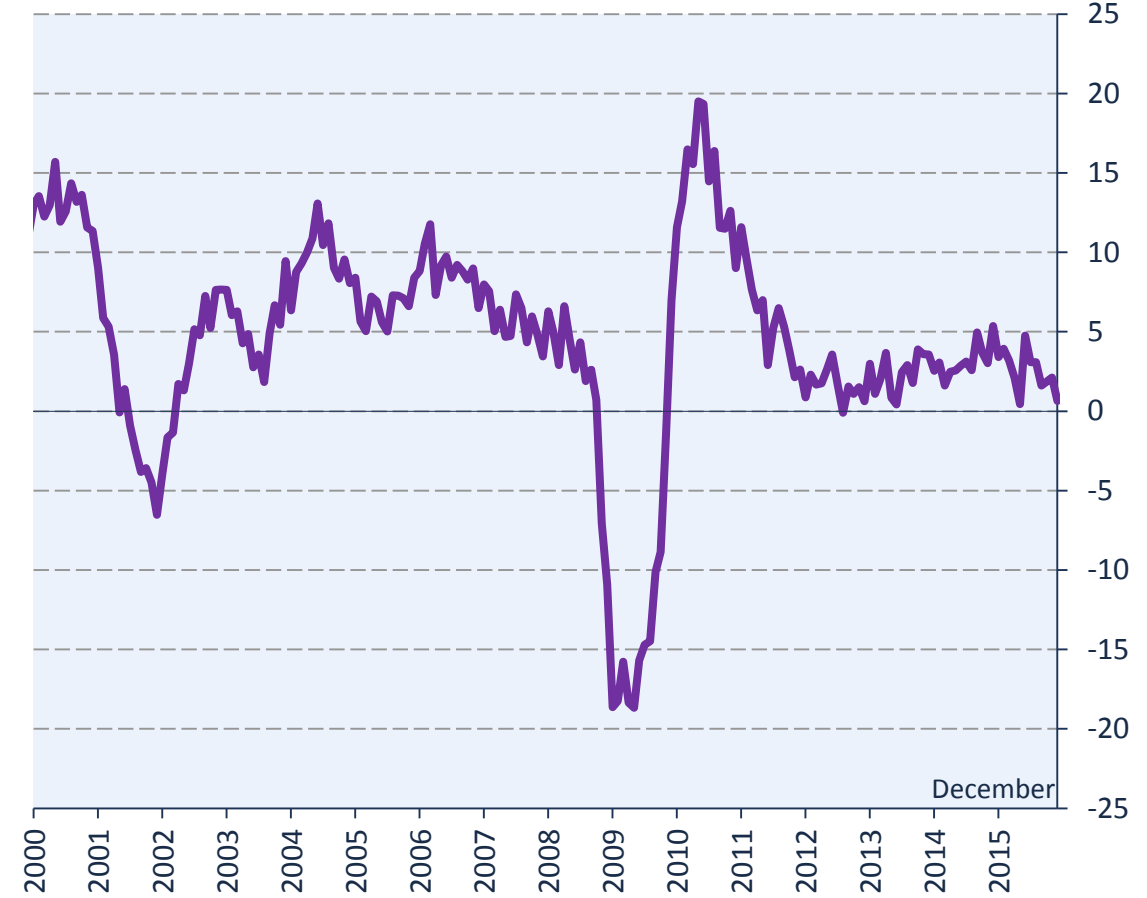
## World Economy

Evolution of GDP Growth Forecasts  
Annual % change



Source: IMF, WEO fall 2011-2015.

Trade Volume  
Annual % change, s. a.

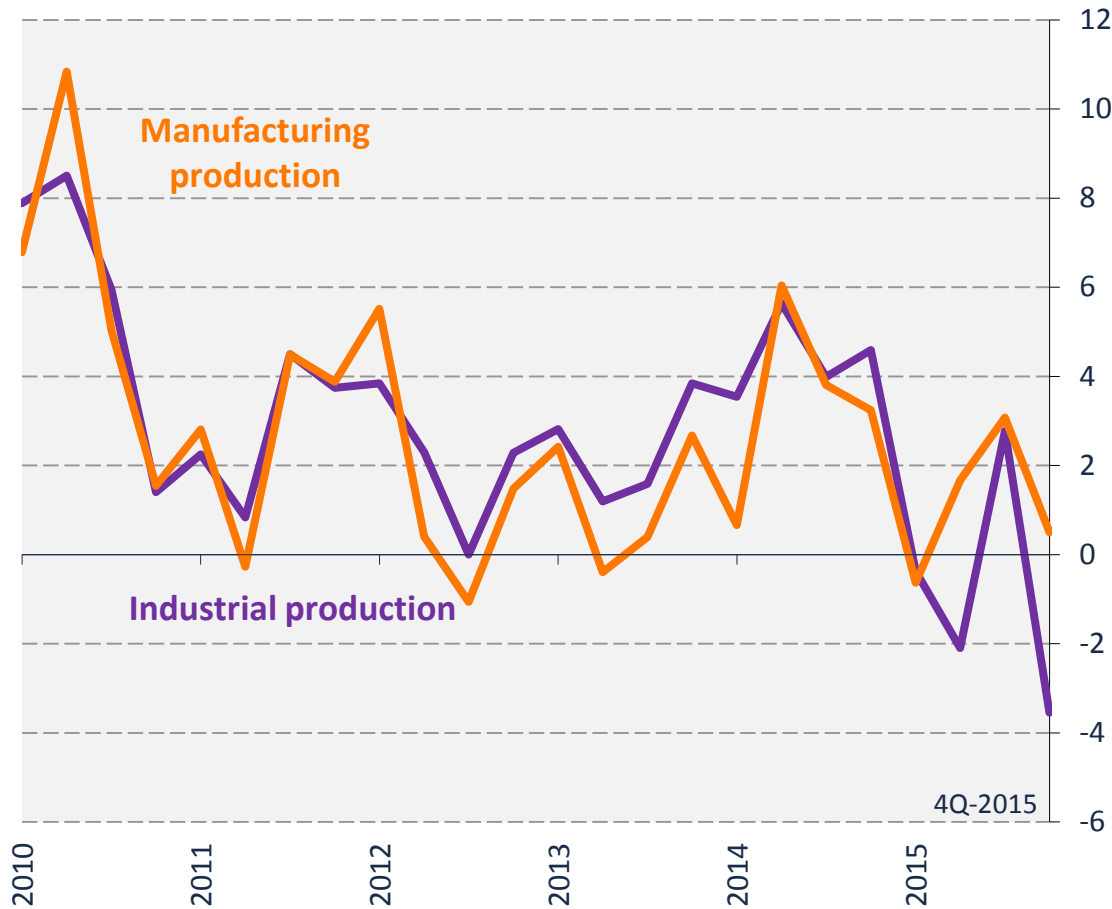


s. a. / Seasonally adjusted data.  
Source: CPB Netherlands.

# In the U.S., weak productive activity contrasts with a strong labor market.

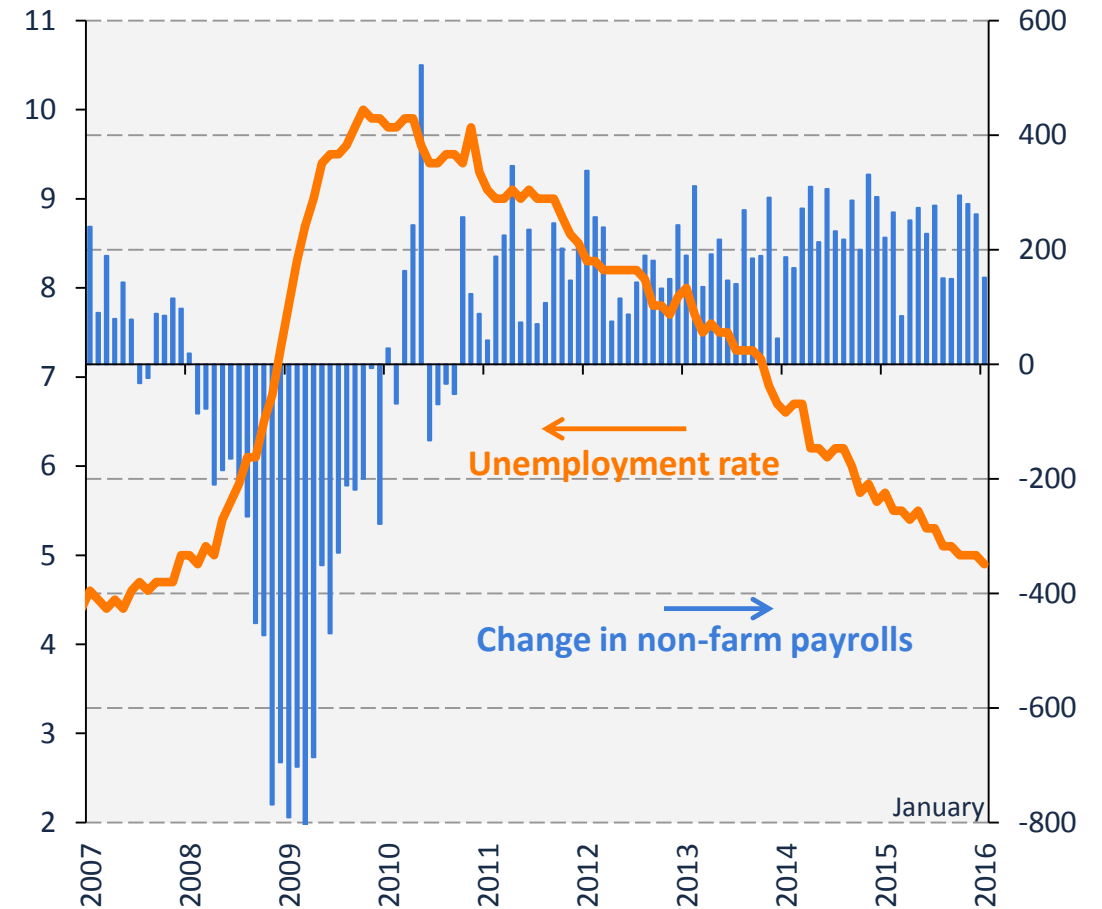
## United States

**Industrial and Manufacturing Production**  
Quarterly % change at annual rates, s. a.



s. a. / Seasonally adjusted data.  
Source: Federal Reserve.

**Change in Non-farm Payrolls and Unemployment Rate**  
Thousands of jobs and % of EAP, s. a.

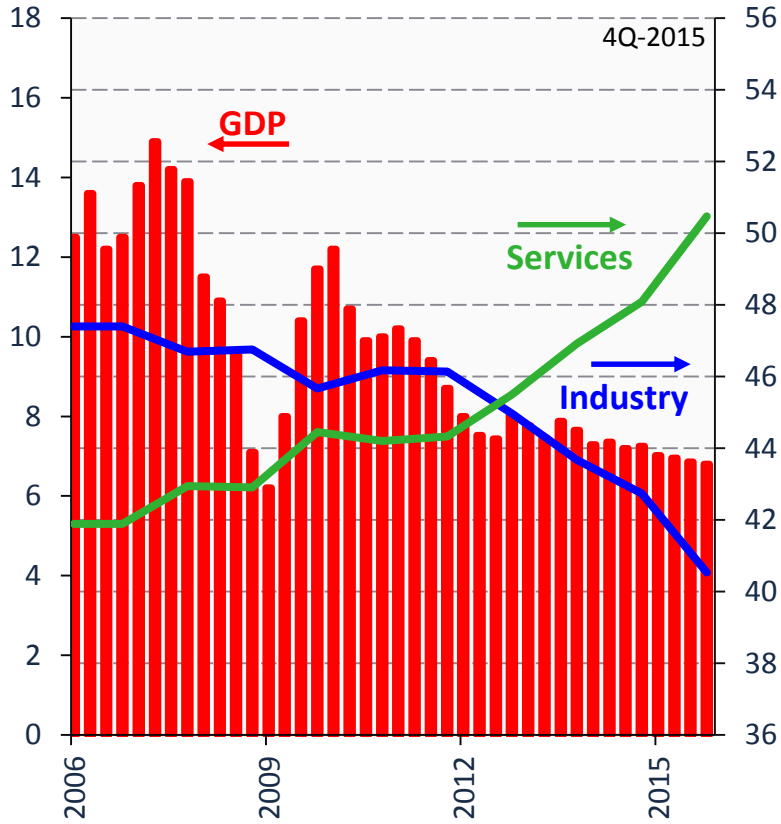


EAP/ Economically Active Population.  
s. a. / Seasonally adjusted data.  
Source: Bureau of Labor Statistics (BLS).

In China, uncertainty regarding its growth outlook, the soundness of its financial system, and the effectiveness of the implemented economic policies increased.

## China

**GDP by Sectors**  
Real annual % change and % of nominal GDP



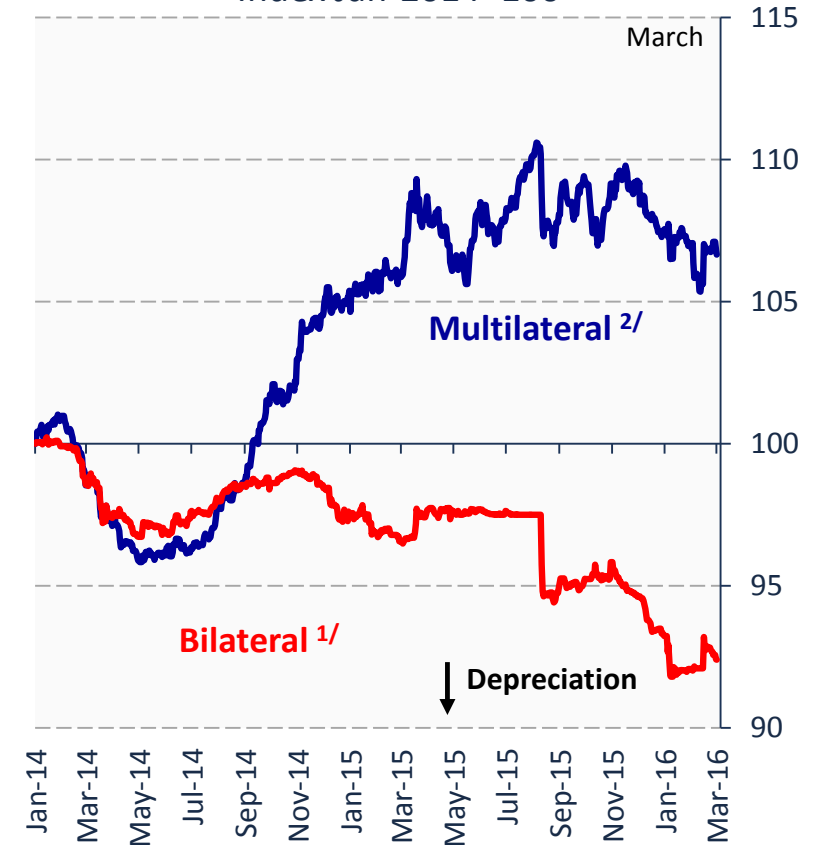
Source: Haver Analytics.

**Stock Markets**  
Index



Source: Bloomberg.

**Bilateral and Multilateral**  
**Effective Nominal Exchange Rate**  
Index Jan-2014=100



1/ It refers to exchange rate Renminbi vs USD.

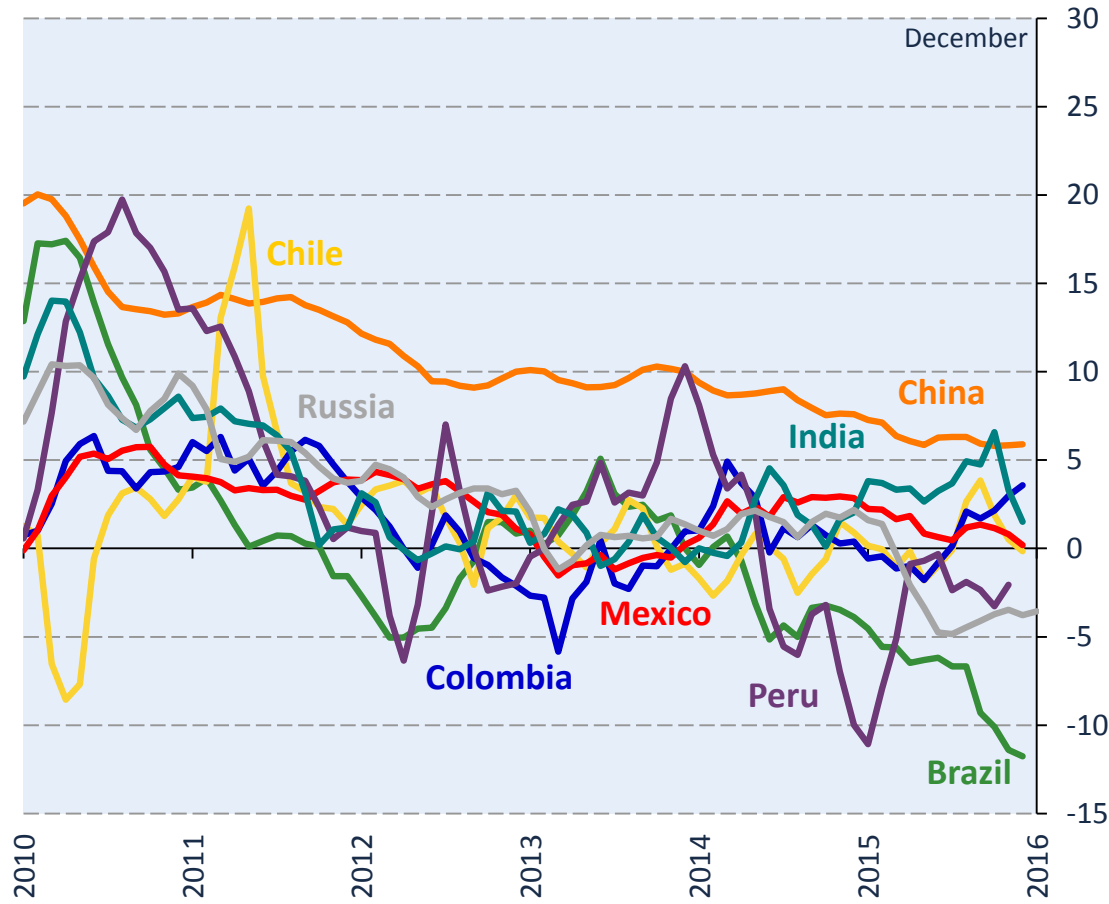
2/ It refers to nominal effective exchange rate trade weighted.

