



Quarterly Report

July – September 2017

November 22nd, 2017



BANCO DE MÉXICO

Outline

1 **Monetary Policy and Inflation**

2 **External Conditions**

3 **Evolution of the Mexican Economy**

4 **Forecasts and Final Remarks**

Conduction of Monetary Policy

Since late 2015, Banco de México has taken the measures required to ensure that, in light of the shocks that affected inflation, adjustments in the relative prices would take place in an orderly manner, **preventing second round effects** on the price formation process in the economy.

- The Board of Governors has considered that the monetary policy measures **affect inflation with a lag** via different **transmission channels**. These channels have been fully operating during 2017. In particular, the monetary policy actions have contributed to the following:
 - ✓ **Anchoring of inflation expectations.**
 - ✓ **Lower growth of financing.**
 - ✓ **Considerable appreciation of the national currency** against the U.S. dollar, from mid-January until the end of September 2017, although recently the Mexican peso has experienced volatility.

Derived from the above, inflation has attained its maximum level and has begun a downward trend.

Conduction of Monetary Policy

Unchanged at 7.0 percent

✓ August, 2017

✓ September, 2017

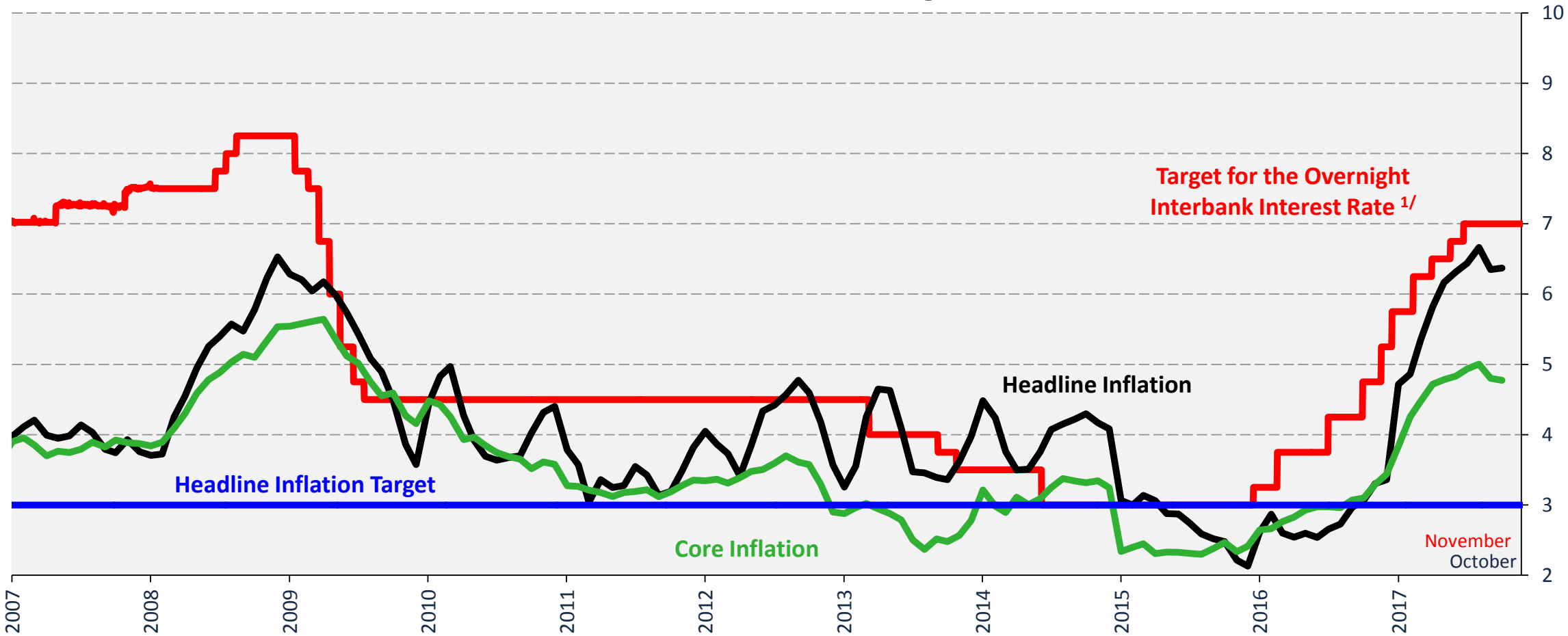
✓ November, 2017

The Board of Governors considered that, despite the increase in some risks, **the adopted monetary policy stance remained congruent with the convergence of headline inflation to the 3.0 percent target** by the end of 2018.

In light of the persisting risks, **Banco de México will remain vigilant to ensure a prudent monetary stance**, so that the anchoring of medium- and long-term inflation expectations prevails and inflation converges to its target.

Thus, the adopted monetary policy stance led the annual headline inflation to attain a maximum in August 2017.

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

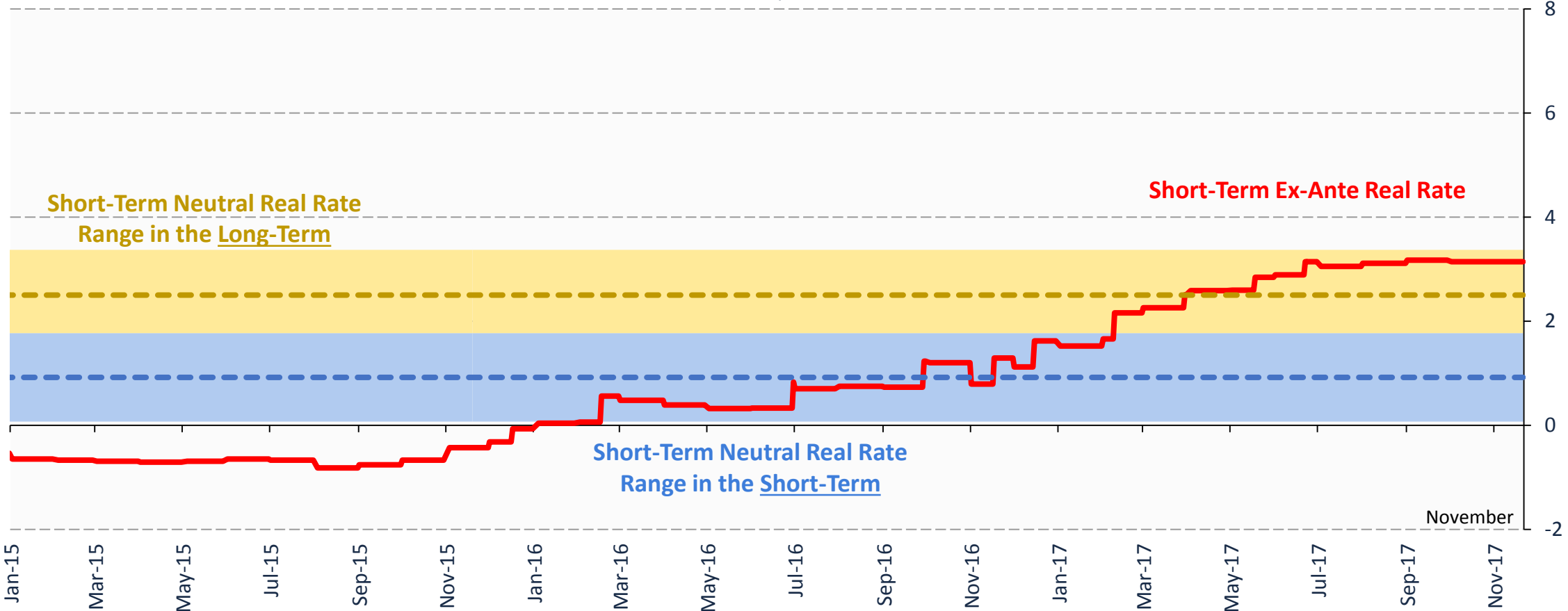


1/ Before January 20, 2008 it refers to the observed Overnight Interbank Interest Rate.
Source: INEGI and Banco de México.

Ex-ante real interest rates have increased to levels above 3.0 percent.

Short-Term Ex-Ante Real Rate and Estimated Ranges for the Short-Term Neutral Real Rate in the Short and Long Terms ^{1/}

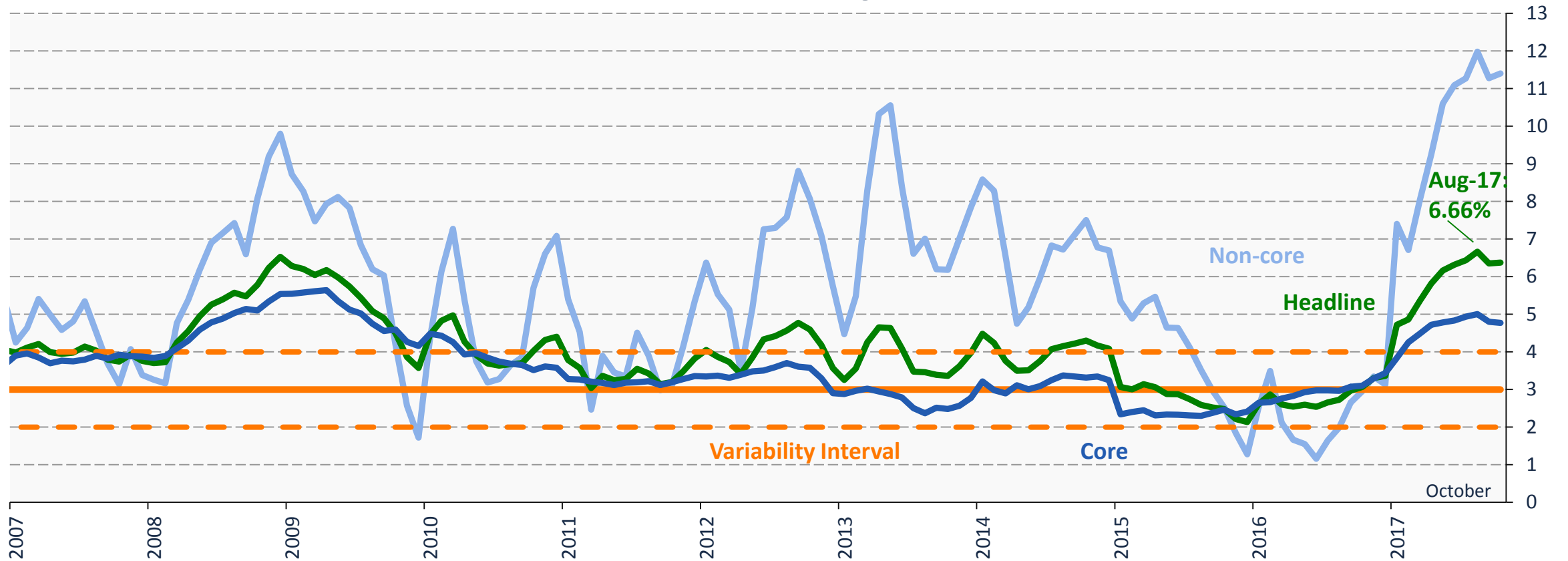
%



^{1/} The short-term ex-ante real rate is constructed using the Target for the Overnight Interbank Interest Rate and 12-month inflation expectations from Banco de México Survey. The dotted lines correspond to the midpoints of each range.
Source: Banco de México.

The change in the inflation trend has been a result, in addition to the implemented monetary stance, of the partial fading of adjustments in relative prices, derived from the sequence of shocks that had affected it.

Consumer Price Index Annual % change

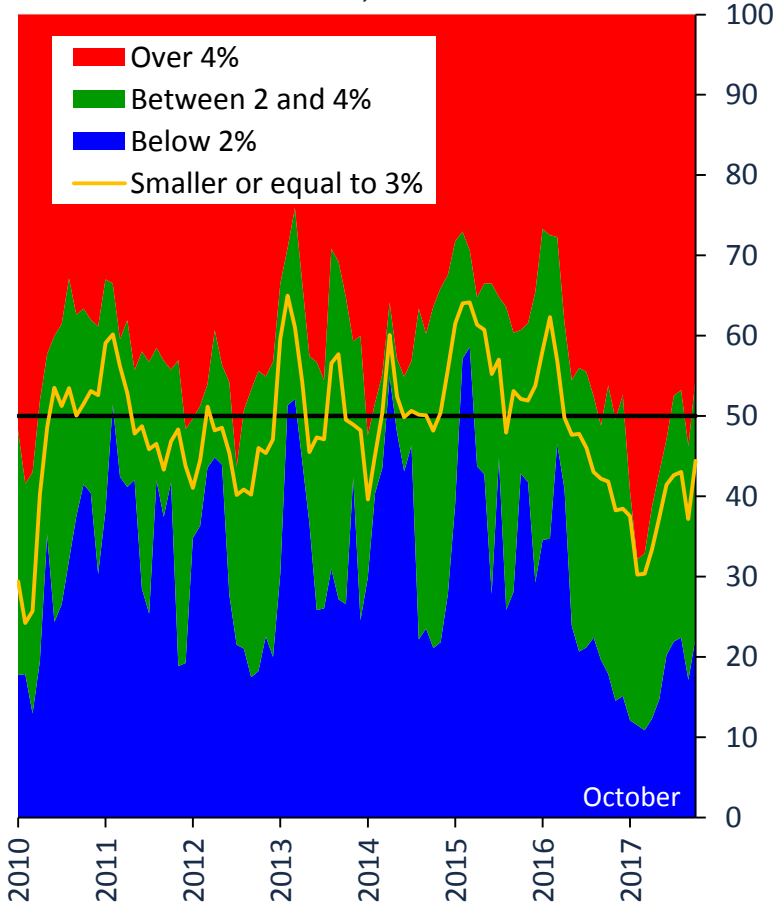


Source: Banco de México and INEGI.

The change in the inflation trajectory is appreciated in more detail when different indicators are analyzed.

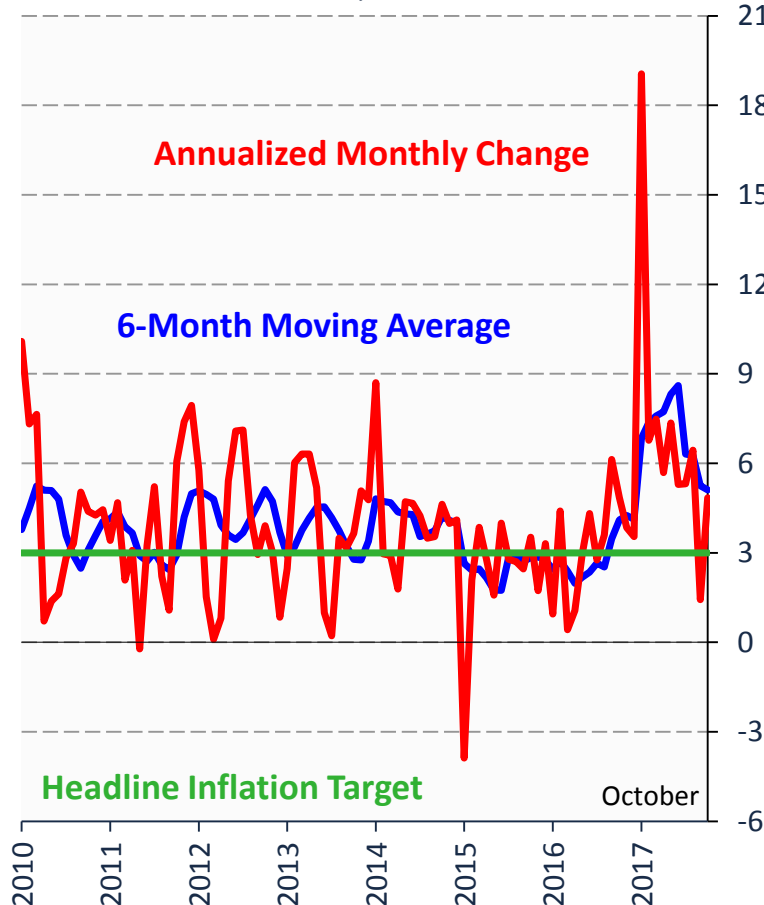
Headline Inflation

Percentage of CPI Basket according to Intervals of Monthly Annualized Increment ^{1/}
%, s. a.



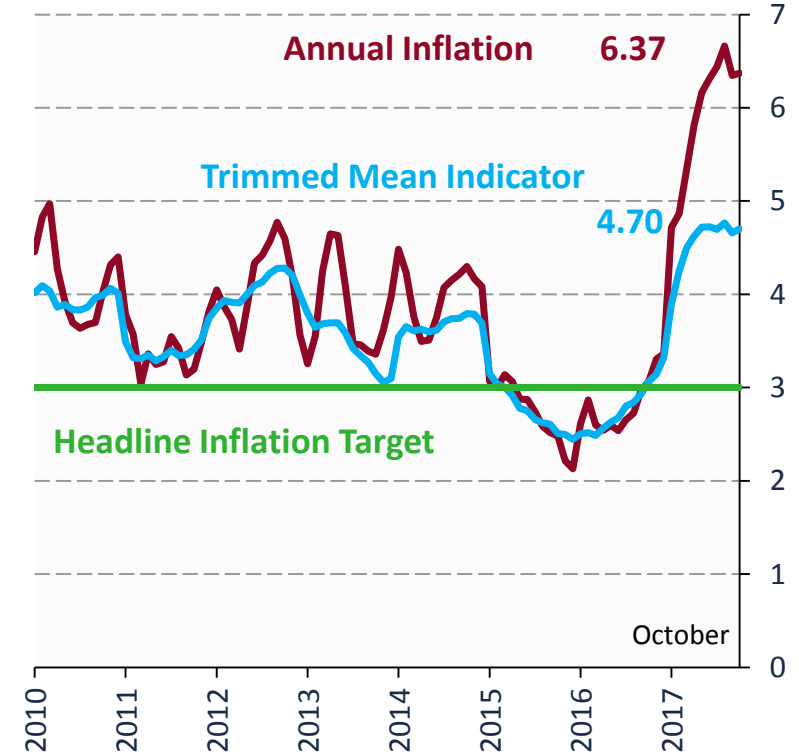
s. a. / Seasonally adjusted data.
1/ 3-month moving average.
Source: Banco de México and INEGI

Annualized Seasonally Adjusted Monthly Change and Trend
%, s. a.



s. a. / Seasonally adjusted data.
Source: Seasonal adjustment prepared by Banco de México with own data and data from INEGI.

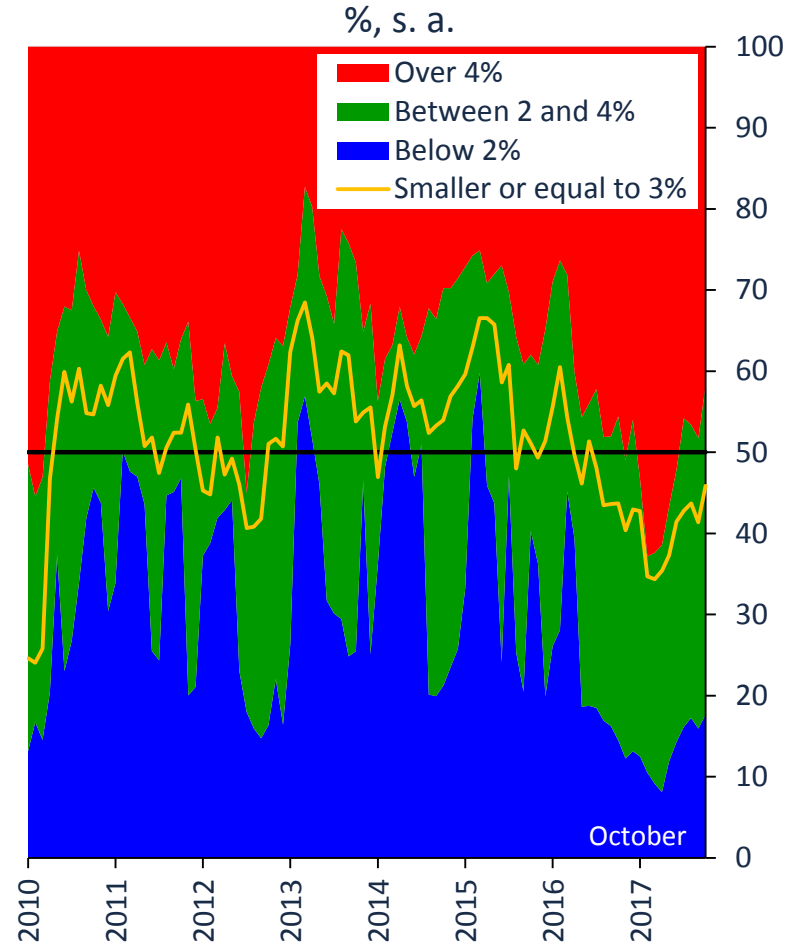
CPI and Trimmed Mean Indicator ^{2/}
Annual % change



^{2/} 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.

This change in the trajectory is also observed in core inflation.

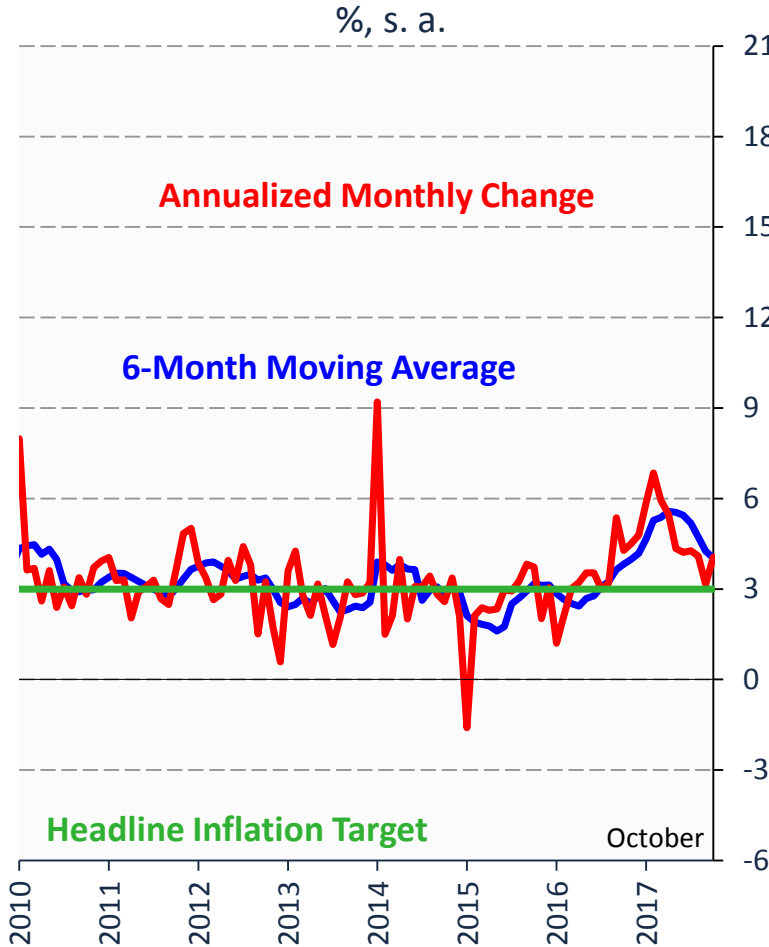
Percentage of CPI Basket according to Intervals of Monthly Annualized Increment ^{1/}



s. a. / Seasonally adjusted data.
 1/ 3-month moving average.
 Source: Banco de México and INEGI

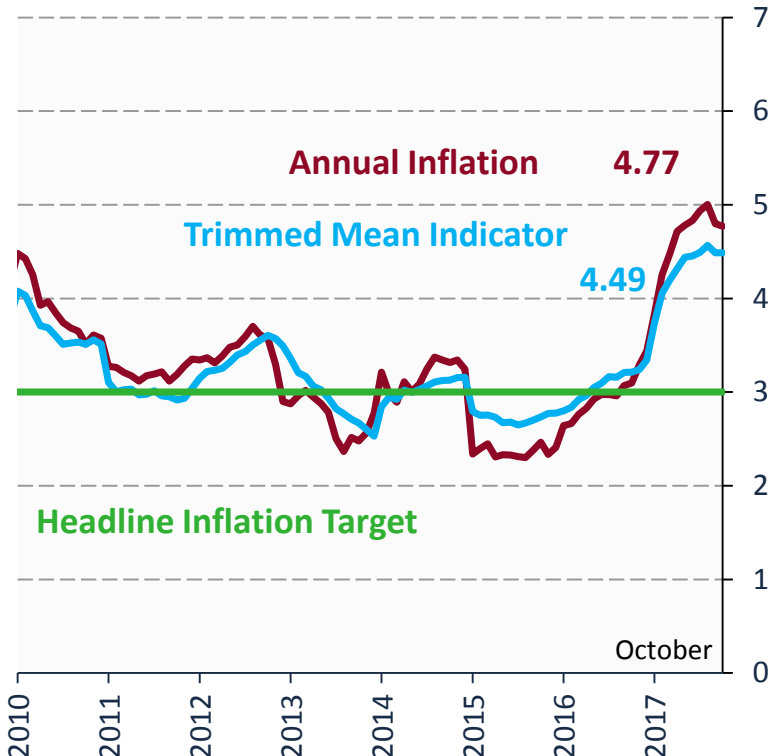
Core Inflation

Annualized Seasonally Adjusted Monthly Change and Trend



s. a. / Seasonally adjusted data.
 Source: Seasonal adjustment prepared by Banco de México with own data and data from INEGI.