Source: Bloomberg.

# The vast majority of emerging economies continued decelerating in the last quarter of 2015.

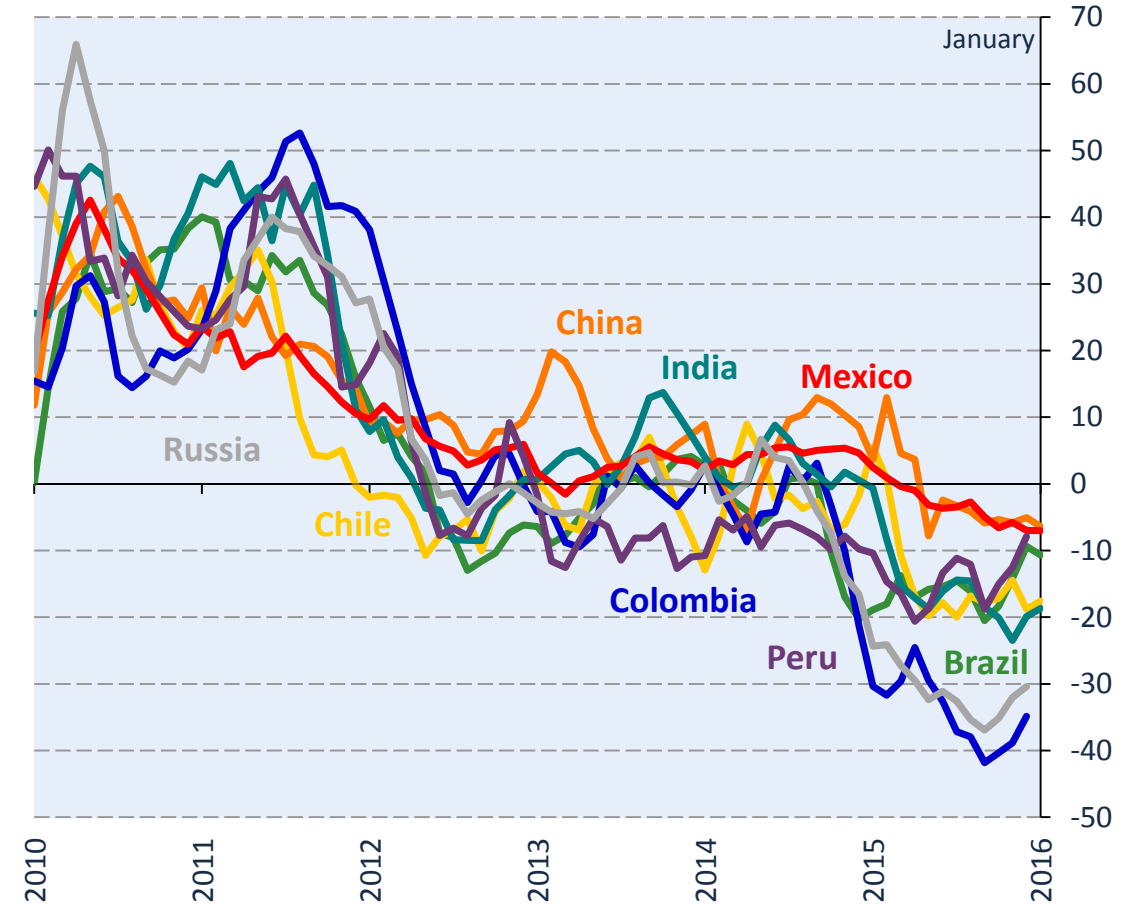
## Emerging Economies

**Industrial Production <sup>1/</sup>**  
Annual % change of 3-month  
moving average



1/ Data for Peru up to November 2015, and January 2016 for Russia.  
Source: Haver Analytics and INEGI.

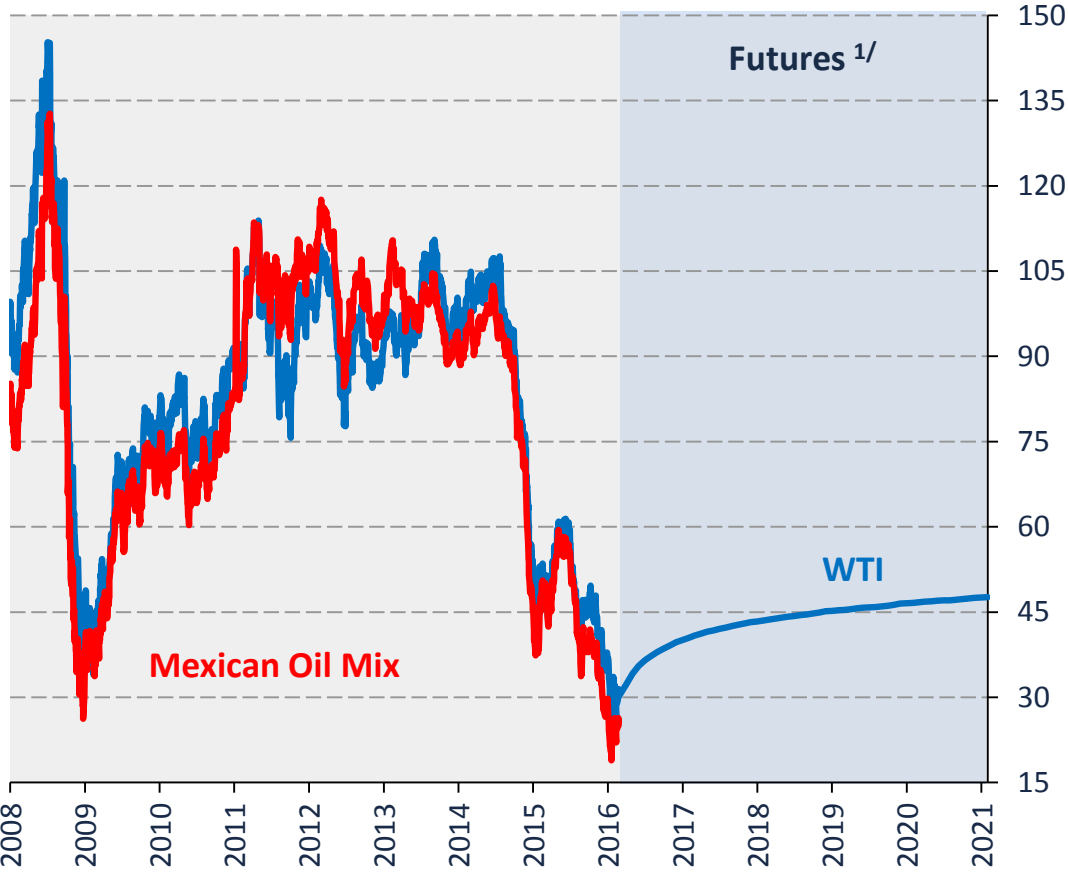
**Exports <sup>2/</sup>**  
Annual % change of 3-month  
moving average



2/ Data up to December 2015 for Colombia, Peru and Russia.  
Source: Haver Analytics and INEGI.

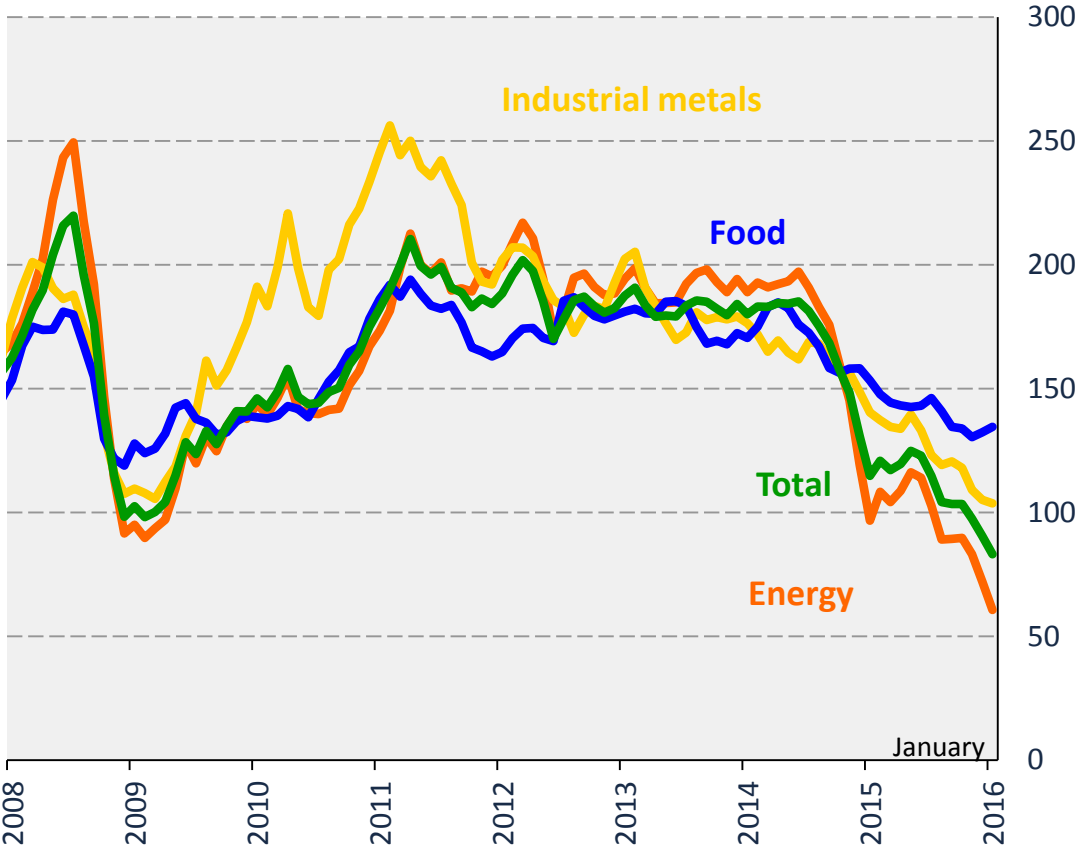
# International commodities prices resumed their downward trend at the beginning of the fourth quarter of 2015, following a period of relative stability in the third one.

**Crude Oil Prices**  
USD per barrel



1/ Data up to March 2, 2016.  
Source: Bloomberg.

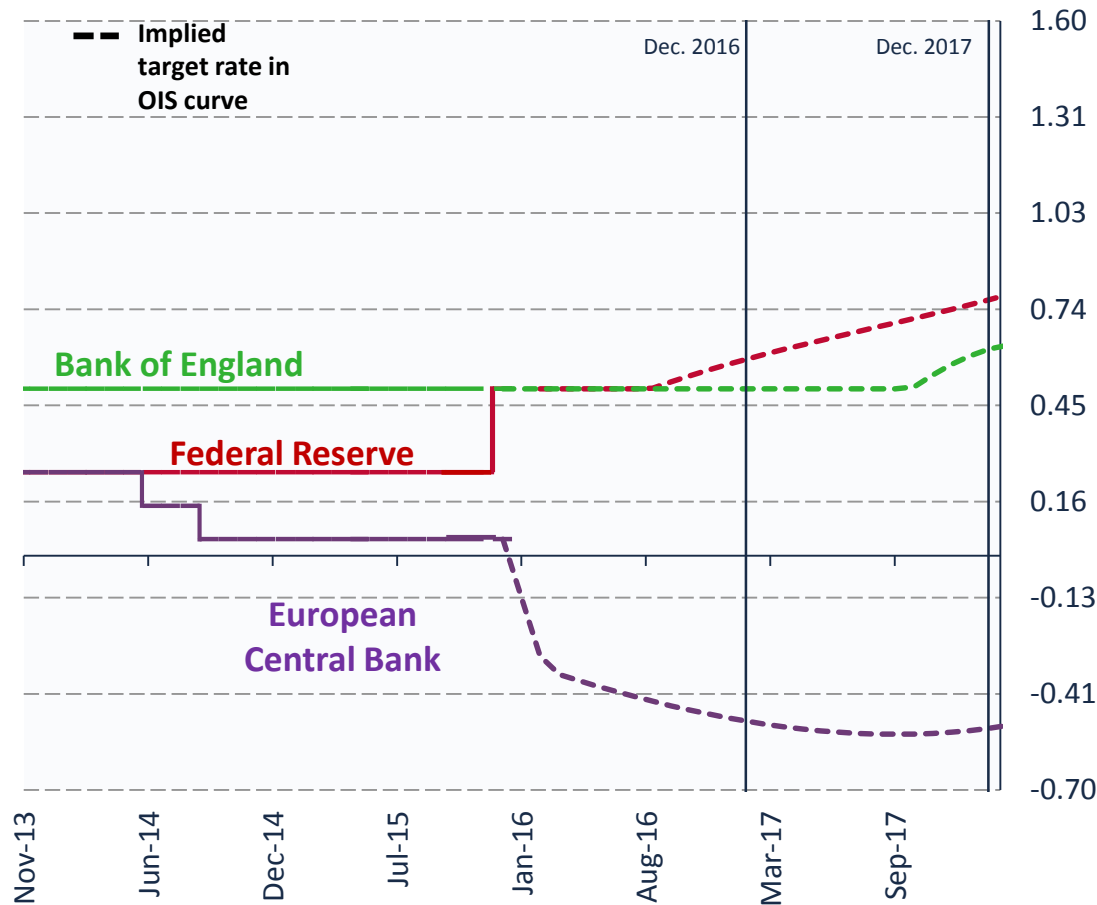
**Commodities Prices**  
Index 2005=100



Source: International Monetary Fund.

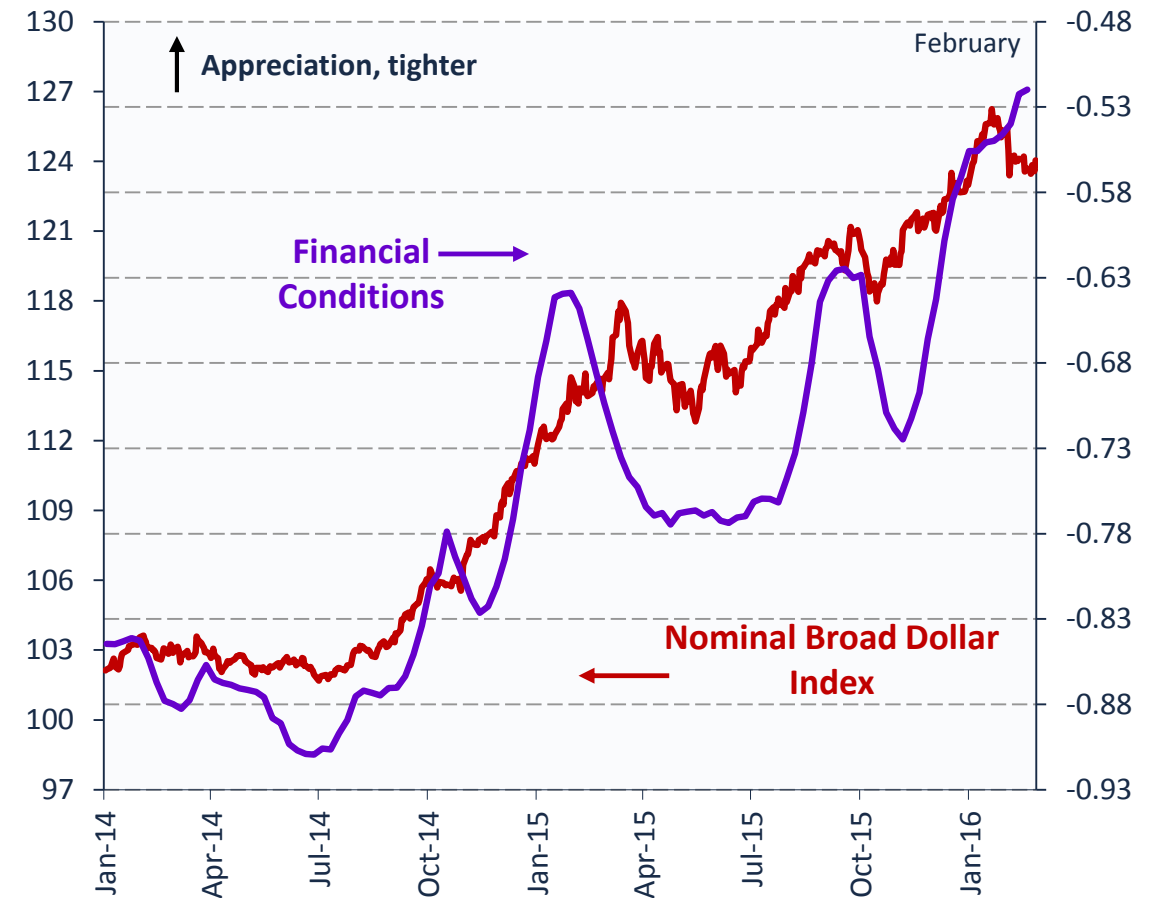
# Consequent on the described environment, a growing divergence among advanced economies' monetary policy stances has been observed.