Core CPI and Trimmed Mean Indicator ^{2/} Annual % change

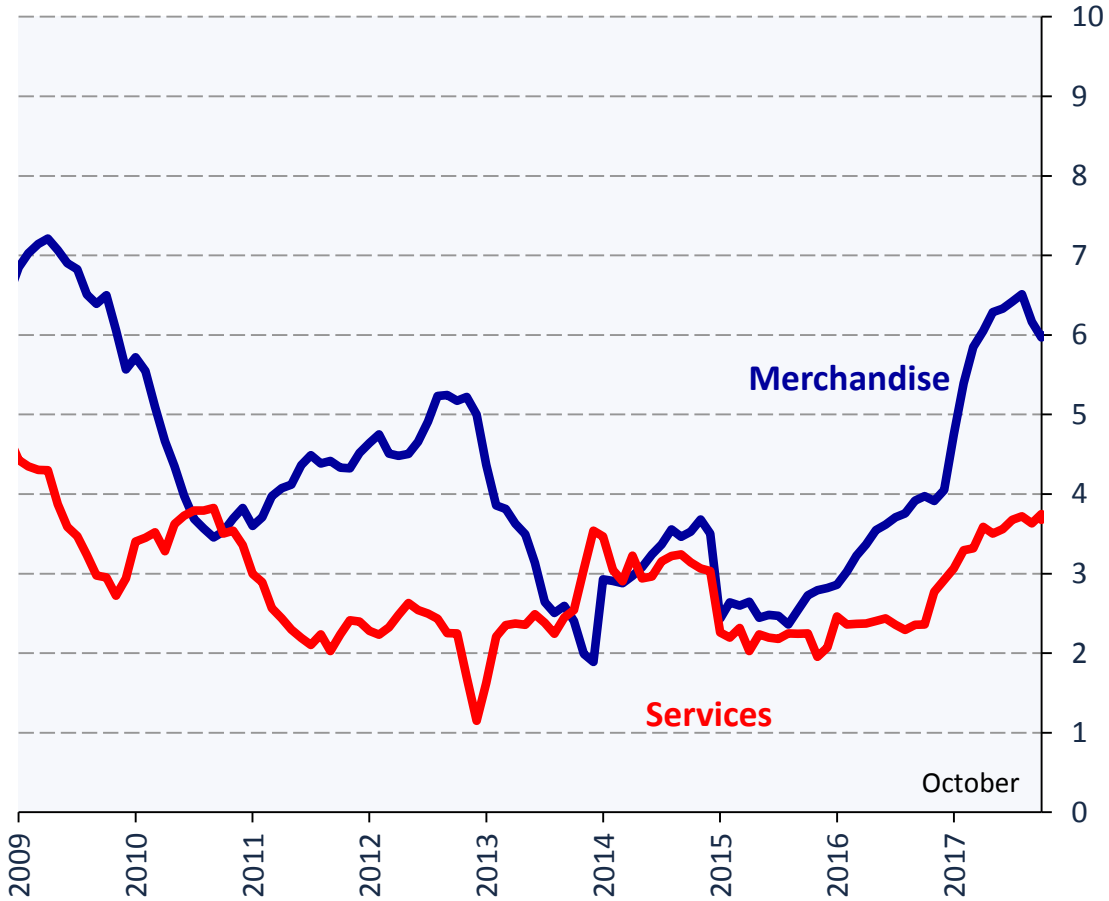


2/ The Trimmed Mean Indicator excludes the contribution of extreme variations in the prices of some generic items from the inflation of a price index. To eliminate the effect of these changes, the following is done: i) monthly seasonally adjusted changes of the generic items of the price index are arranged 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.

One of the factors that has contributed the most to lower inflation levels has been the change in the core component trend since August. This is largely explained by merchandise prices.

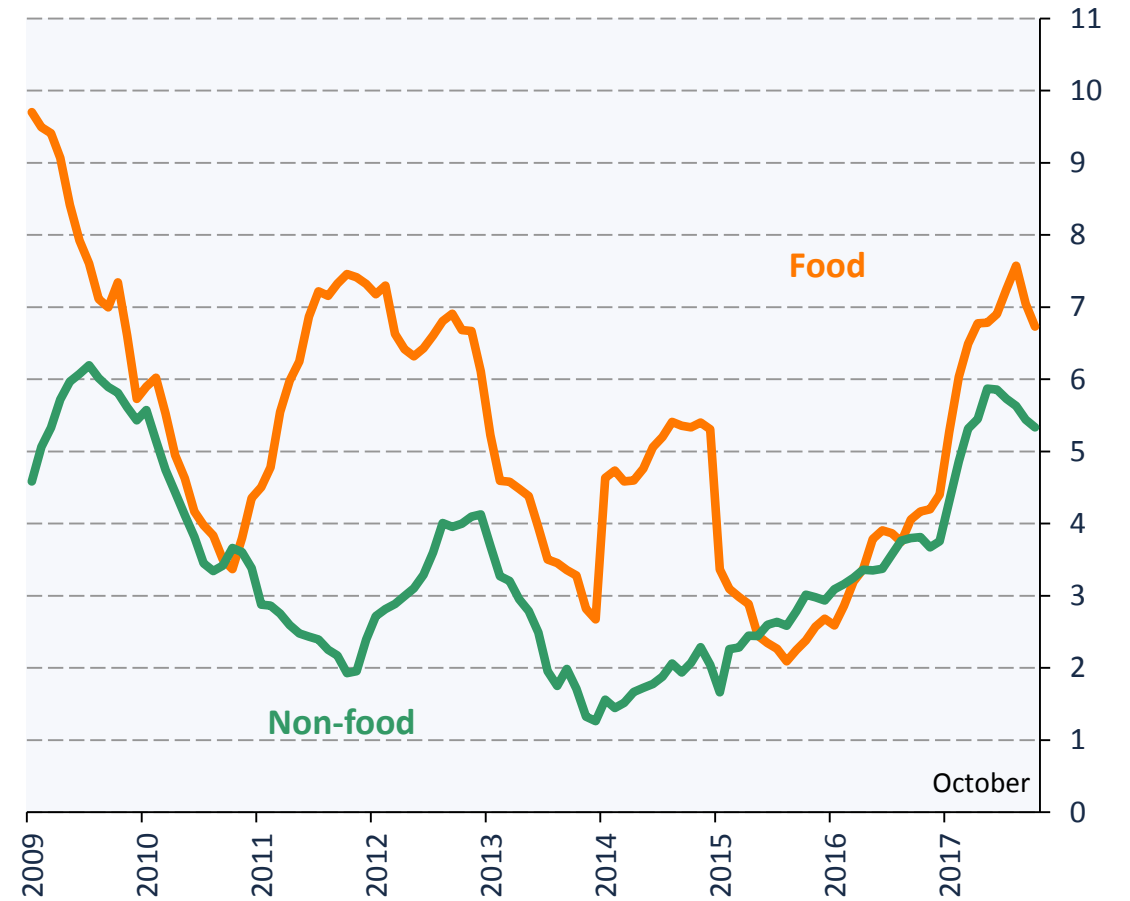
Core Price Index Annual % change

Merchandise and Services



Source: Banco de México and INEGI.

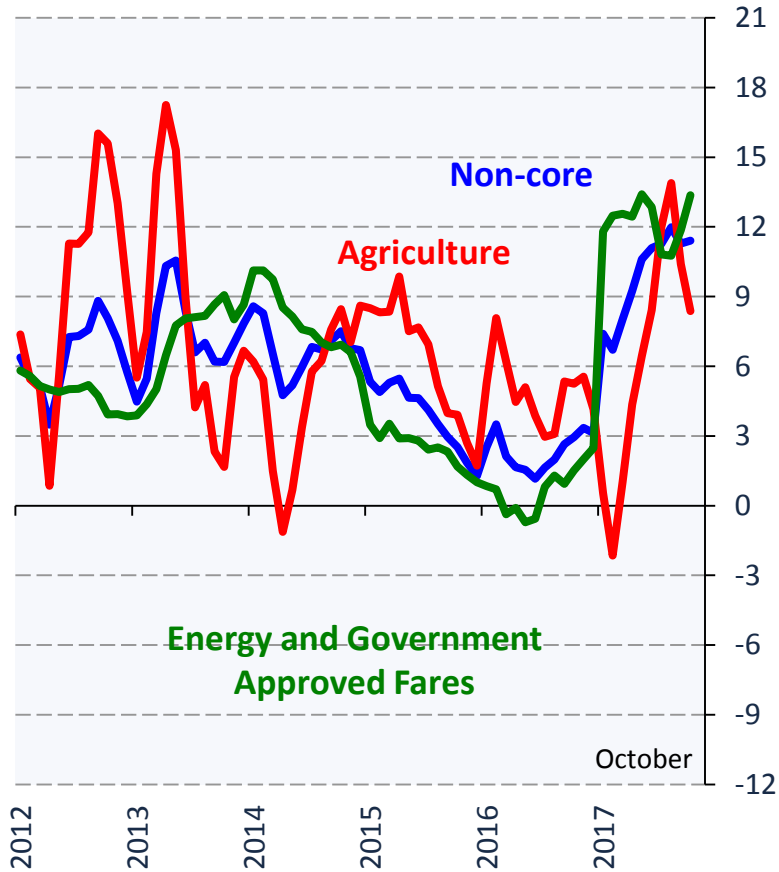
Merchandise



Source: Banco de México and INEGI.

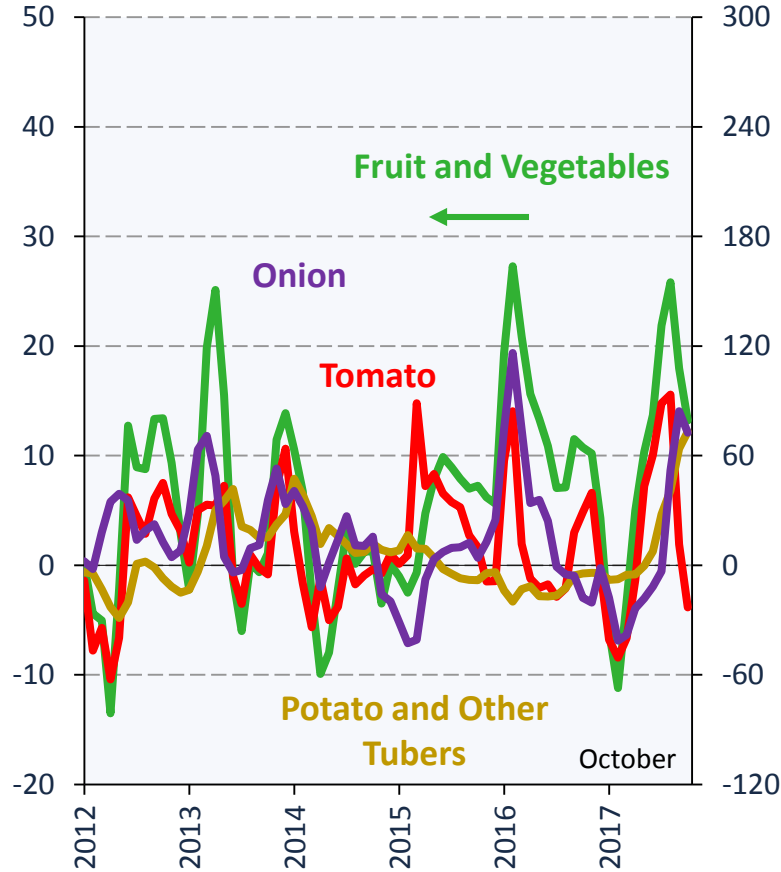
Non-core inflation remains at high levels, which has limited the speed of the decrease of headline inflation. This is attributed to higher prices of some agricultural products, as well as a spike in energy prices since September, in particular the LP gas prices.

Non-core Price Index
Annual % change



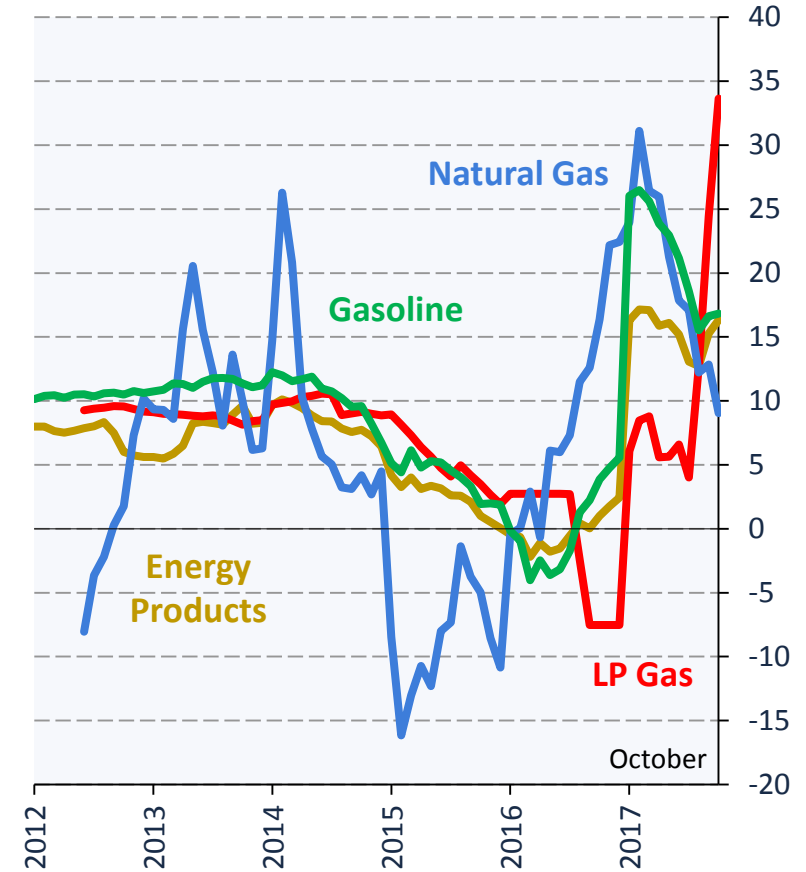
Source: Banco de México and INEGI.

Price Index of Selected Fruit and Vegetables
Annual % change



Source: Banco de México and INEGI.