Advanced Economies: Expected Monetary Policy Rates <sup>1/</sup>  
%



<sup>1/</sup> The expected rates are the trajectories implicit in OIS Curves (Overnight Index Swap).  
Source: Bloomberg with estimates from Banco de México.

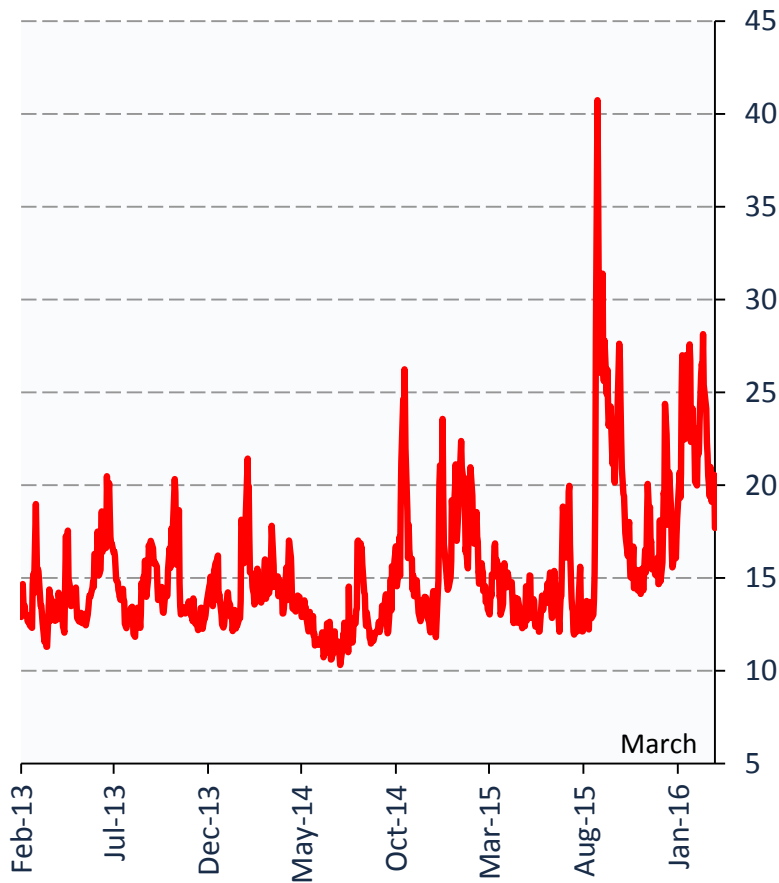
U.S.: Nominal Broad Dollar Index and Financial Conditions  
Index Jan-1997=100 and standard deviations



Source: Federal Reserve Bank of Chicago and Federal Reserve.

# In a high volatility environment, strong exchange rate depreciations and capital outflows were observed in emerging economies.

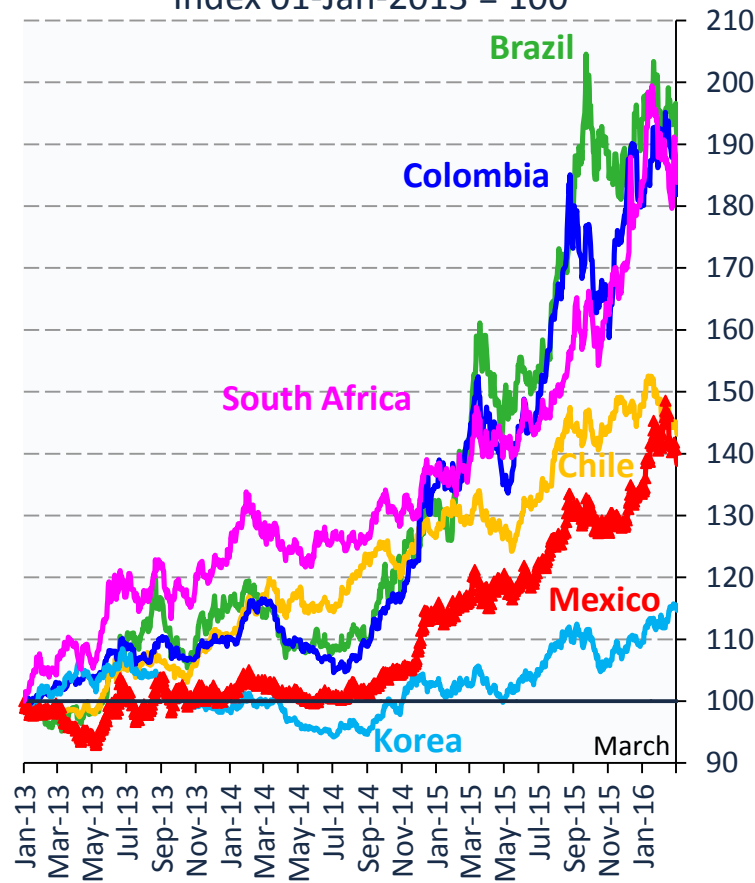
VIX Index



Source: Bloomberg.

Emerging Markets: Nominal Exchange Rate against USD

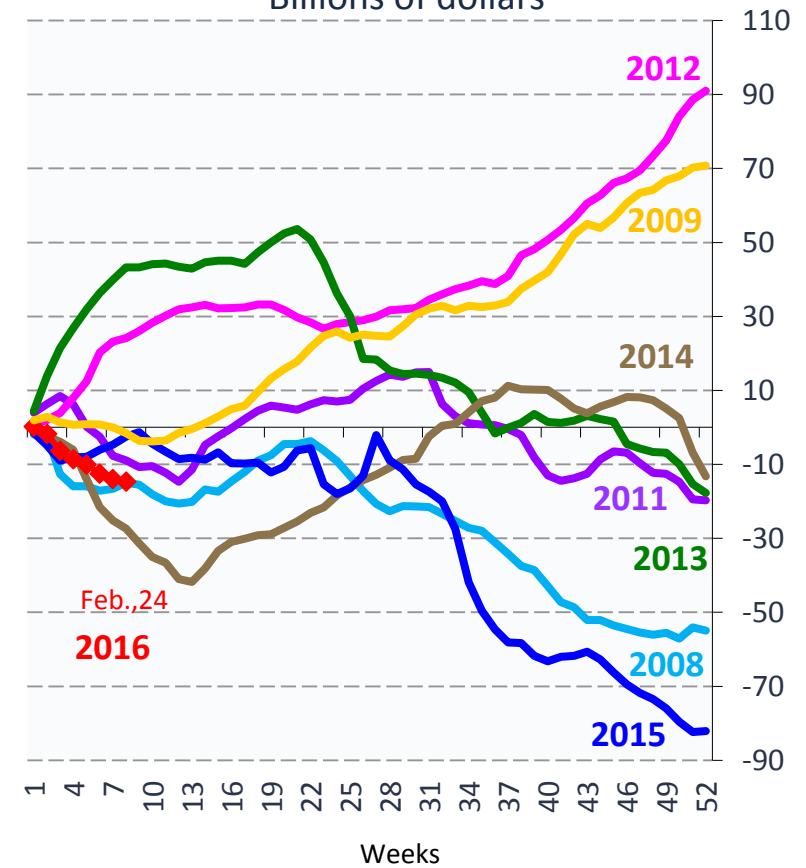
Index 01-Jan-2013 = 100



Source: Bloomberg.

Emerging Markets: Accumulated Capital Flows (Debt and Equity)<sup>1/</sup>

Billions of dollars



<sup>1/</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.



# Outline

**1** **Monetary Policy**

**2** **External Conditions**

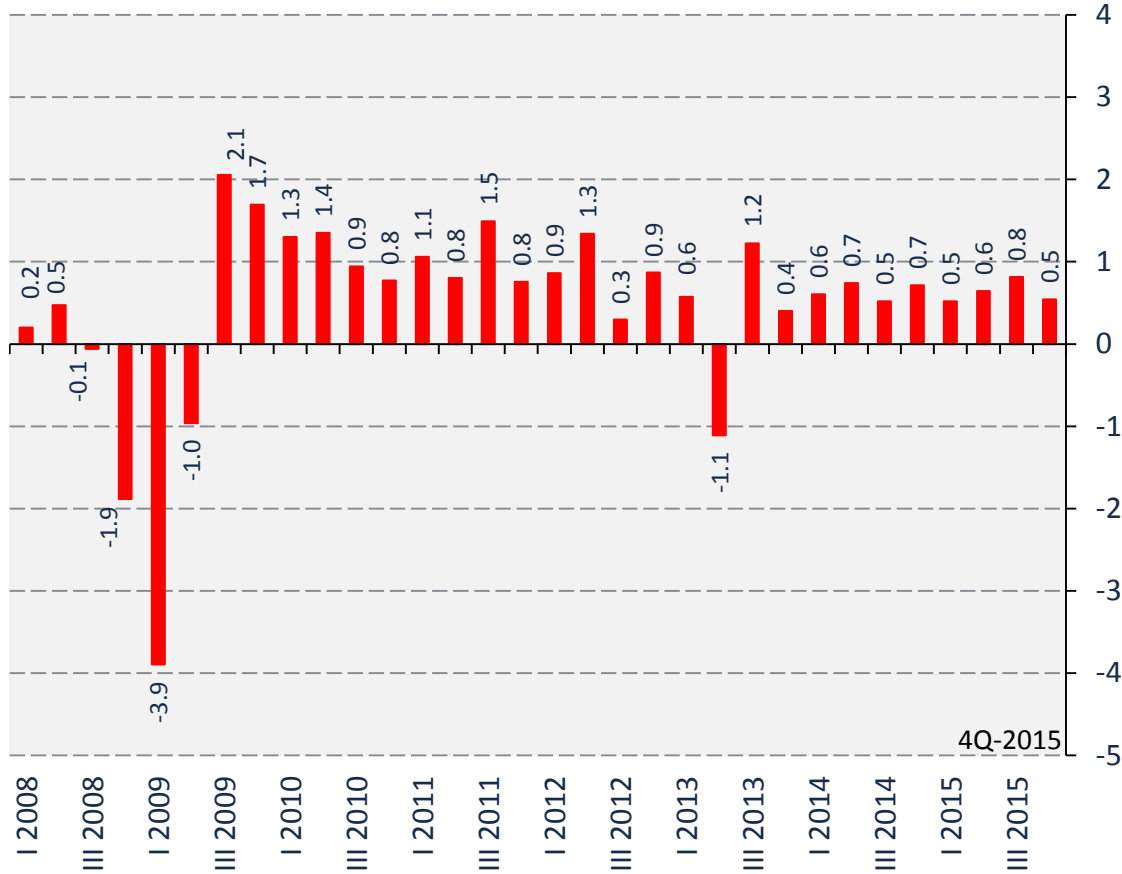
**3** **Economic Activity in Mexico**

**4** **Inflation and its Determinants**

**5** **Forecasts and Balance of Risks**

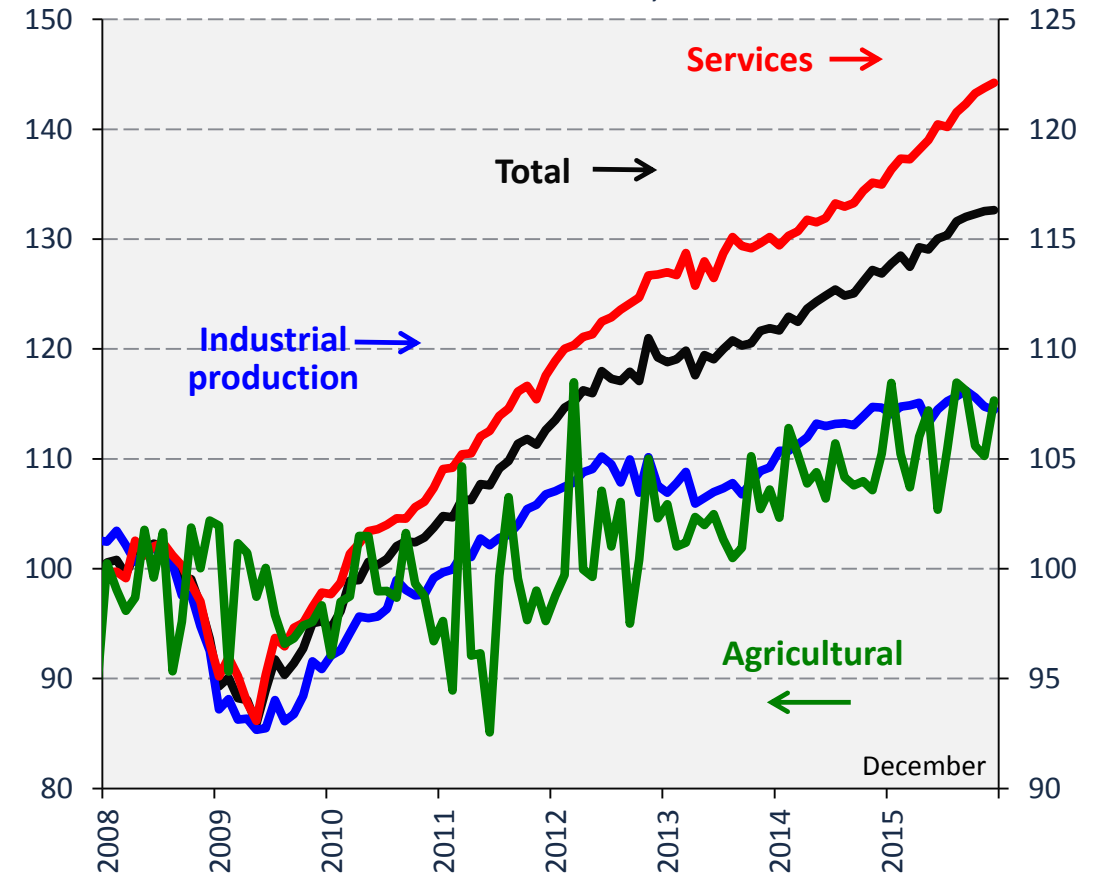
# In the fourth quarter of 2015, economic growth in Mexico continued to be supported by the dynamism of the services sector.

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



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

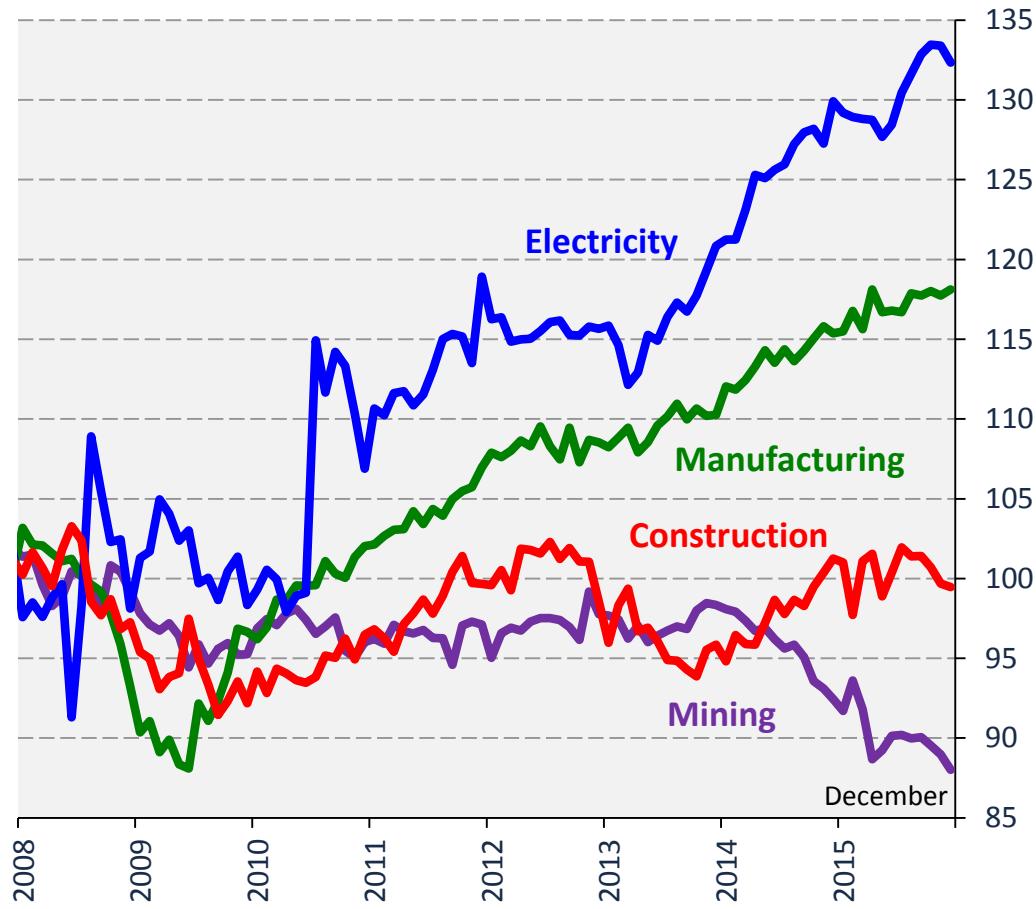
**Global Indicator of Economic Activity**  
Index 2008=100, s. a.