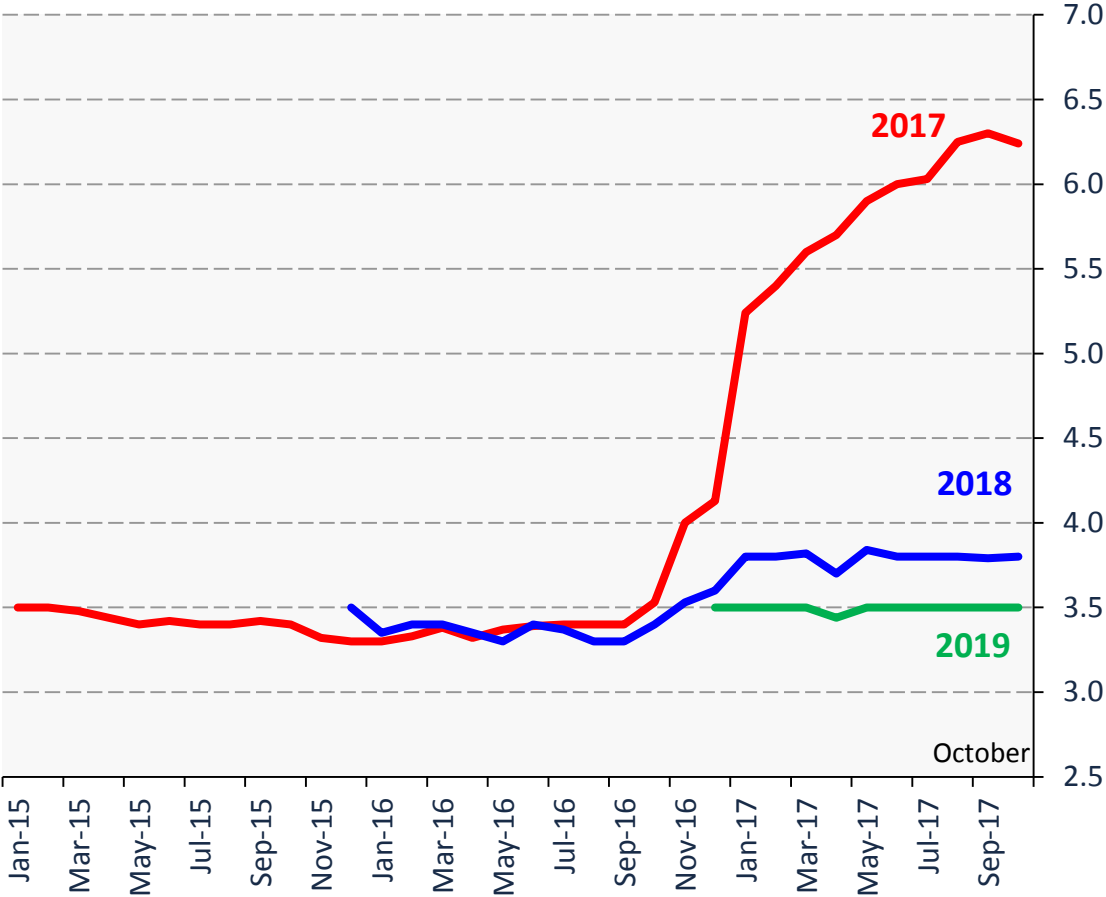
Price Indices of Selected Energy Products
Annual % change



Source: Banco de México and INEGI.

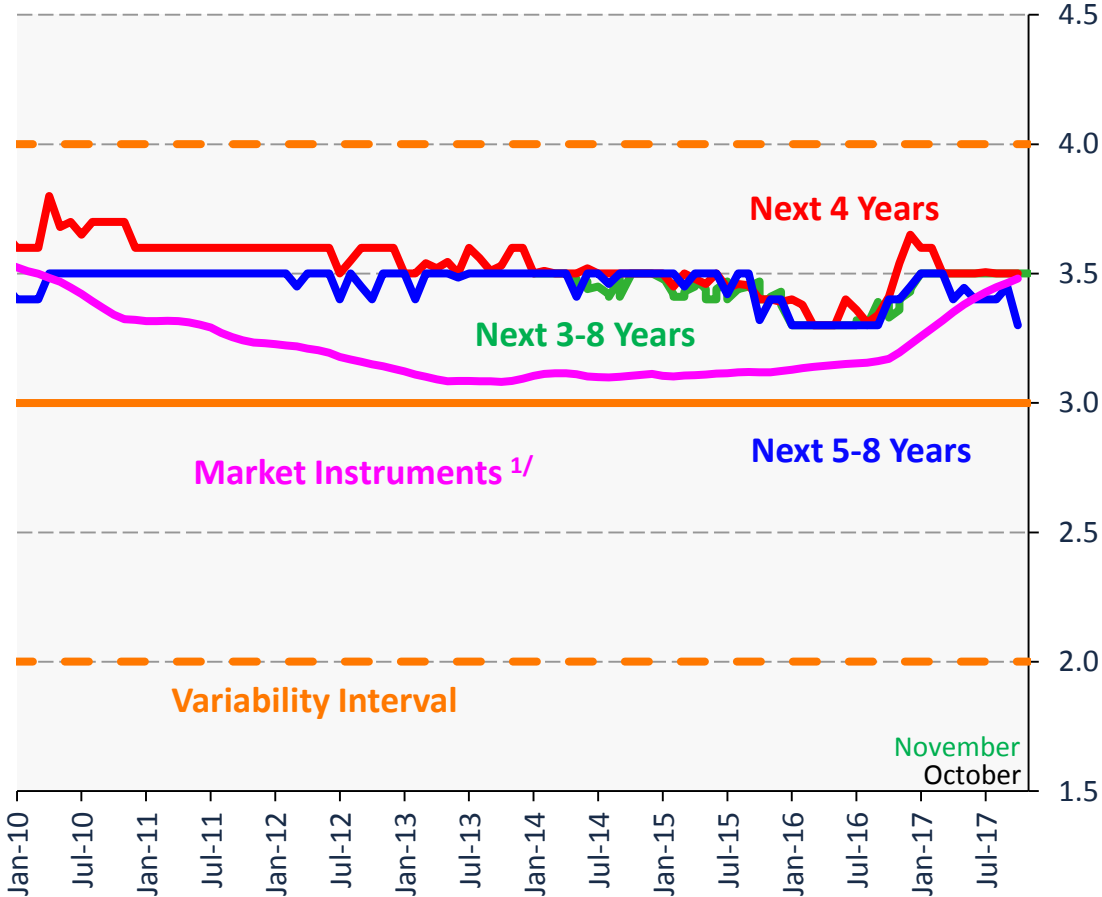
Inflation expectations corresponding to the end of 2018 are considerably lower than those of 2017. Meanwhile, longer-term expectations remained anchored around 3.5 percent.

Annual Headline Inflation Expectations
Median, %



Source: Banco de México Survey.

Long-term Inflation Expectations
Median, %

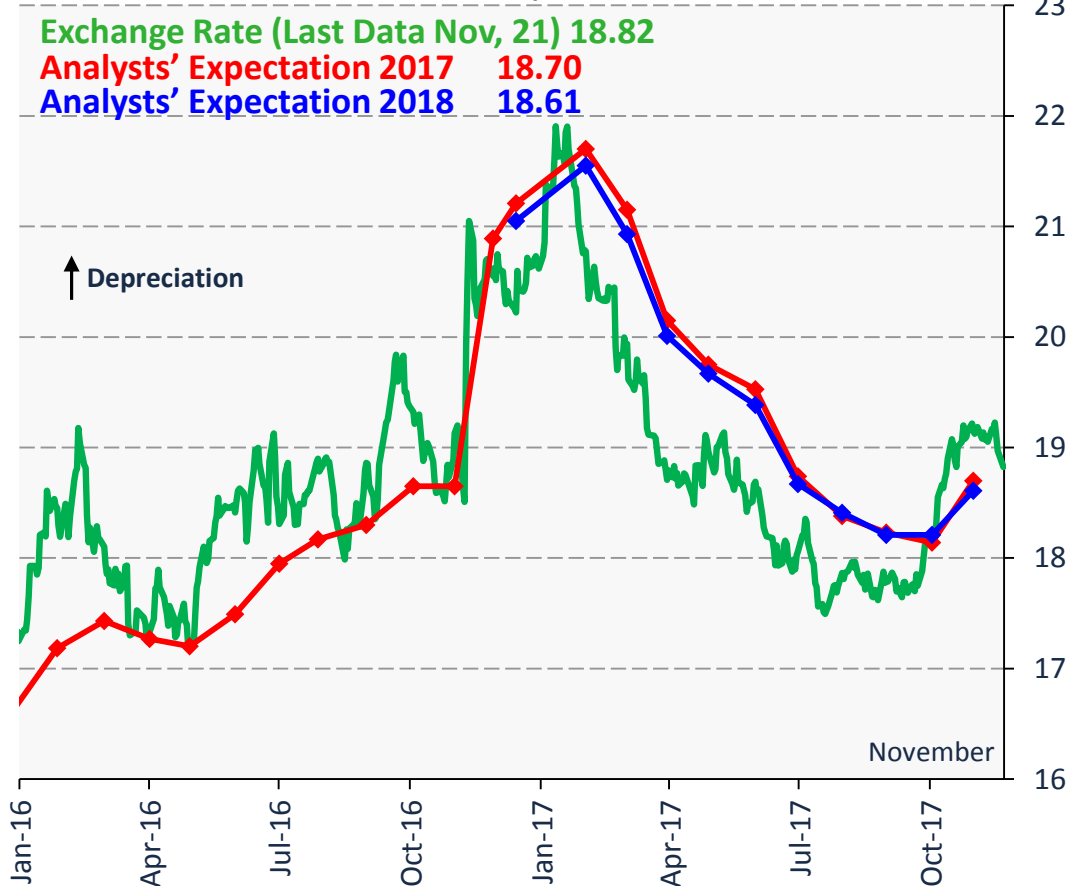


1/ For a description of the estimation of log-term inflation expectations, see the Box "Decomposition of Break-even Inflation" in the Quarterly Report, October – December 2013.
Source: Banco de México and Citibanamex Survey.

The Mexican peso had a favorable performance during most of the quarter. However, since the end of September it depreciated and its volatility increased, mainly due to the NAFTA-related uncertainty, the normalization process of the U.S. monetary policy and the possible approval of a fiscal plan in this country.

Nominal Exchange Rate ^{1/}

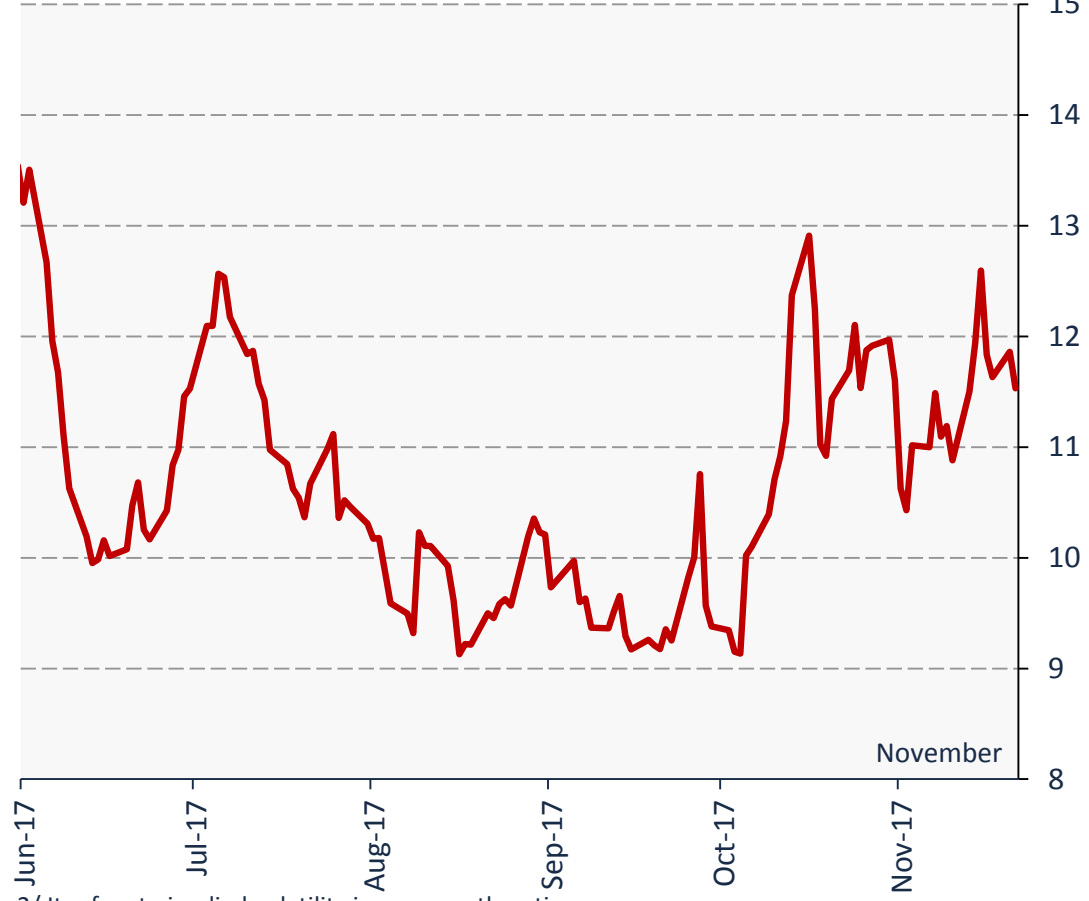
Pesos per USD



1/ Observed exchange rate refers to the daily FIX Exchange Rate. Expectations refer to the average of Banco de México Survey from October. Source: Banco de México.