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

Industrial production remained stagnant, mainly reflecting the slowdown of manufacturing activity and the negative trend in mining and construction sectors.

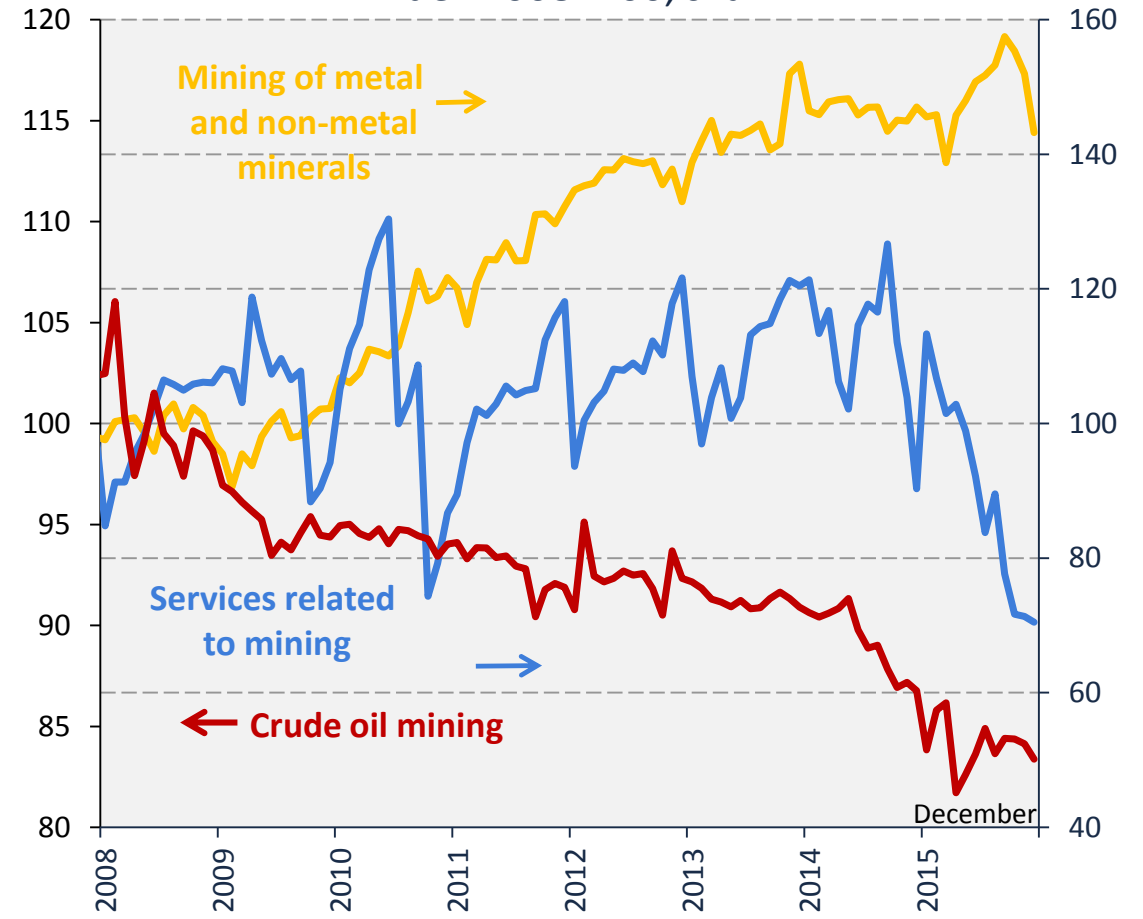
**Industrial Activity**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.

Source: Monthly Indicator of Industrial Activity, Mexico's System of National Accounts, INEGI.

**Mining Sector**  
Index 2008=100, s. a.

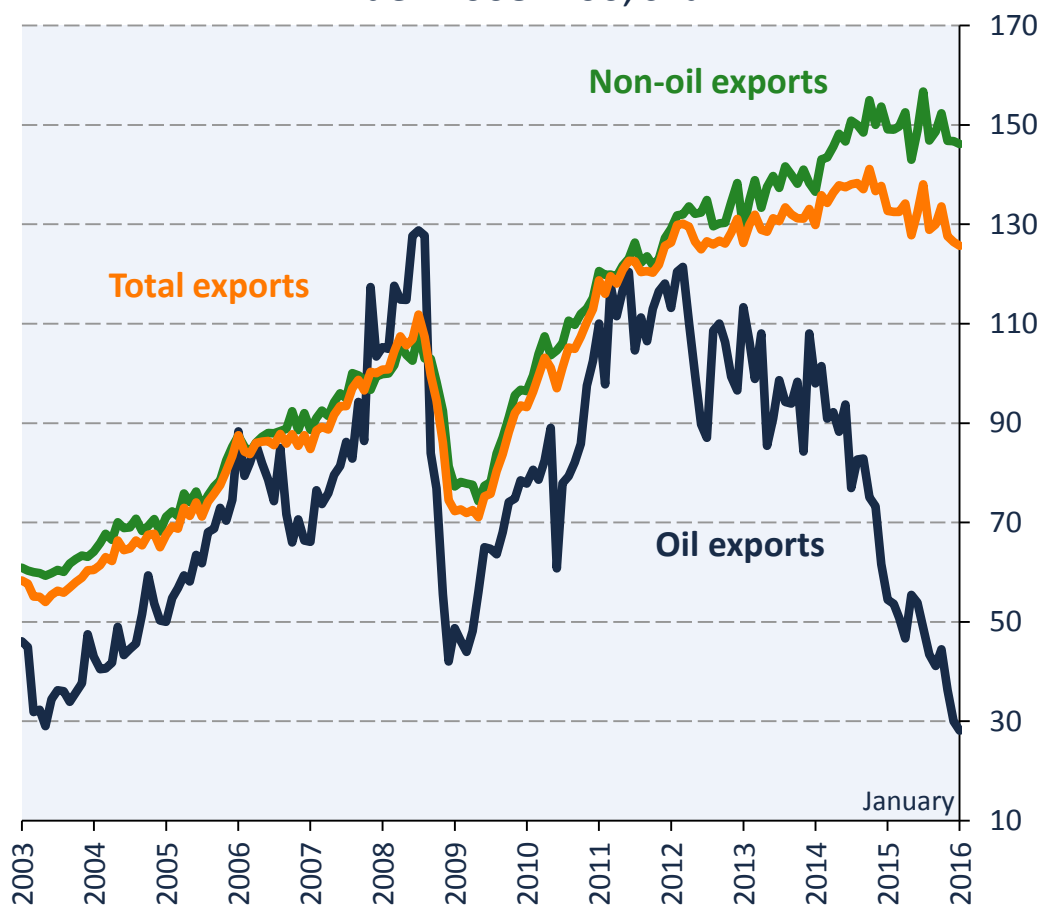


s. a. / Seasonally adjusted data.

Source: Monthly Indicator of Industrial Activity, Mexico's System of National Accounts, INEGI.

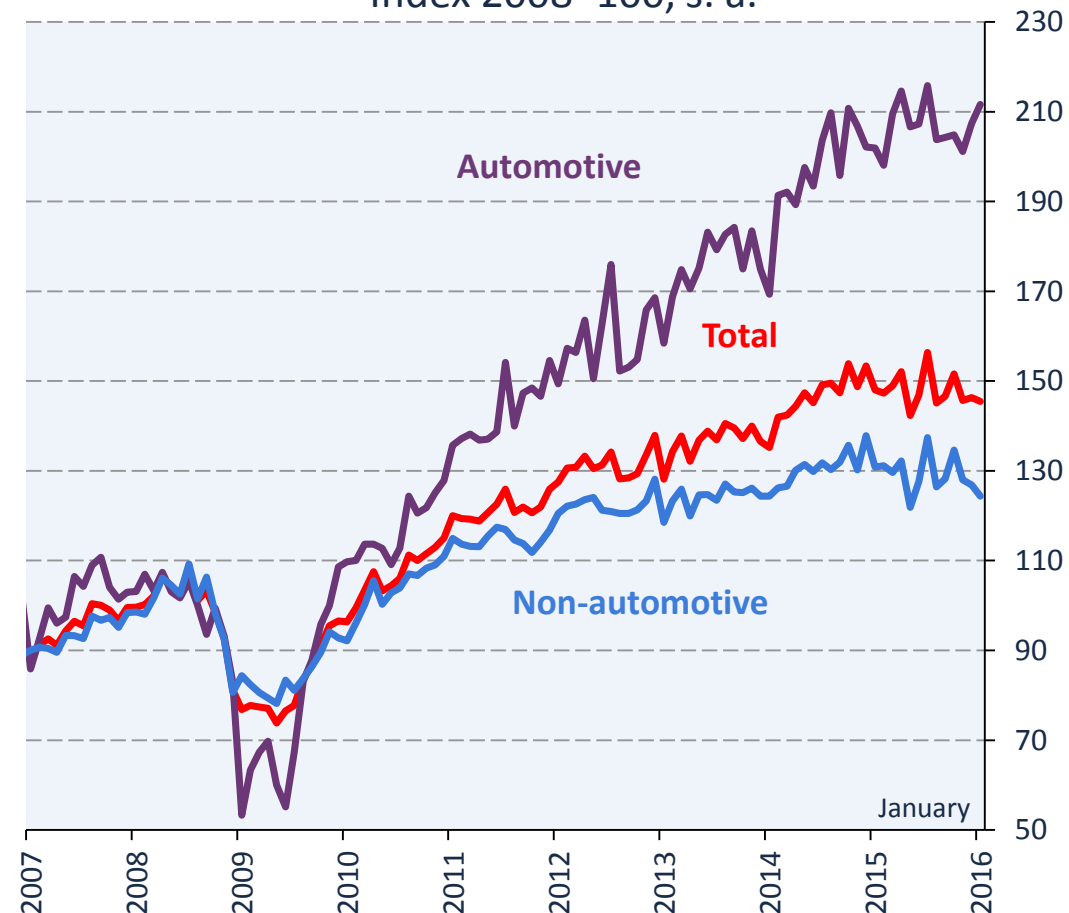
Regarding external demand, the downward path in oil exports persisted, while manufacturing exports remained stagnant in the last quarter of 2015 and the first month of 2016.

**Oil and Non-oil Exports**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.  
Source: SAT, Secretaría de Economía, Banco de México, INEGI. México's Goods Trade Balance. SNIEG. National Interest Information, and Banco de México with data from PMI Comercio Internacional. S.A. de C.V.

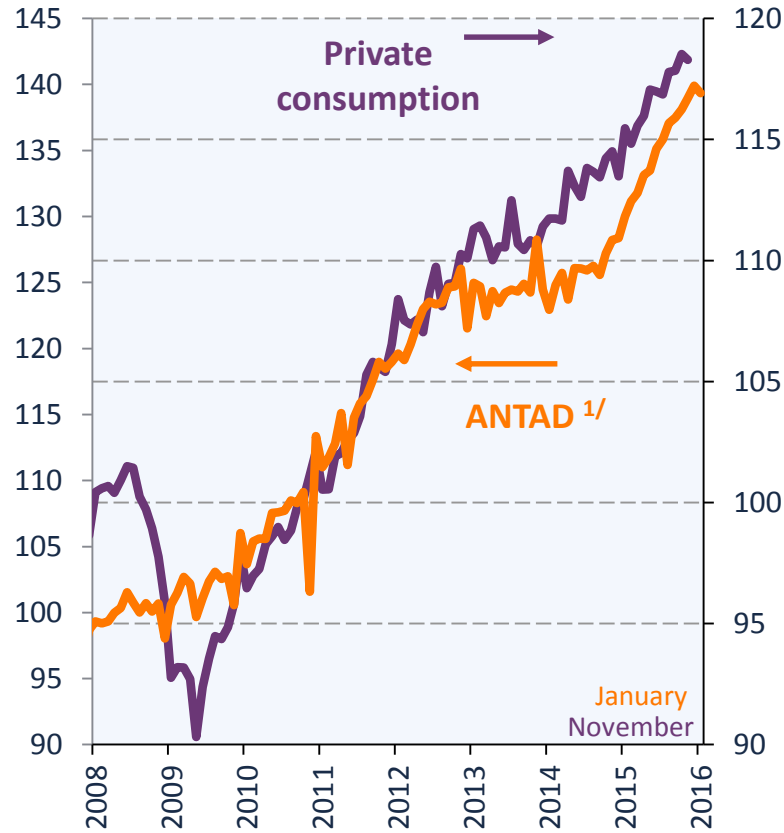
**Manufacturing Exports**  
Index 2008=100, s. a.



s. a. / Seasonally adjusted data.  
Source: SAT, Secretaría de Economía, Banco de México, INEGI. México's Goods Trade Balance. SNIEG. National Interest Information.

Some private consumption indicators suggest that it continued to show a relatively high expansion rate. In contrast, by the end of 2015, gross fixed investment registered signs of a possible unfavorable trend change.

**Domestic Market Private Consumption**  
**Indicator and ANTAD Sales**  
 Index 2008= 100, s. a.

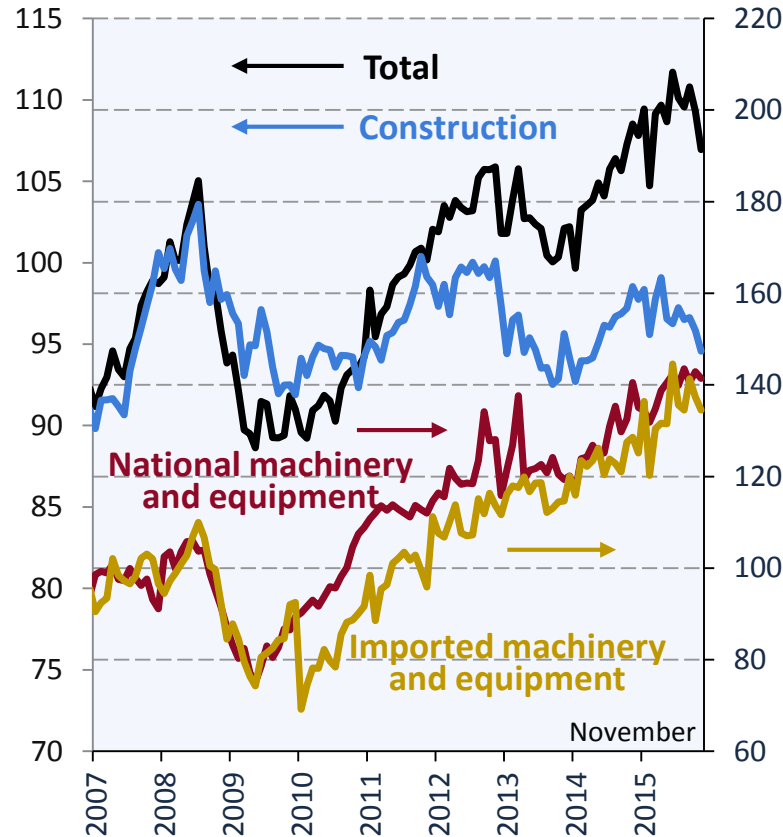


s. a./ Seasonally adjusted data.

1/ It refers to total sales.

Source: INEGI and elaborated by Banco de México with data from ANTAD.

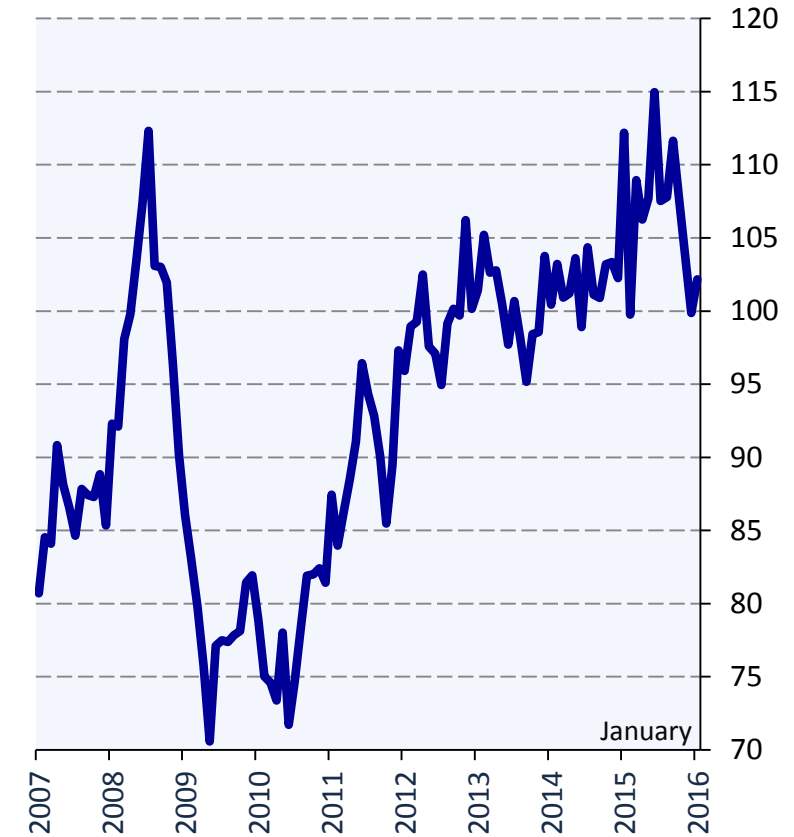
**Investment and its Components**  
 Index 2008=100, s. a.



s. a. / Seasonally adjusted data.

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

**Imports of Capital Goods**  
 Index 2008=100, s. a.

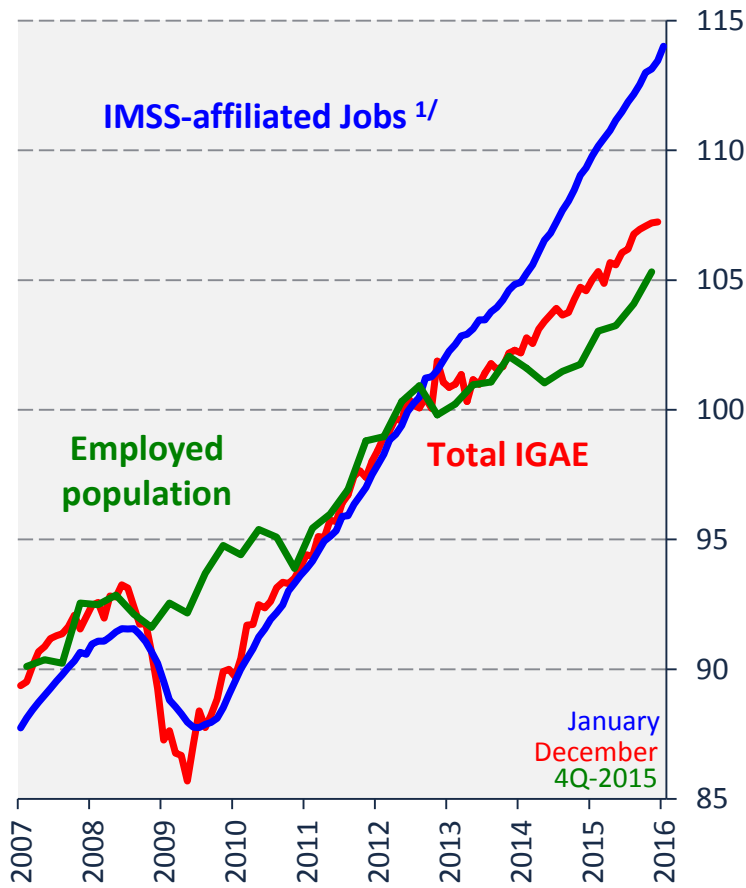


s. a. / Seasonally adjusted data.

Source: SAT, Secretaría de Economía, Banco de México, INEGI. México's Goods Trade Balance. SNIEG. National Interest Information.

# Reflecting the moderate expansion rate of the economy, slack conditions persisted in the labor market, although some indicators suggest that these could be gradually diminishing.

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



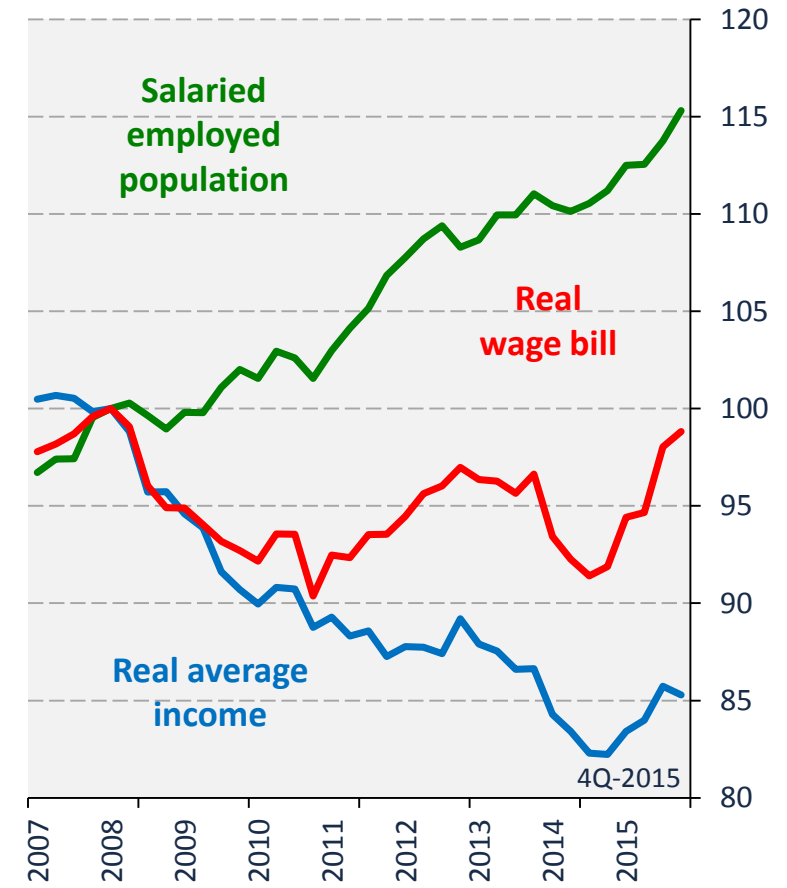
s. a. / Seasonally adjusted data.  
1/ Permanent and temporary workers in urban areas. Seasonally adjusted by Banco de México.  
Source: Calculated by Banco de México with data from IMSS and INEGI (SCNM and ENOE).

**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.

**Total Real Wage Bill**  
Index 1Q-2008 = 100, s. a.



s. a./ Seasonally adjusted data.  
Source: Prepared by Banco de México with data from the National Employment Survey (ENOE), INEGI

# Outline

**1 Monetary Policy**

**2 External Conditions**

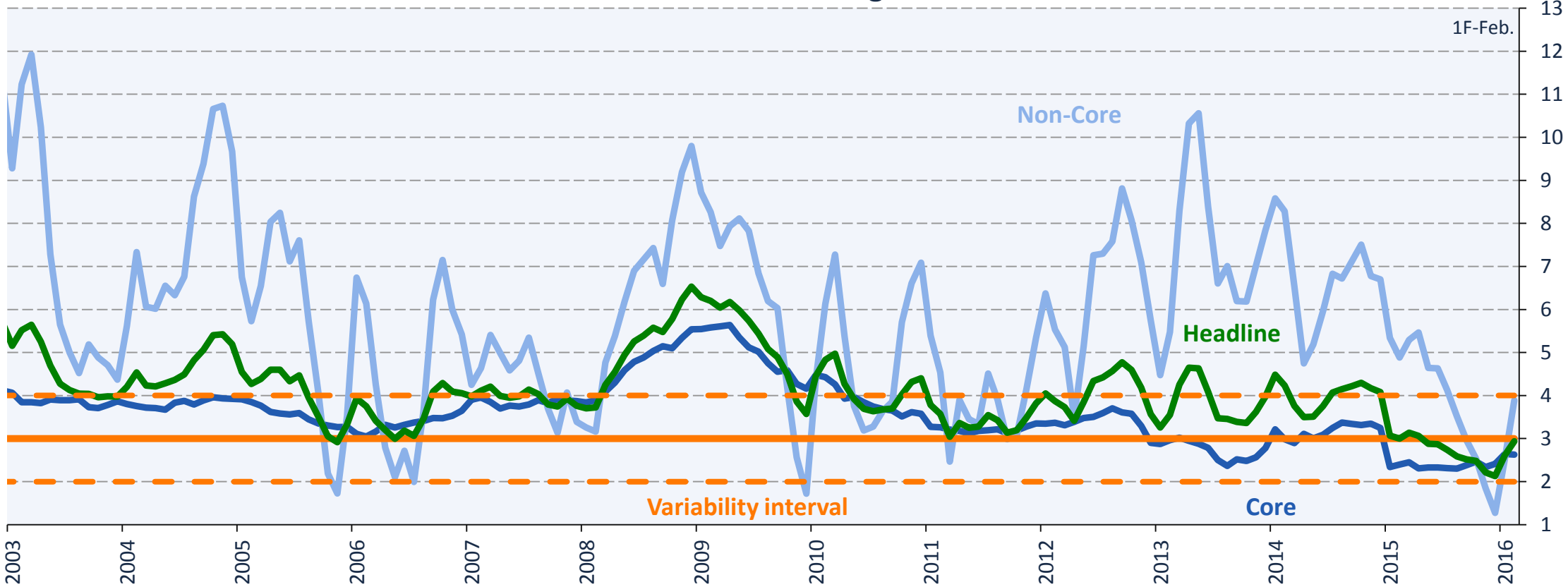
**3 Economic Activity in Mexico**

**4 Inflation and its Determinants**

**5 Forecasts and Balance of Risks**

In the fourth quarter of 2015, inflation presented additional decreases to those observed since the beginning of the second quarter of 2015. However, in January 2016 it rebounded, due to arithmetic effects and a transitory increase in some agricultural products' prices.

### Consumer Price Index Annual % change



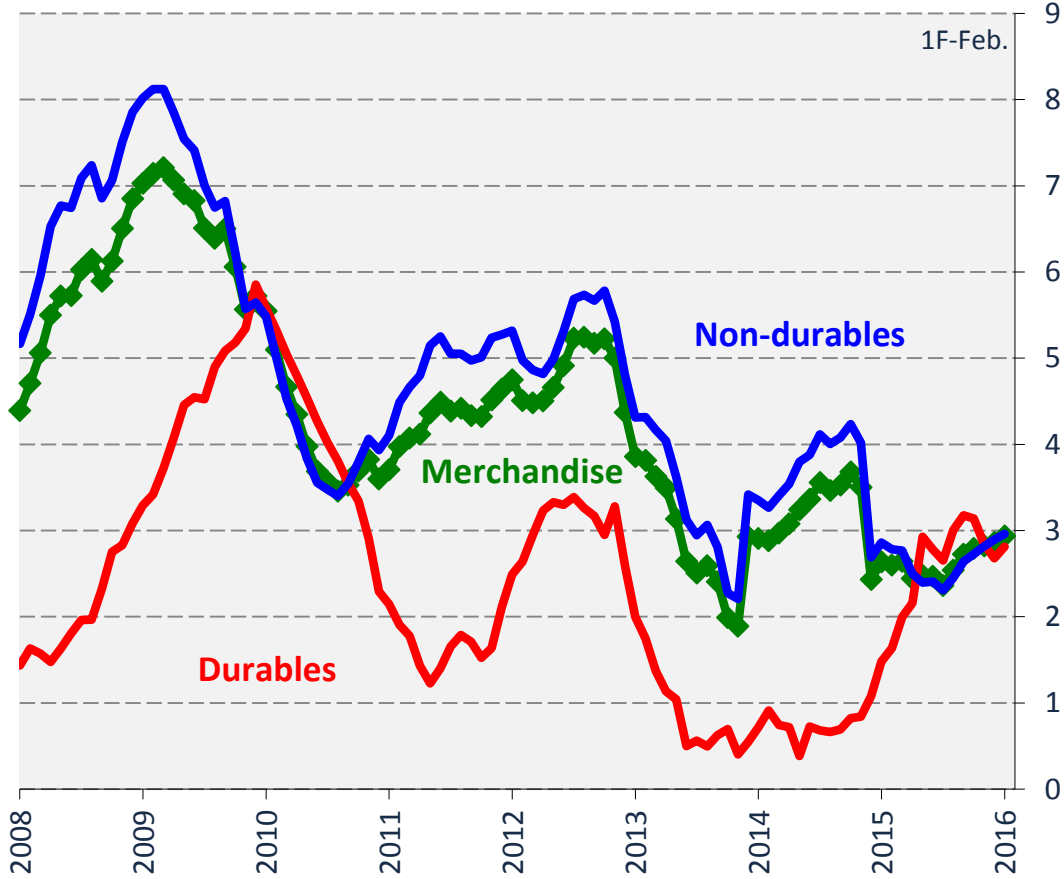
Source: Banco de México and INEGI.



The pass-through of the exchange rate depreciation onto prices has been limited and has been reflected mainly in the prices of durable goods, without evidence of second round effects on the price-formation process of the economy.

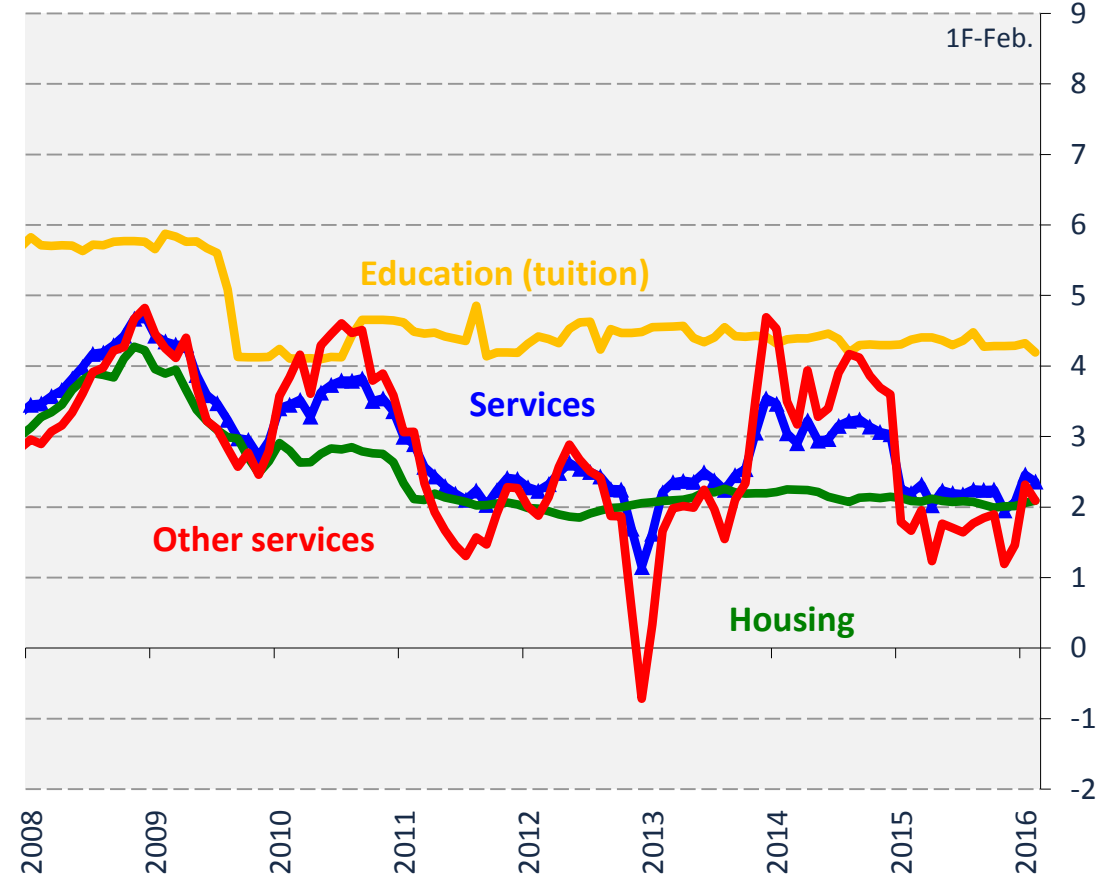
### Core Price Index Annual % change

#### Merchandise



Source: Banco de México and INEGI.

#### Services

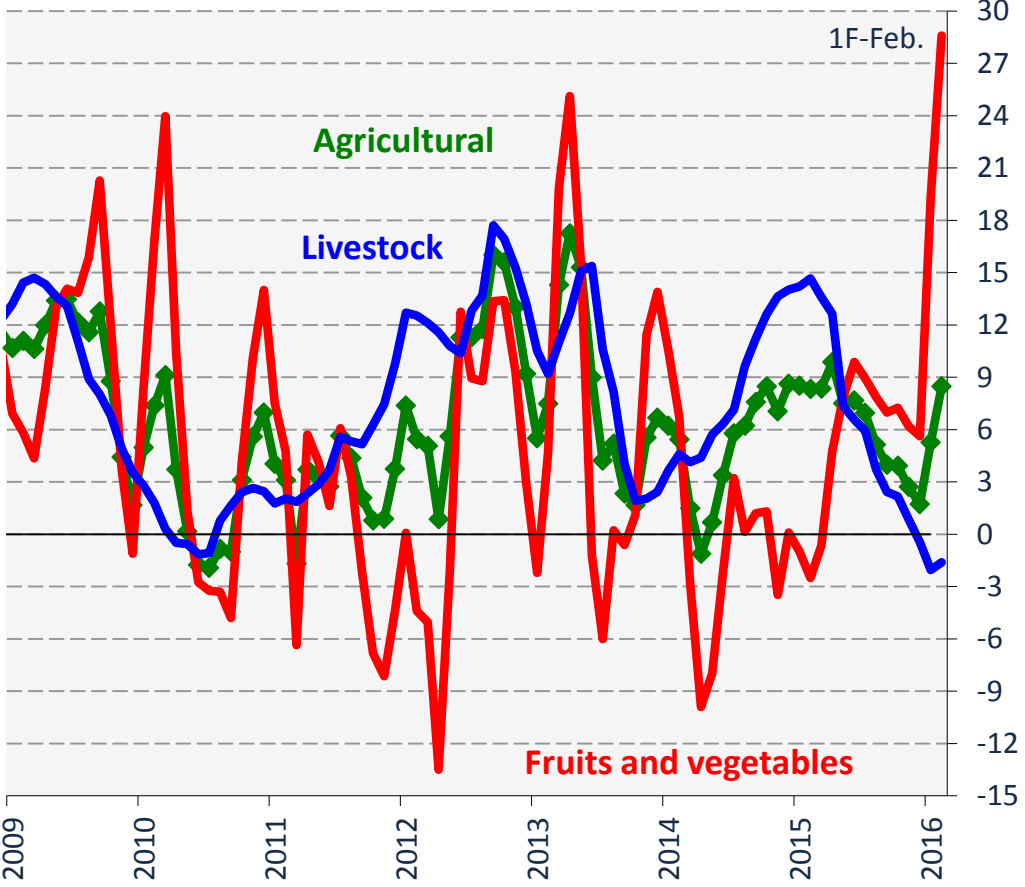


Source: Banco de México and INEGI.