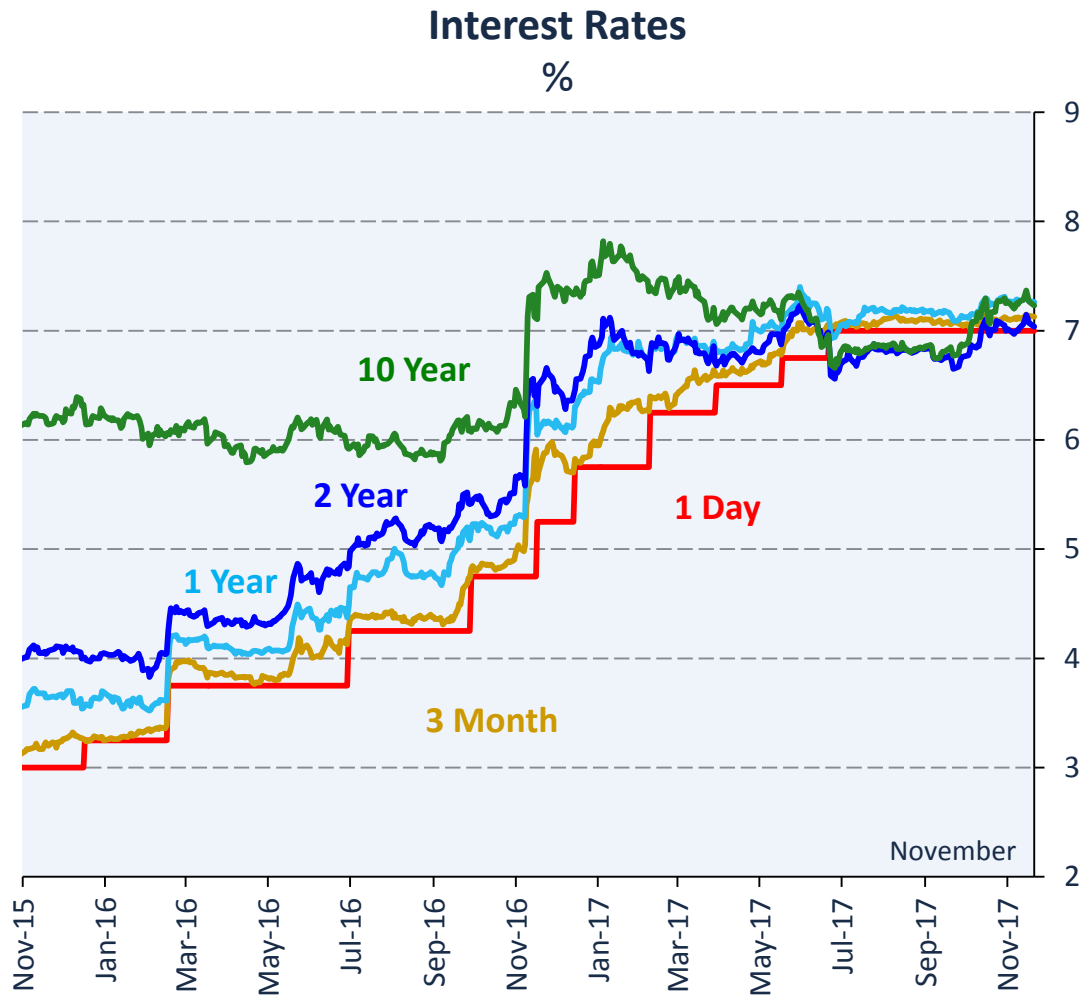
Implied Volatility in FX Options ^{2/}

%

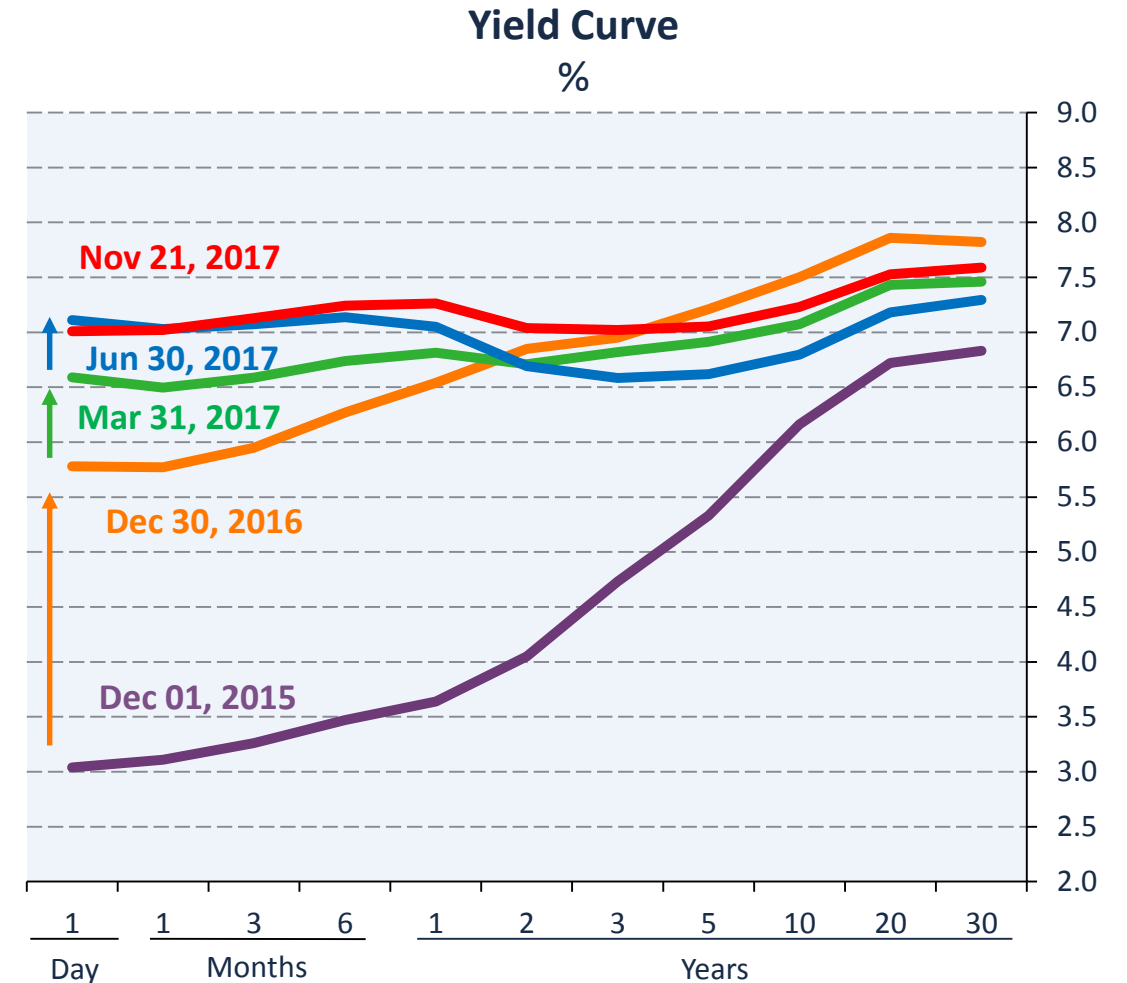


2/ It refers to implied volatility in one-month options. Source: Bloomberg.

Since June, interest rates for all terms increased. Short-term ones rose moderately, while medium- and long-term ones, particularly those for two years and longer, registered more considerable increments. As a result, the slope of the yield curve got somewhat steeper, which could have been even steeper in the absence of the monetary policy actions.



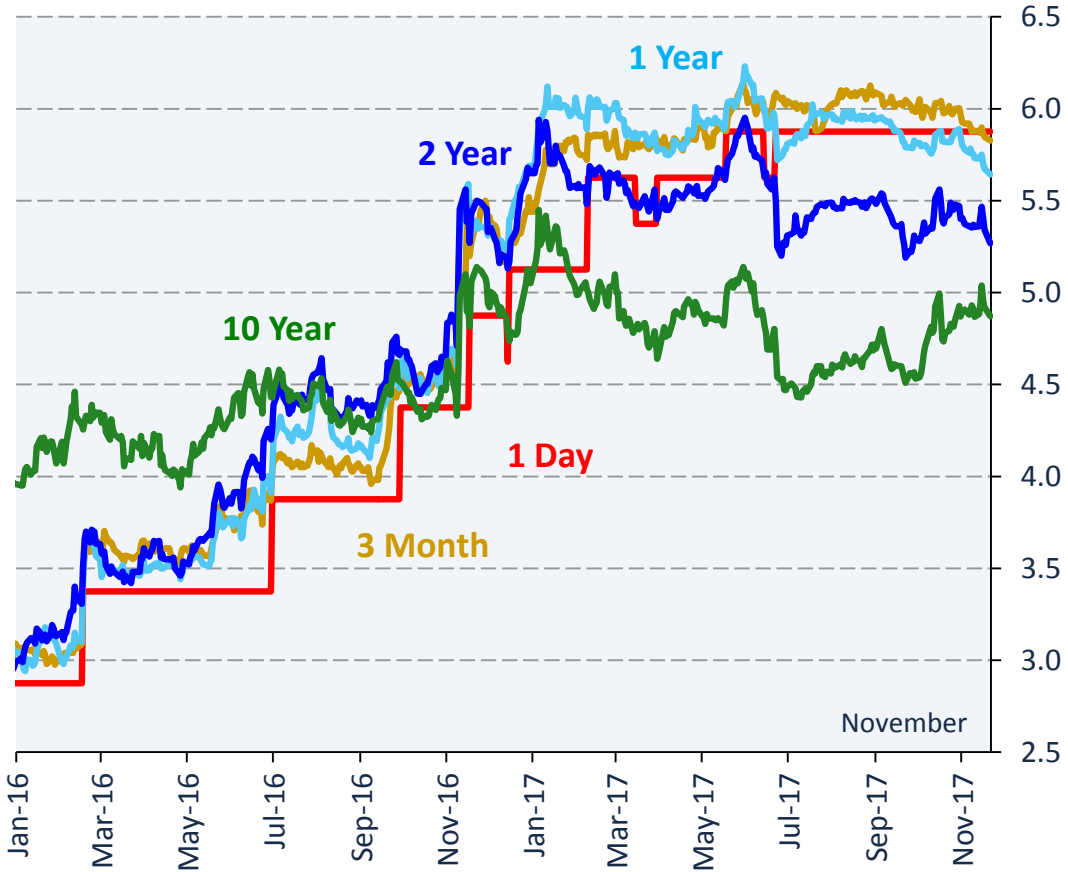
Source: Banco de México and Proveedor Integral de Precios (PiP).



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

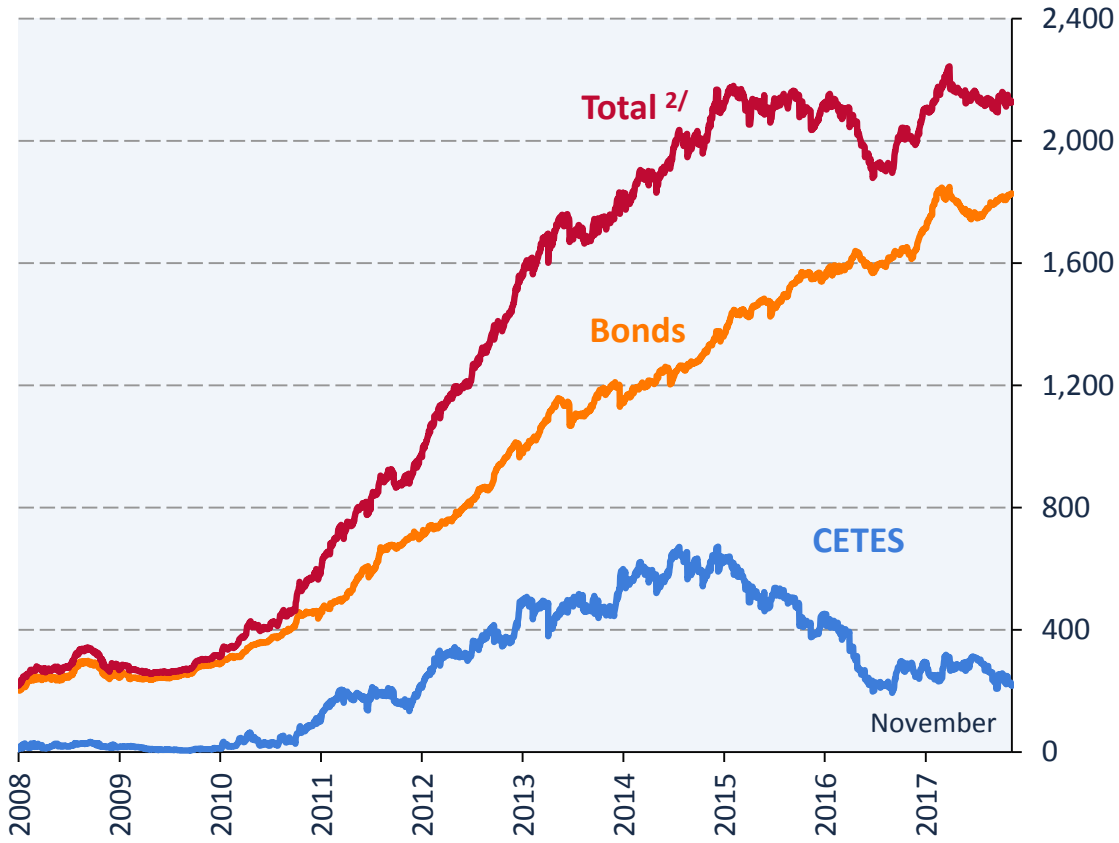
Since late June, short-term interest rate spreads between Mexico and the U.S. decreased, and medium- and long-term ones widened. In this context, government securities' holdings by non-residents remained relatively stable. It stands out that holdings of short-term instruments decreased, which was offset by the increment in medium- and long-term ones.

Mexico and United States Interest Rate Spreads ^{1/}
%



^{1/} The United States objective rate is the average of the interval considered by the Federal Reserve. Source: Banco de México, *Proveedor Integral de Precios (PiP)*, and U.S. Treasury Department.

Mexico: Government Securities' Holdings by Foreign Investors
MXN billion



^{2/} The total includes CETES, bonds, udibonos, bondes and bondes D. Source: Banco de México.

Outline

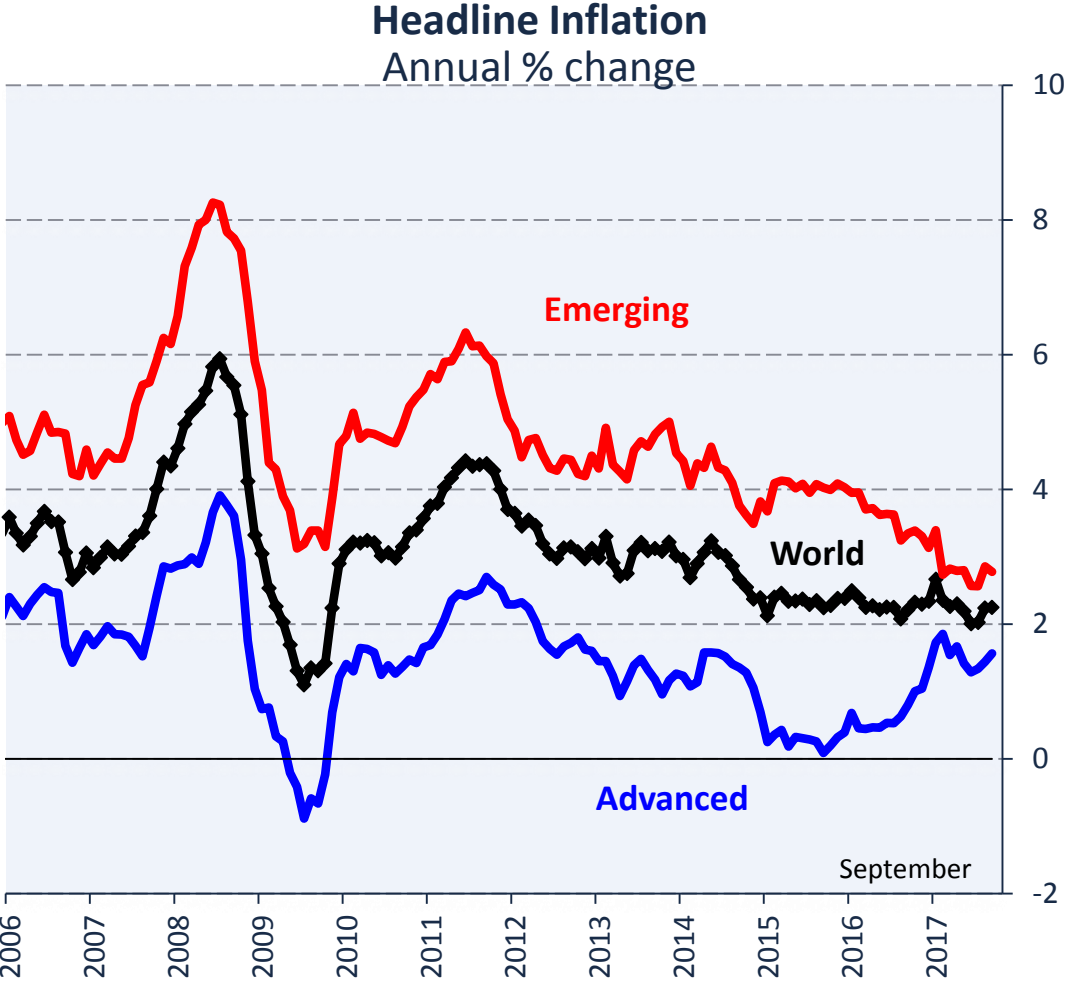
1 Monetary Policy and Inflation

2 External Conditions

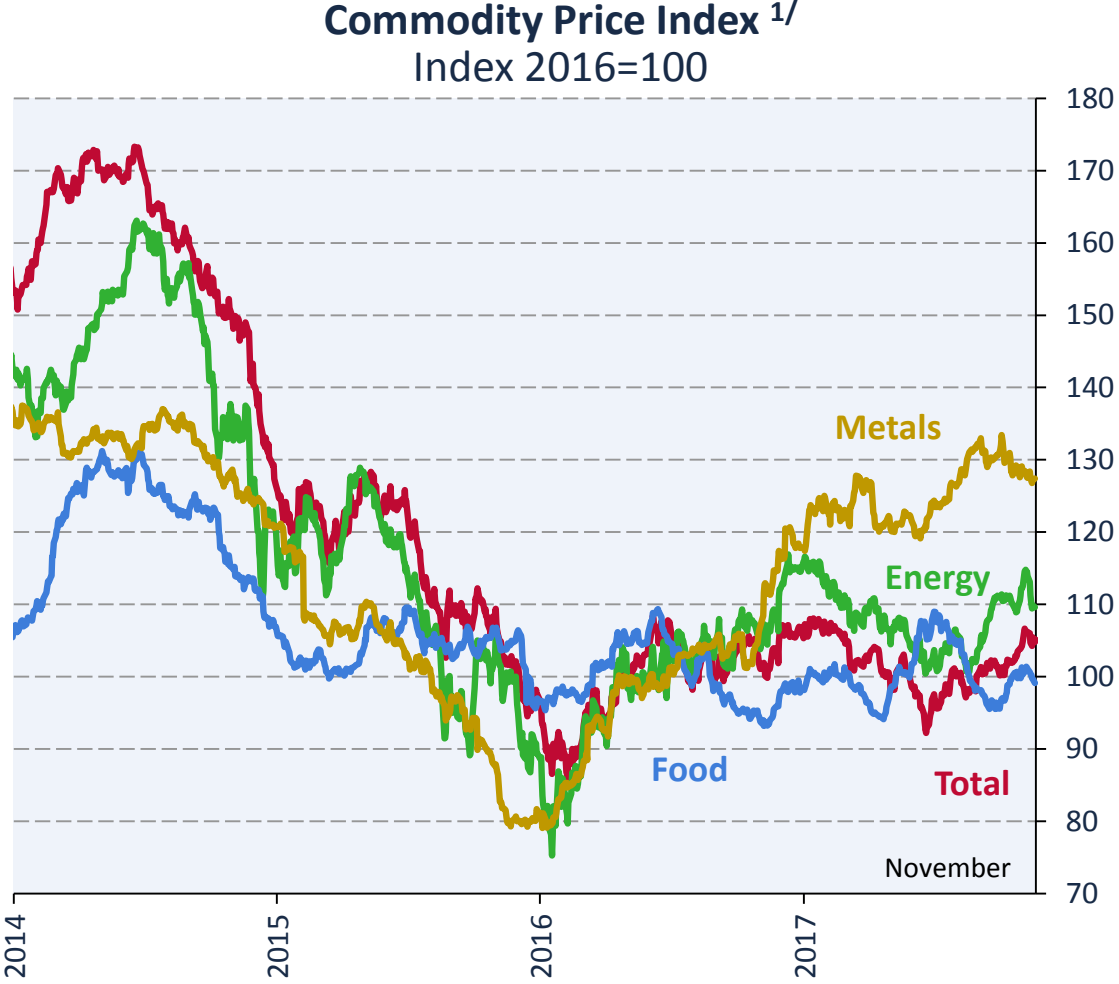
3 Evolution of the Mexican Economy

4 Forecasts and Final Remarks

World headline inflation increased slightly across most Advanced Economies (AEs), as a consequence of higher energy and food prices. However, inflation persists below the respective central banks' target.



Note: The sample of countries used for the calculation represents the 83.2% of world GDP, measured by the purchasing power parity.
 Source: Elaborated by Banco de México with data from Haver Analytics and IMF.



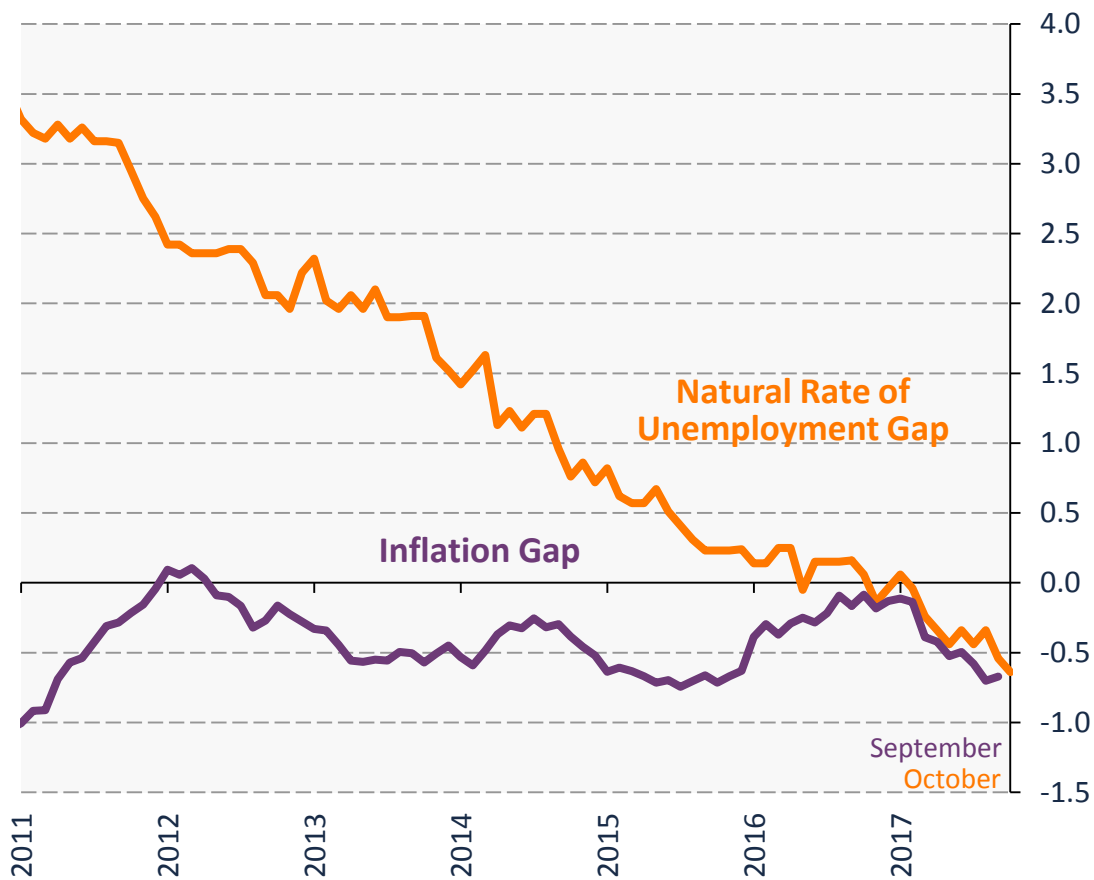
^{1/} It refers to the Thomson Reuters Commodity Index.
 Source: Bloomberg.

In the U.S., economic activity continued registering a solid growth during Q3 2017. This environment kept reflecting in a continuous strengthening of the labor market. Nevertheless, inflation has persisted below 2 percent.

United States

Inflation and Unemployment Gaps

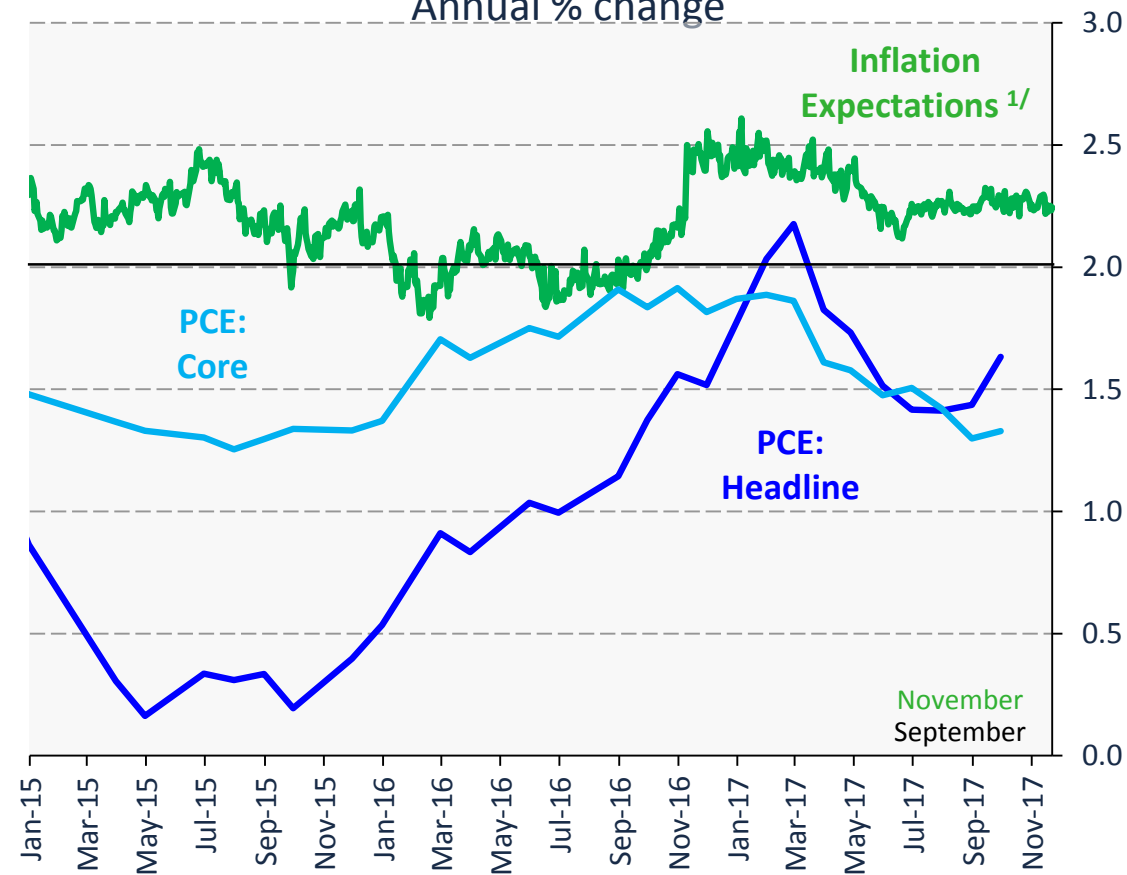
%



Note: Inflation gap refers to the PCE core component and is relative to the Federal Reserve 2% objective. Unemployment gap is relative to the natural rate of unemployment estimated by the CBO.
 Source: U.S. Department of Labor, Bureau of Labor Statistics; Congressional Budget Office (CBO).