In the last quarter of 2015, the annual growth rate of the non-core price index continued exhibiting a deceleration, even though it rebounded this year, which was related to higher prices of some vegetables.

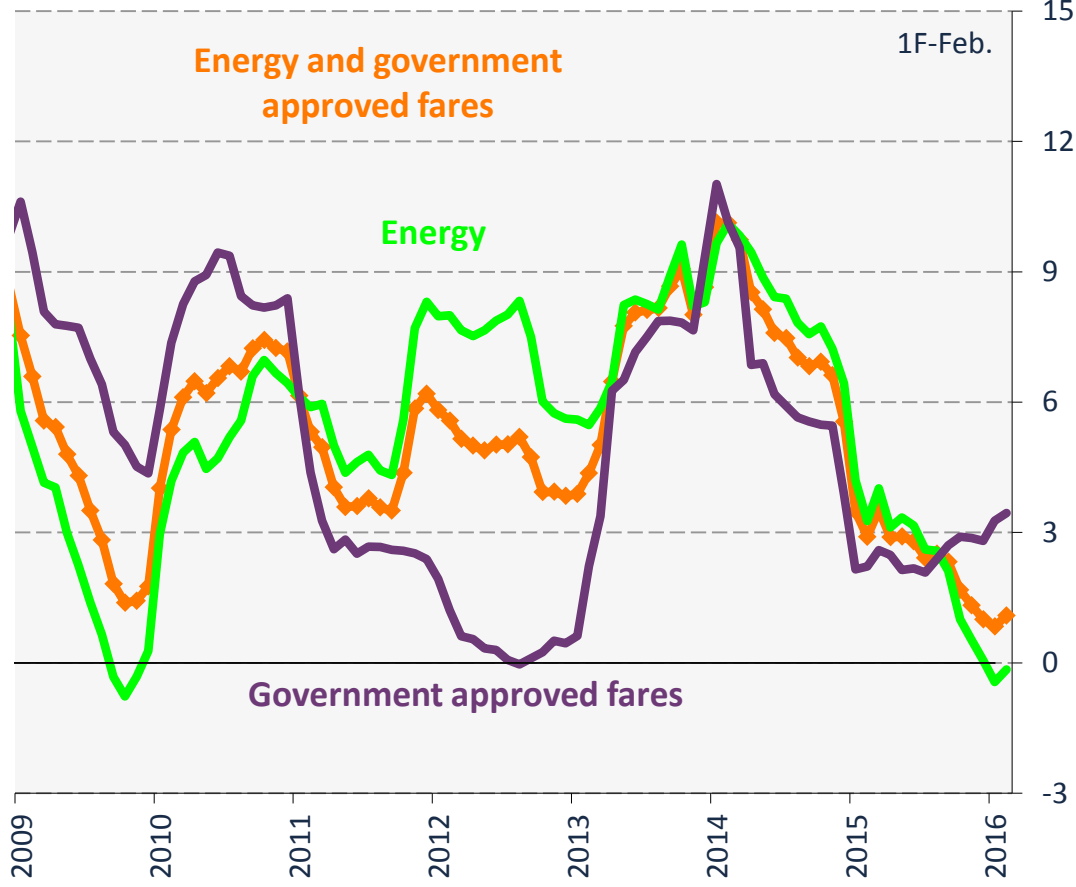
**Non-Core Index**  
Annual % change

**Agricultural**



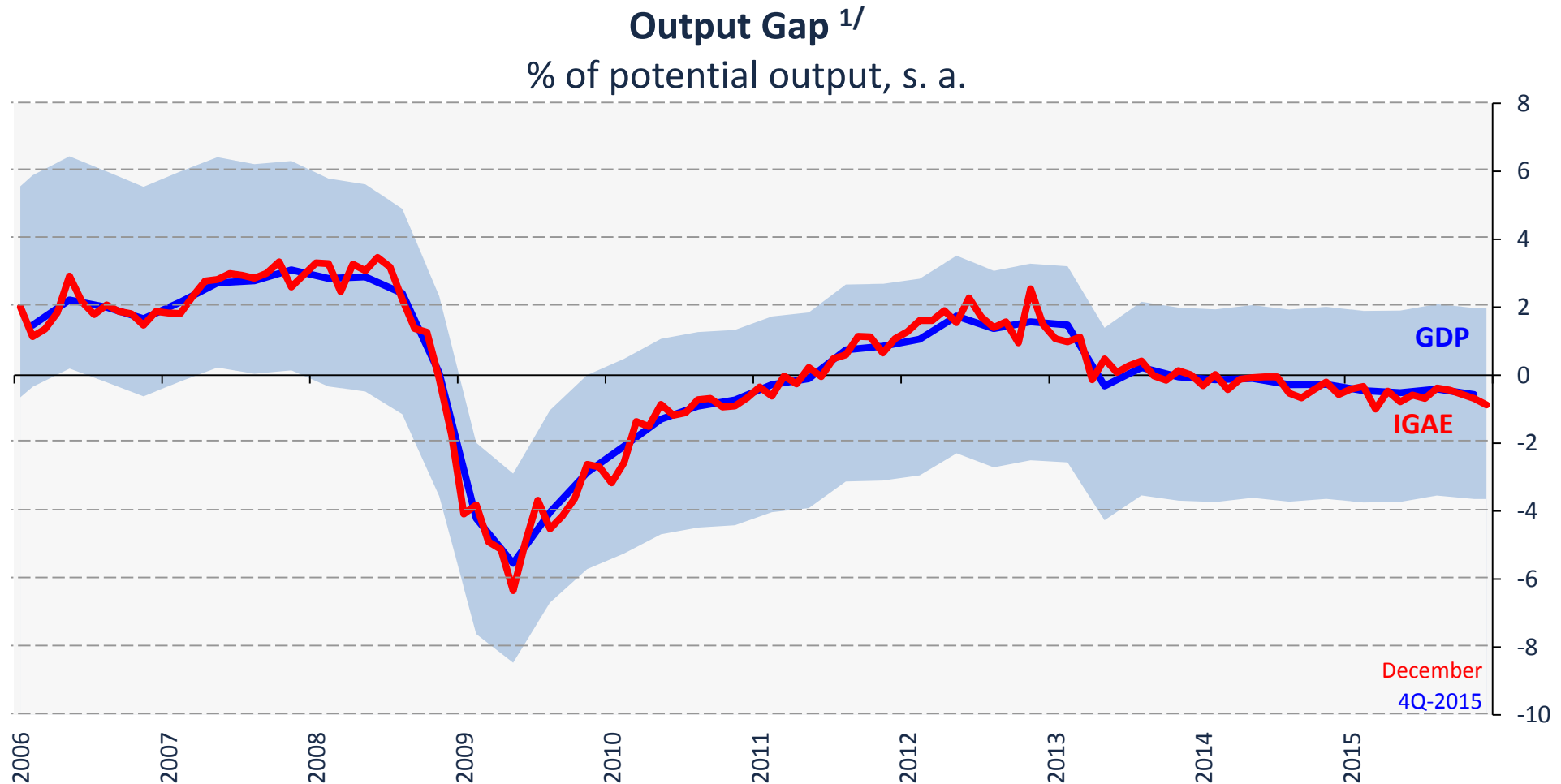
Source: Banco de México and INEGI.

**Energy and Government Approved Fares**



Source: Banco de México and INEGI.

The output gap has remained negative and it is expected to remain so in the foreseeable future.



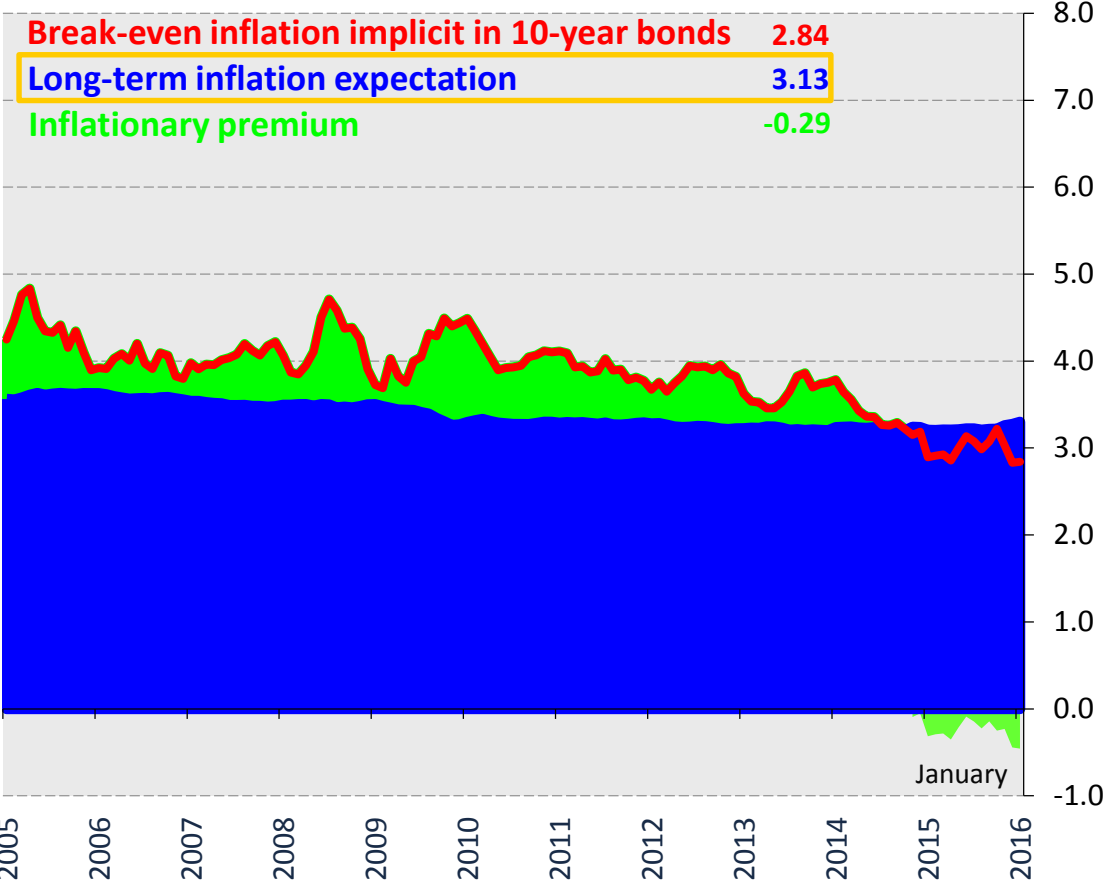
s. a. / Calculated with seasonally adjusted data.

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.

# Long-term inflation expectations implicit in market instruments remained stable, while those derived from surveys kept diminishing.

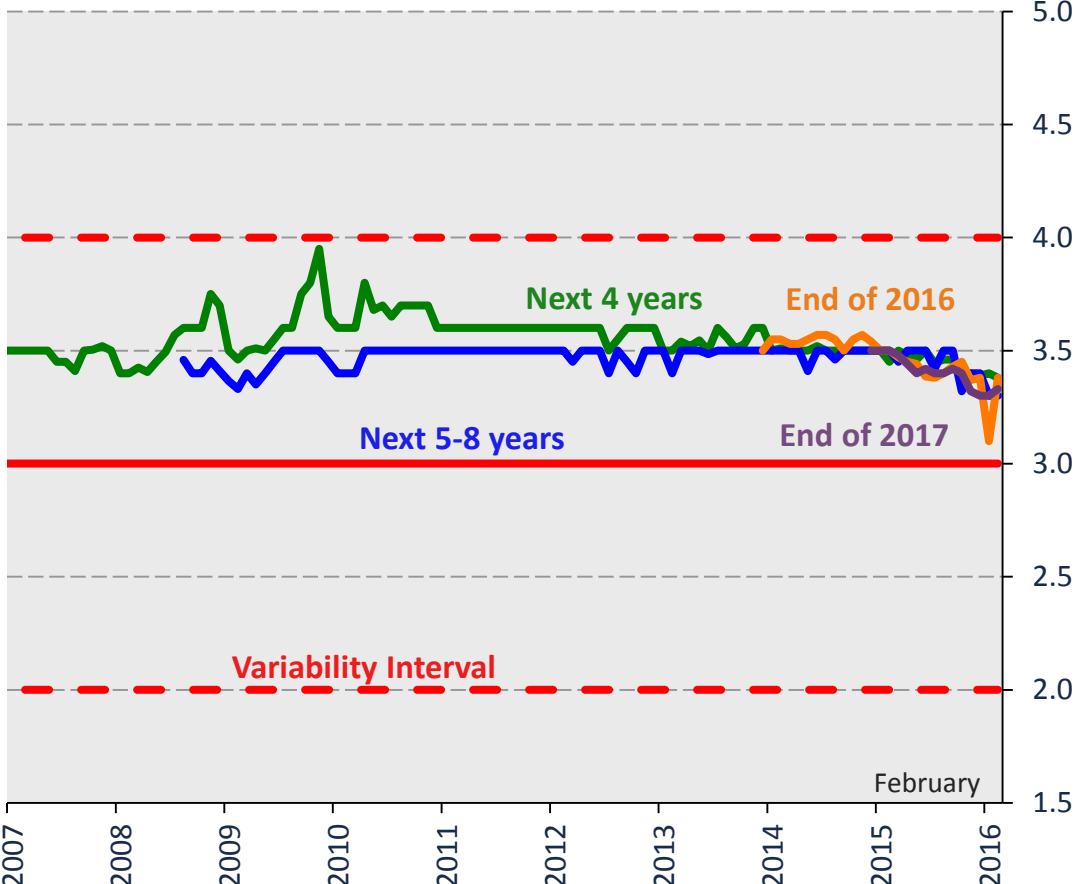
Break-even Inflation Decomposition <sup>1/</sup>  
%



1/ Based on the methodology described in Box 1 "Decomposition of the Break-even Inflation" of the Quarterly Report October-December 2013. For this report, the estimate was updated to include data up to December 2015.

Source: Banco de México.

Annual Headline Inflation Expectations  
Median, %



Source: Survey of private sector economic analysts' expectations, Banco de México.

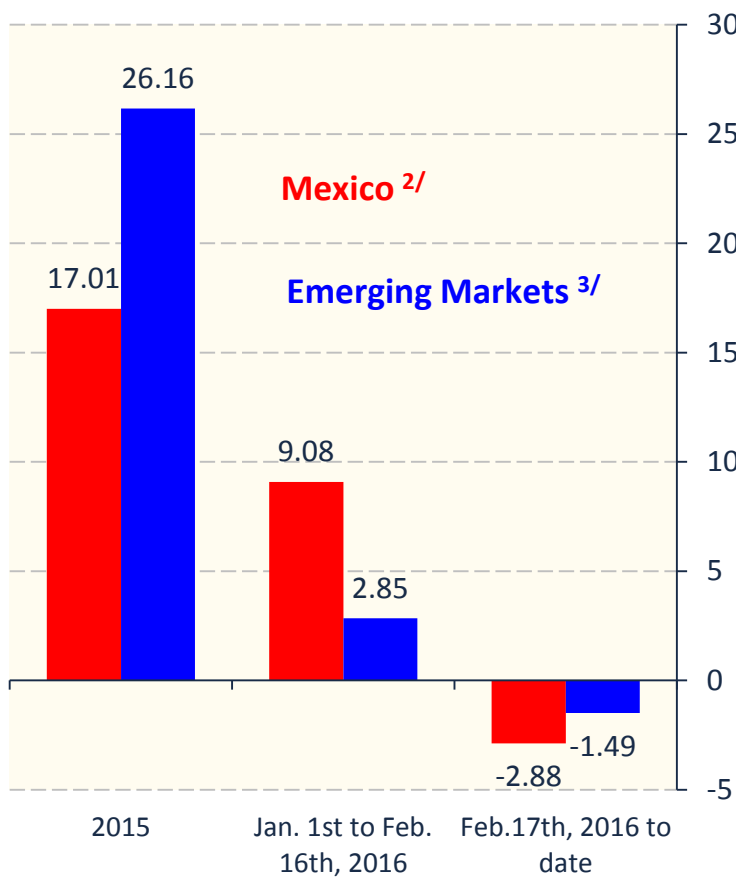
# The Mexican peso depreciated against the U.S. dollar and observed high volatility.

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



1/ Refers to FIX exchange rate. Data up to March 2, 2016  
Source: Banco de México

**Nominal Exchange Rate**  
Percentage change



2/ Refers to FIX exchange rate.  
3/ Refers to the simple average of the depreciation of the exchange rate of: Brazil, Chile, Colombia, Peru, Poland, Russia, South Africa, Turkey.  
Note: An increase means a depreciation of the exchange rate.  
Source: Banco de México and Bloomberg.