Personal Consumption Expenditures Price Index and Inflation Expectations

Annual % change

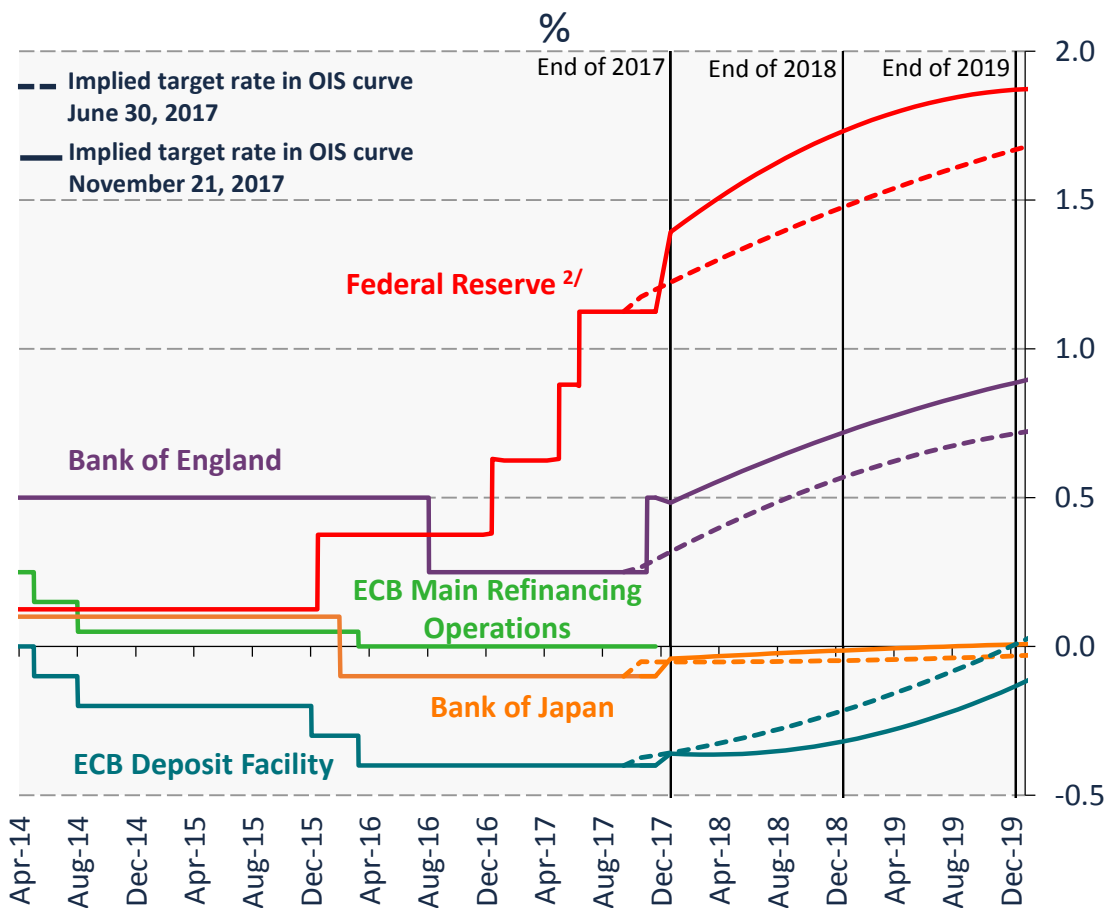


1/ Expected inflation over the five-year period that begins five years from today. Obtained from swap contracts in which one counterparty agrees to pay a fixed rate in exchange for receiving a referenced payment at an inflation rate over a specified period.
 Source: Bloomberg and Bureau of Economic Analysis.

The central banks of the main AEs kept their accommodative monetary stance, even though some of them continued or started a gradual normalization process. In the future, it is still expected that these policies remain loose.

Advanced Economies

Expected Monetary Policy Rates Implicit in OIS Curve ^{1/}



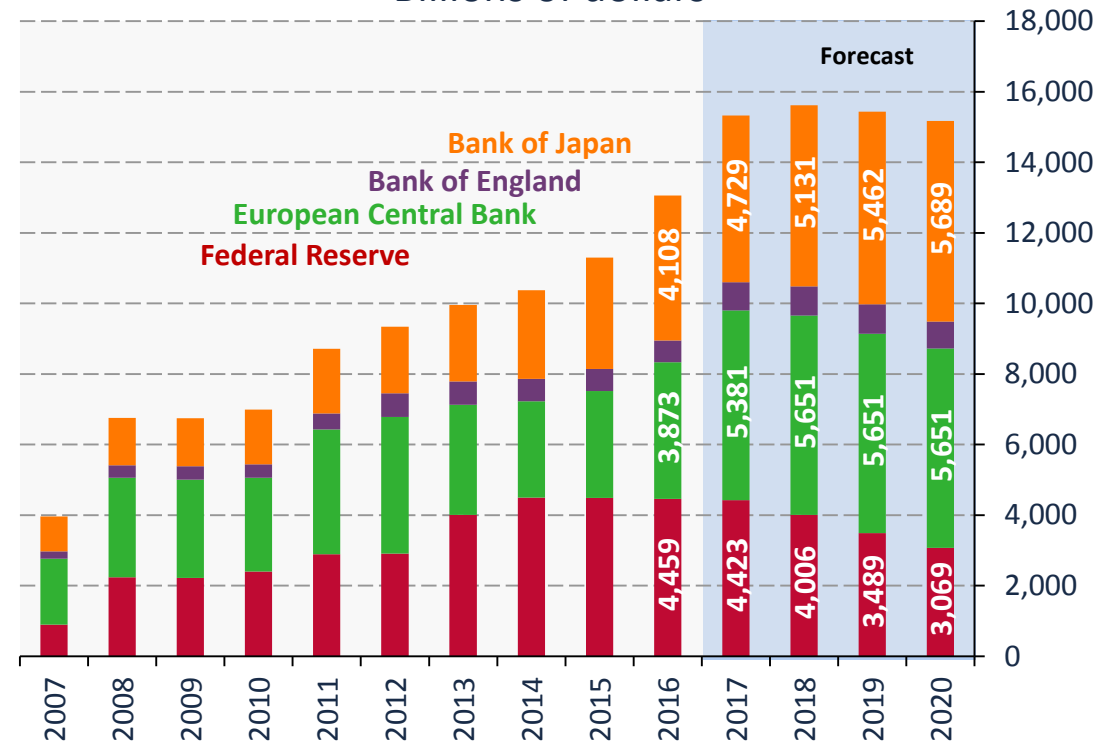
1/ OIS: Fixed-For-Floating swap where the fixed interest rate is the reference rate.

2/ Data for the observed federal funds rate corresponds to the average between the lower and upper bounds of the range (1.00% - 1.25%).

Source: Banco de México with data from Bloomberg.

Aggregate Balance of Central Banks at the End of each Year

Billions of dollars



Note: For the Federal Reserve, it is projected that the reduction in the balance sheet started in October 2017 at the pace announced by the Federal Reserve. For the ECB it is projected what was announced by the central bank in its October meeting (the pace of purchasing is maintained in 60 billions of dollars until December, and from January to September 2018 the monthly pace decreases to 30 billions of dollars), furthermore, it is anticipated that the asset purchasing program ends in October 2018 and that the reinvestment of maturities for the following two years is maintained. For Japan, it is anticipated that the central bank maintains its current policy of balance expansion during 2018, to later increase it to a more gradual pace. For the Bank of England, no changes in the size of the balance are assumed. The data is converted to dollars with the current exchange rate.

Source: Bloomberg with estimates of JPMorgan and Banco de México.

Outline

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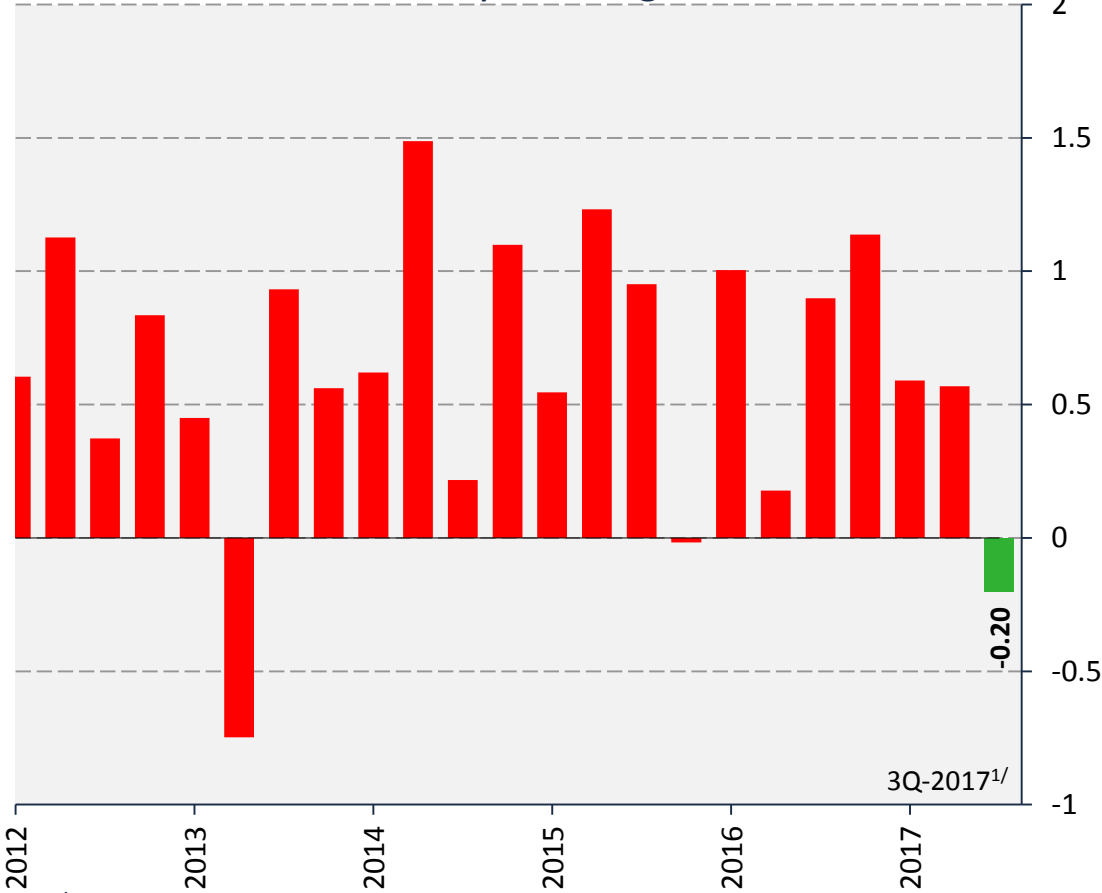
2 External Conditions

3 Evolution of the Mexican Economy

4 Forecasts and Final Remarks

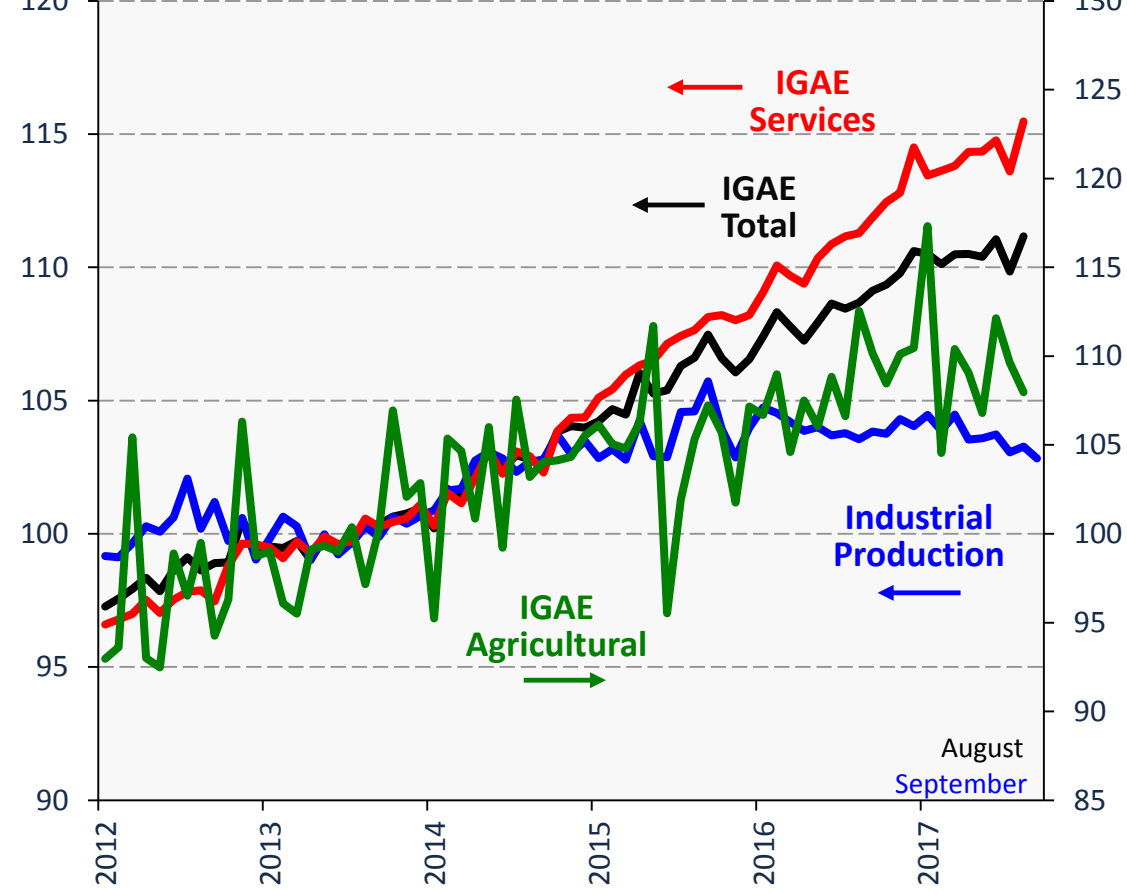
In Q3 2017, Mexican economic activity contracted, reflecting both the deceleration of some aggregate demand components, and the negative, albeit transitory, effects, resulting from the earthquakes and by a sharp drop in crude oil production during September.