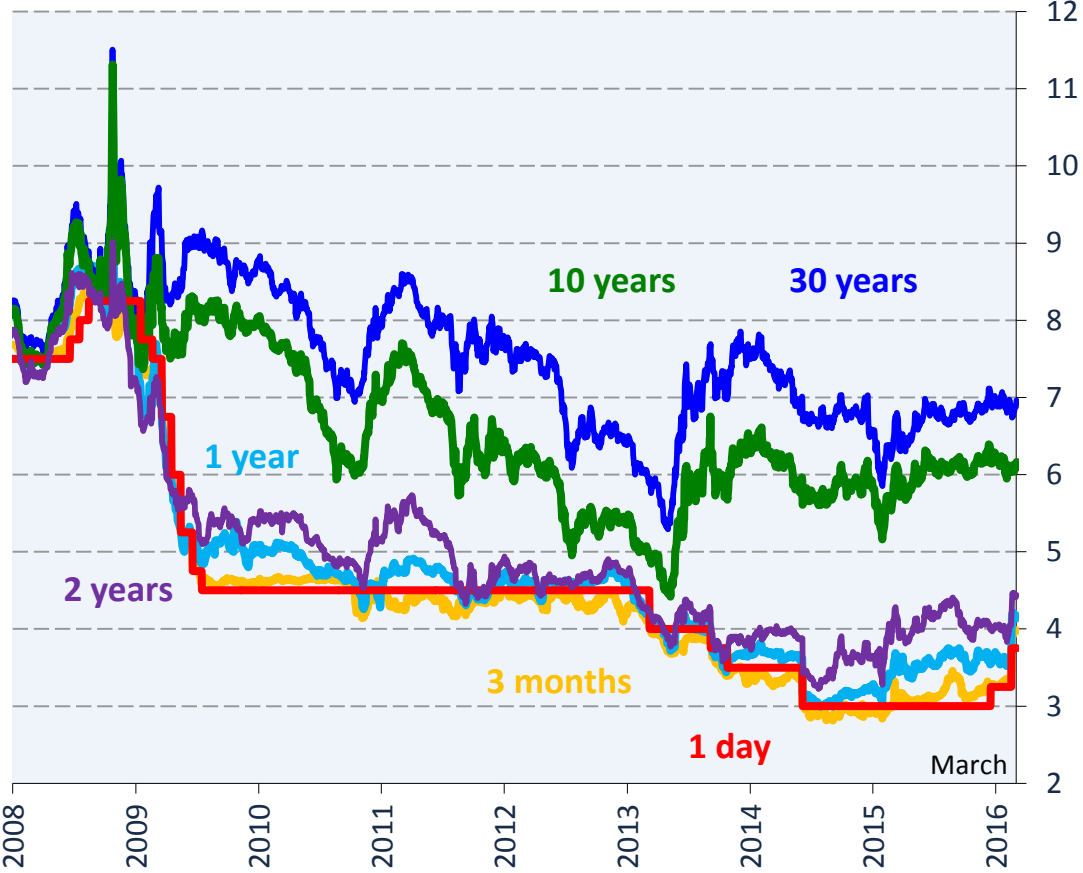
**Implied Volatility in Exchange Rate Options <sup>4/</sup>**  
%



4/ Refers to implied volatility in one-month options.  
5/ Implied volatility in peso options.  
6/ Refers to the simple average of the options for the currencies of: Brazil, Chile, Colombia, Korea, India, Mexico, Peru, Poland, South Africa and Turkey.  
Source: Bloomberg

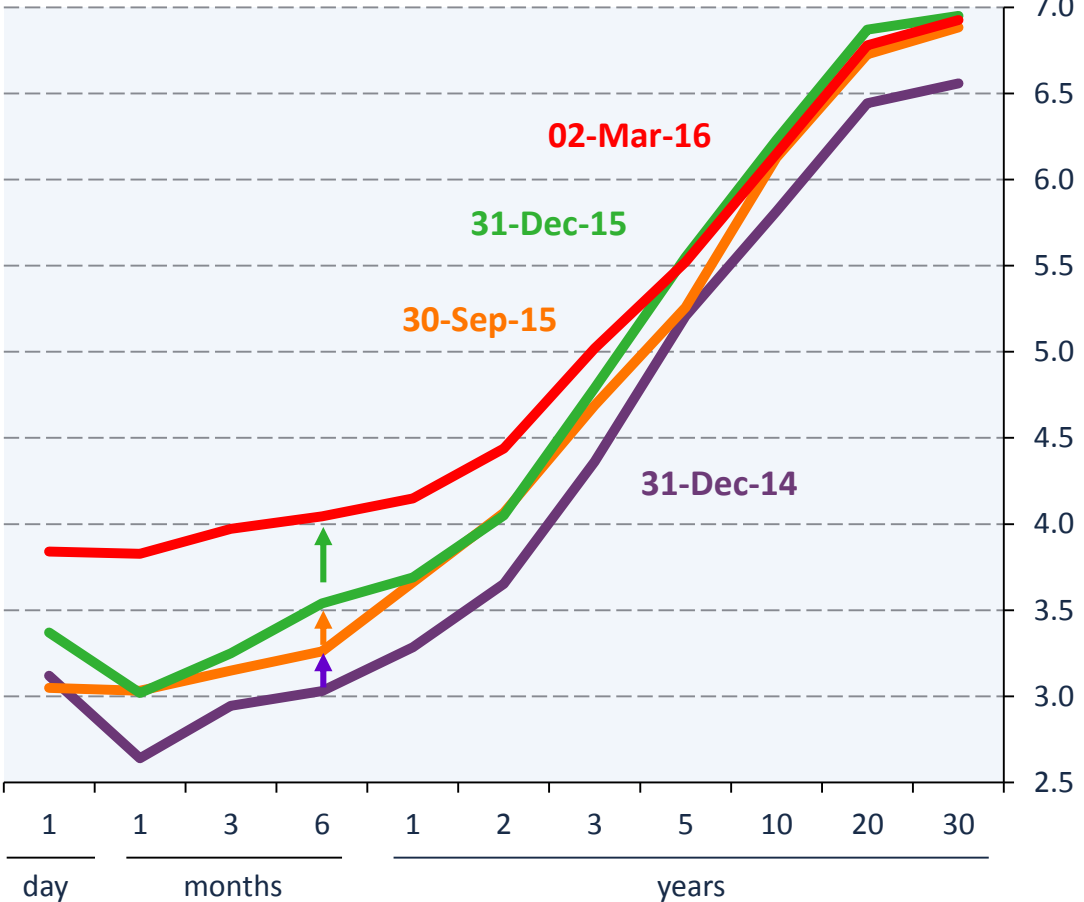
Interest rates performed favorably. Short-term interest rates reflected the increments in the policy interest rate. In contrast, long-term interest rates remained stable. Thus, the slope of the yield curve declined considerably.

Government Securities' Interest Rates <sup>1/</sup>  
%



<sup>1/</sup> Since January 21, 2008, the one-day (overnight) interest rate corresponds to the target for the Overnight Interbank Interest Rate.  
Source: Banco de México and Proveedor Integral de Precios (PiP).

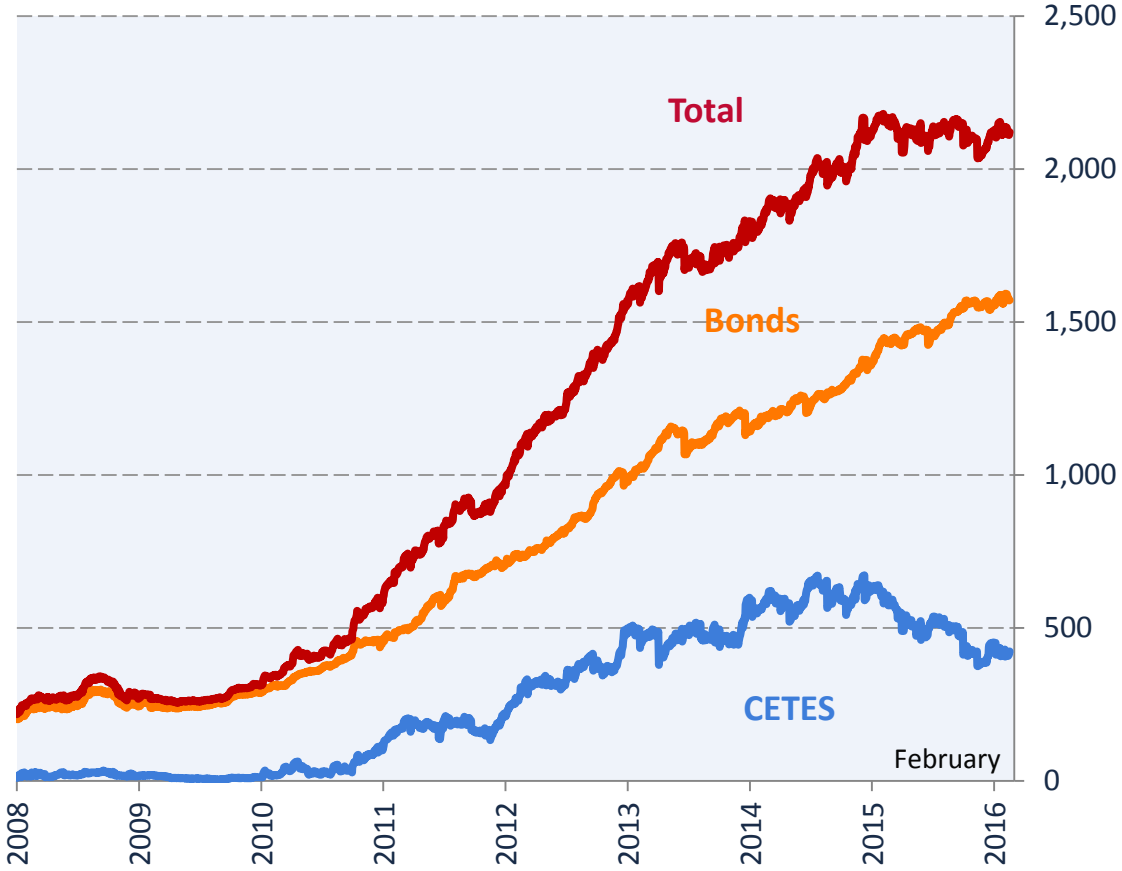
Government Bond Yield Curve  
%



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

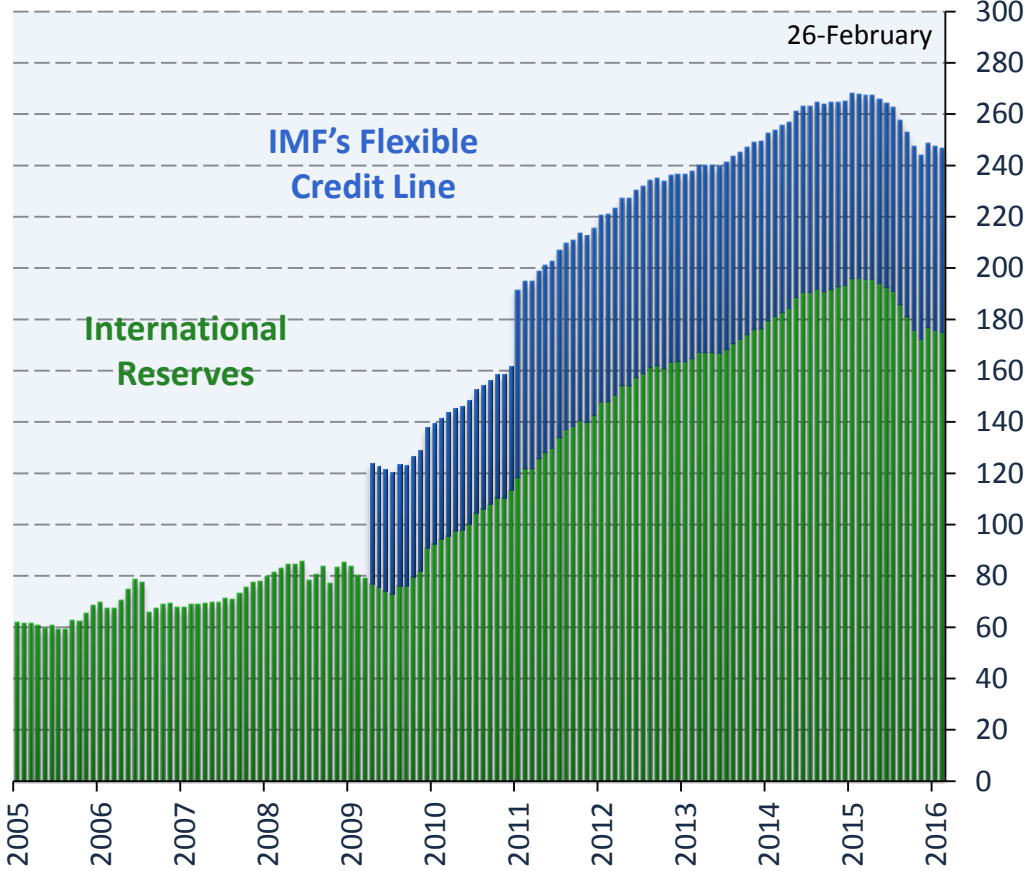
# Non-resident government securities' holdings decreased marginally.

**Government Securities' Holdings by Foreign Investors <sup>1/</sup>**  
 MXN billion



<sup>1/</sup> Total includes CETES, bonos, udibonos, bondes and bondes D.  
 Source: Banco de México.

**International Reserves**  
 USD billion



Source: Banco de México and International Monetary Fund.

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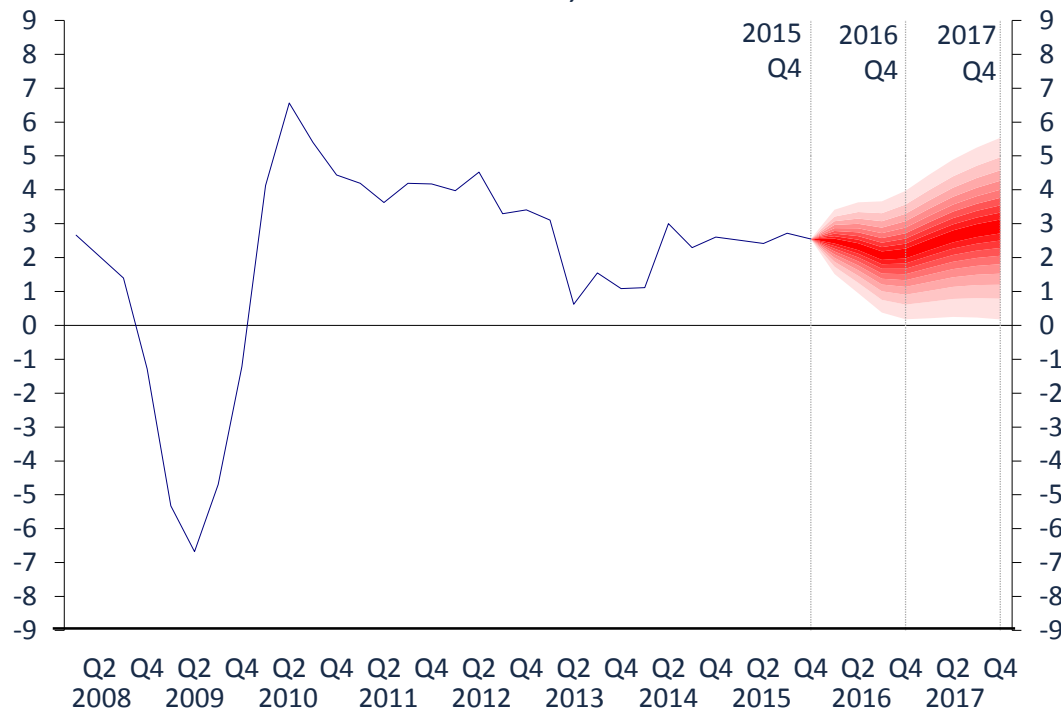
# Economic Activity Outlook

GDP Growth (%)		
Report	Previous	Current
2016	2.5 - 3.5	2.0 - 3.0
2017	3.0 - 4.0	2.5 - 3.5

Increase in the number of IMSS-insured jobs (Thousands)		
Report	Previous	Current
2016	630 - 730	610 - 710
2017	660 - 760	650 - 750

## Fan Charts

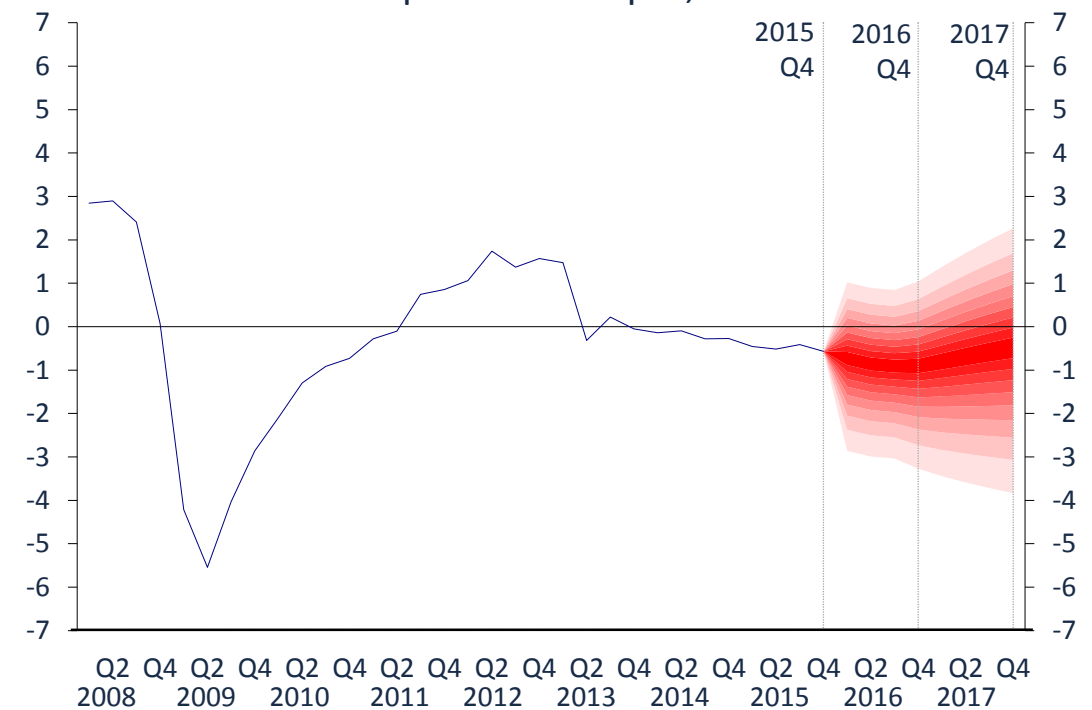
**GDP Growth**  
Annual %, s. a.



s. a. / Seasonally adjusted data.

Source: INEGI and Banco de México.

**Output Gap**  
% of potential output, s. a.



s. a. / Seasonally adjusted data.

Source: INEGI and Banco de México.

## Risks to the Growth Outlook

### Upward:

- ✓ U.S. industrial activity better than expected, which, together with a more orderly adjustment of the real exchange rate, may lead to an important increase in non-oil exports.
- ✓ That the implementation of structural reforms may produce more favorable and faster effects on investment.

### Downward:

- ✓ An even lower than expected dynamism of the U.S. industrial activity.
- ✓ That oil prices would not recover. In the short term this could lead to a lower domestic spending.
- ✓ That volatility in financial markets would become even sharper.

# Inflation Outlook

The projected inflation path considers the fading of favorable supply shocks that took place in early 2015, adjustments in relative prices derived from the exchange rate depreciation, as well as the change in the gasoline price-setting mechanism, and, as a consequence, the change in its seasonality.

## Headline Inflation

## Core Inflation

2016

It is anticipated that, derived from the referred seasonality, it will temporarily attain levels slightly above 3 percent between the second and the third quarters, to close the year around the said level.

It is expected to gradually increase throughout the year, and to conclude 2016 at levels close to 3 percent as well.

2017

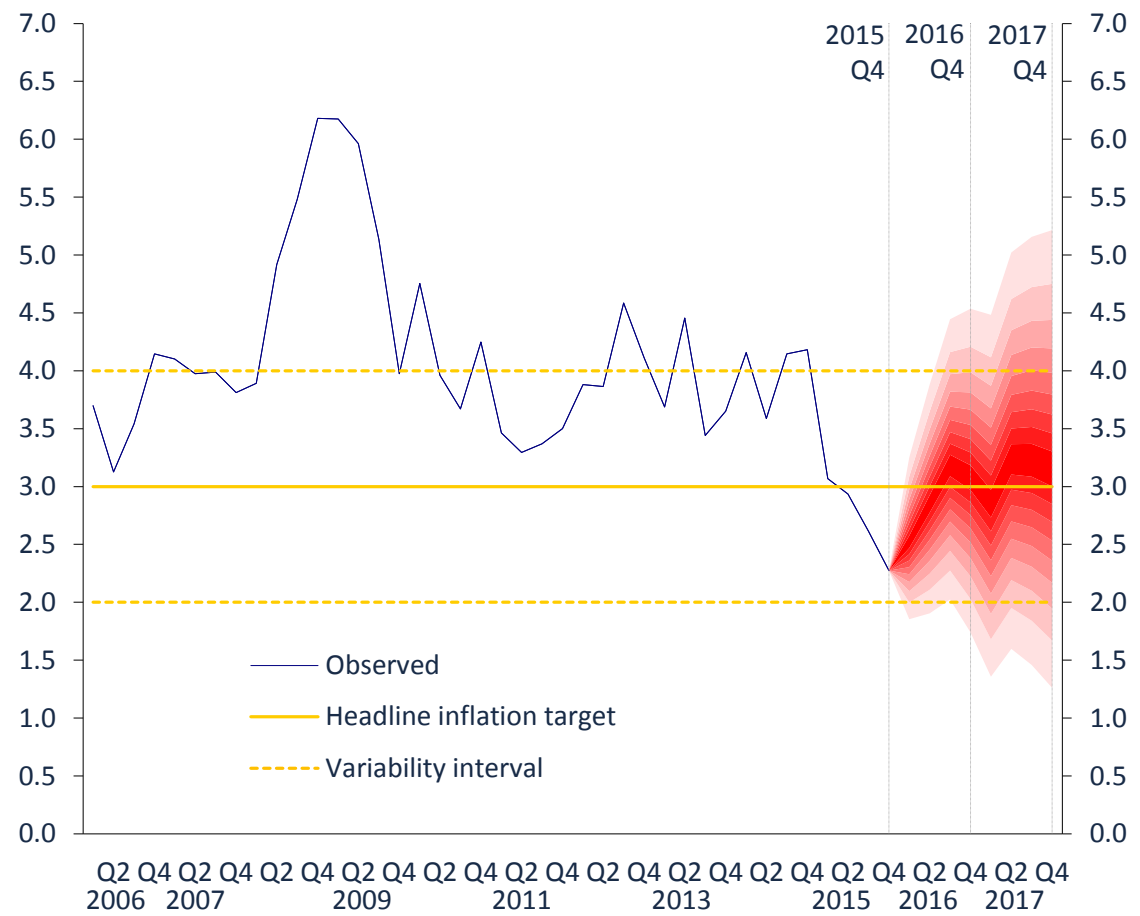
They are expected to stabilize around the permanent inflation target.

**It should be mentioned that this forecast does not imply a generalized deterioration in the price formation process, but rather it reflects the expected effects of the above mentioned factors onto inflation.**

**Fan Charts**

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

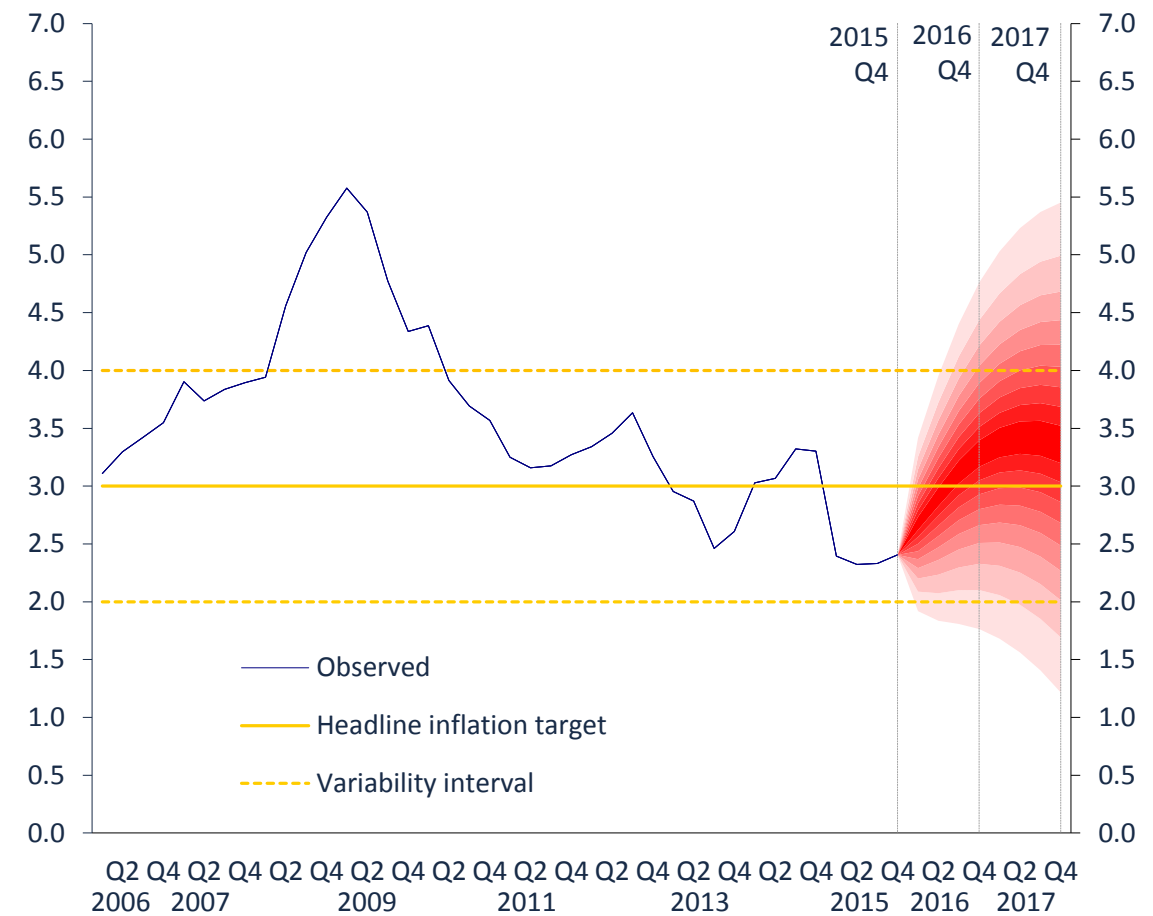
%



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

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

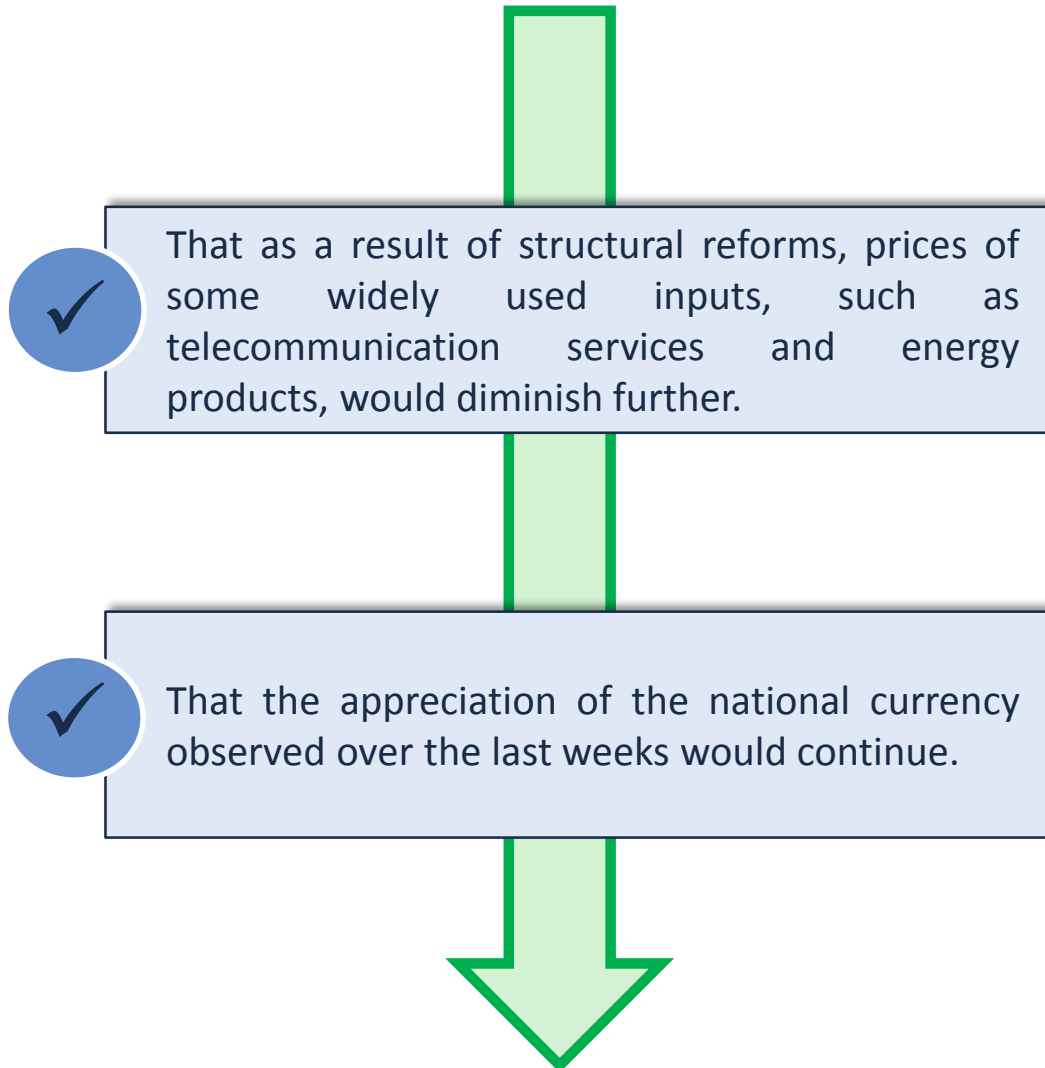
%



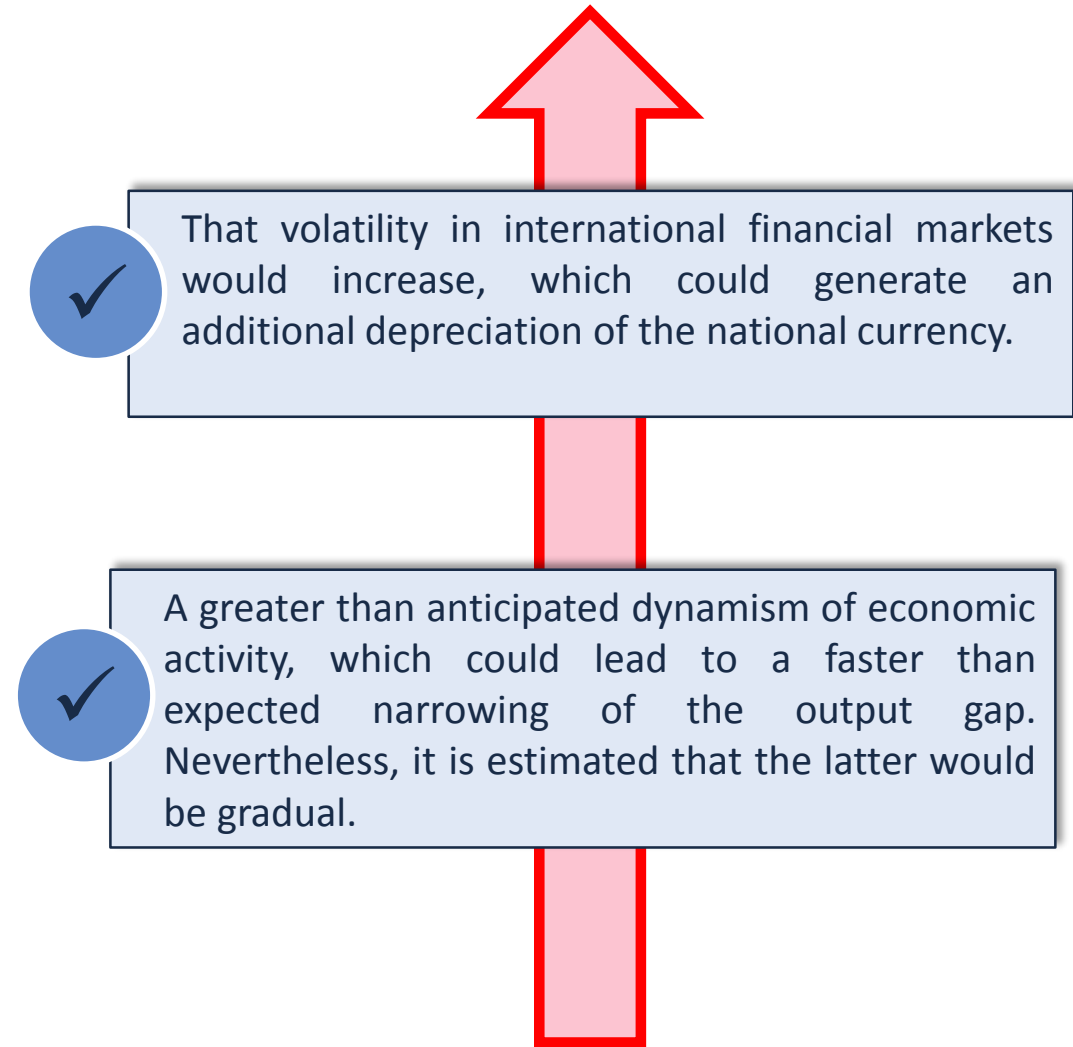
<sup>2/</sup> Quarterly average of annual headline inflation.  
Source: INEGI and Banco de México.

## Risks to Inflation Outlook

### Downward



### Upward



# Monetary Policy Stance

- On February 17, Banco de México's Board of Governors clarified that, although its latest monetary policy decision would not initiate a cycle of monetary contraction, looking forward it **will remain alert to the performance of all inflation determinants and its expectations for the medium and long term**, especially:

- ✓ The exchange rate and its possible pass-through onto consumer prices.

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

- ✓ The evolution of the output gap.

→ All of the above, in order to be able to take measures in a flexible manner and whenever conditions demand it, so as **to consolidate the efficient convergence of inflation to the 3 percent target.**

## Challenges to Strengthen Confidence in the Mexican Economy

- Having **internal sources of growth**, particularly in a context of weak world economy and a low volume of global trade.
- An adequate implementation of **structural reforms, which would allow to more clearly distinguish the Mexican economy** among other emerging countries, and to consolidate a higher growth rate in the medium term.
- Continue **strengthening the rule of law and guaranteeing legal certainty**. This would allow to enhance the effect of structural reforms on economic growth, in addition to directly attracting greater investment to the country.



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