Gross Domestic Product
Quarterly % change, s. a.



s. a. / Seasonally adjusted data.
1/ It refers to the preliminary estimation published by INEGI.
Source: Mexico's System of National Accounts, INEGI.

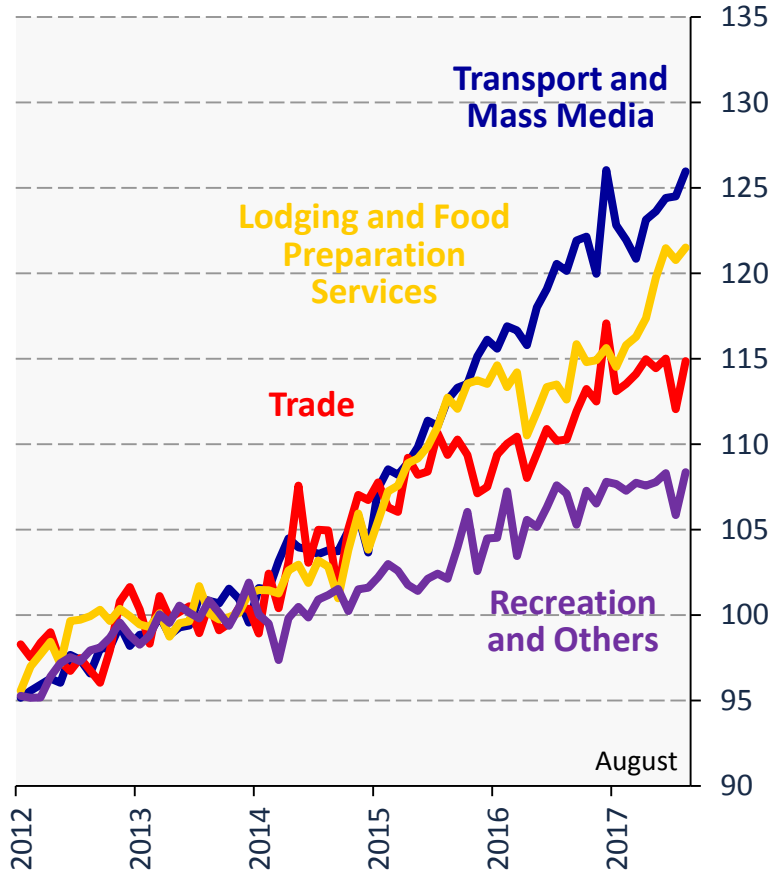
Indicators of Economic Activity
Index 2013=100, s. a.



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

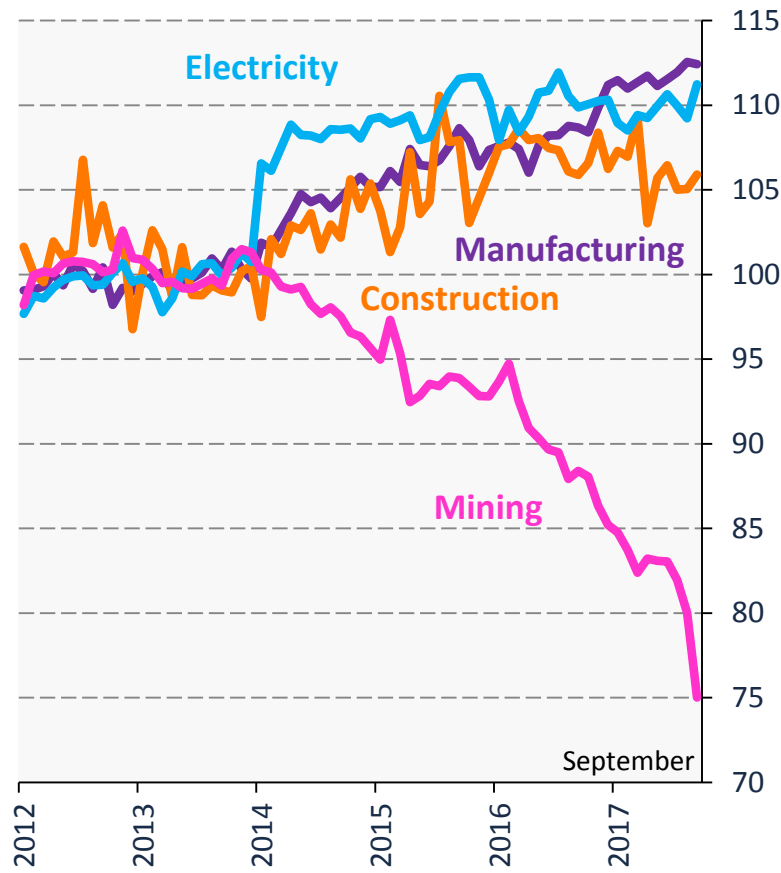
According to preliminary data published by INEGI, tertiary activities contracted in Q3 2017, while industrial activity remained weak, with a notable drop in crude oil production platform.

IGAE: Services
Index 2013=100, s. a.



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

Industrial Activity
Index 2013=100, s. a.



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

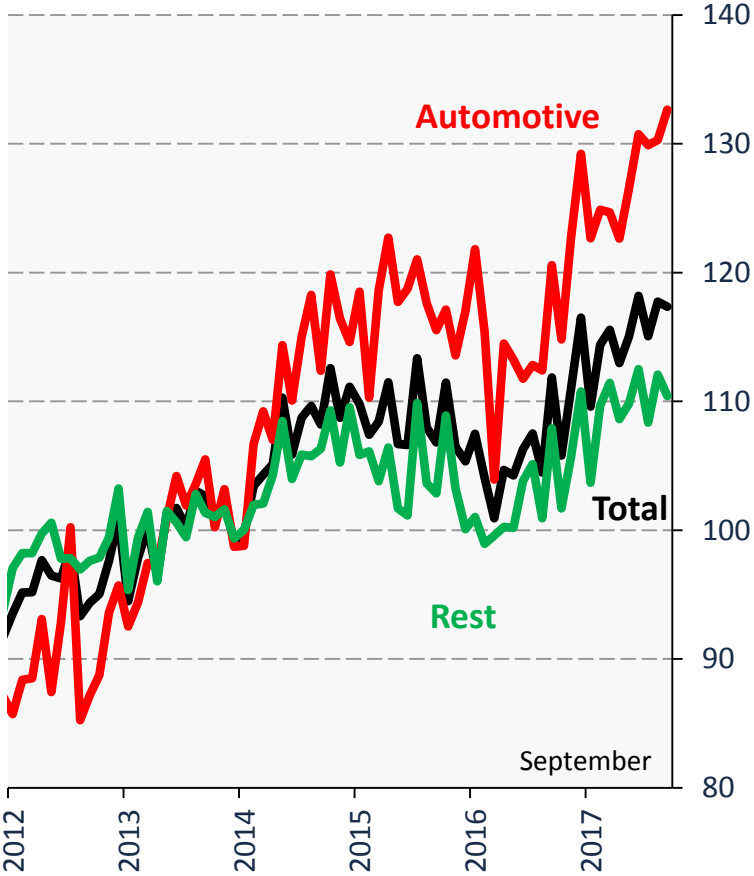
Crude Oil Production Platform
Thousands of daily barrels, s. a.



s. a. / Seasonally adjusted data.
1/ Data up to October 29, 2017.
Source: Seasonally adjusted by Banco de México with data from PEMEX.

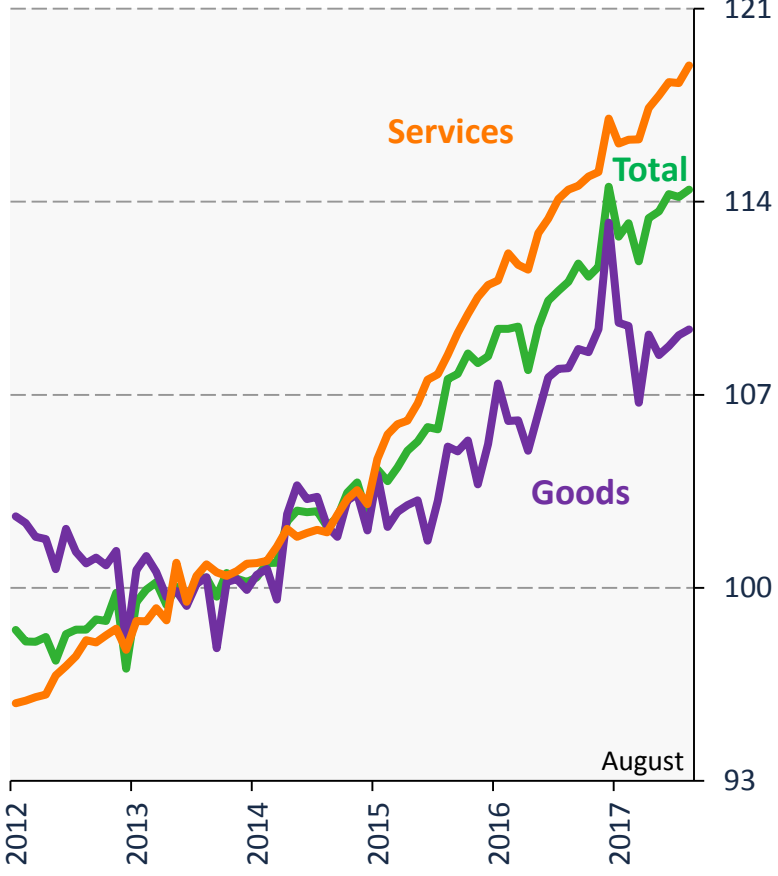
Despite a continuous positive trend of external demand, a certain slowdown in private consumption has been observed, while the weakness of investment persisted.

Manufacturing Exports
Index 2013=100, s. a.



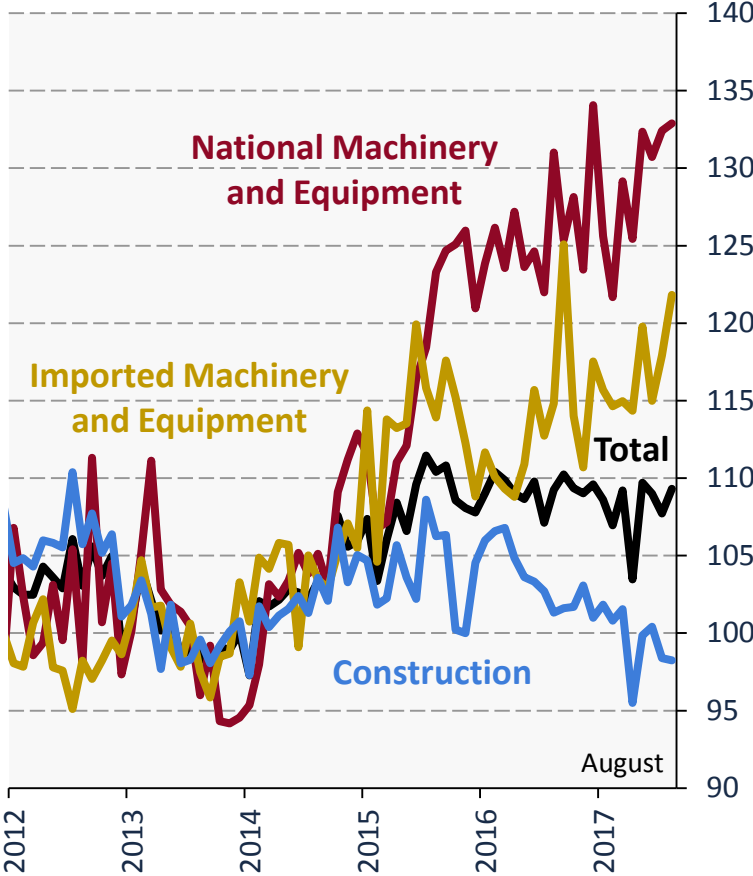
s. a. / Seasonally adjusted data.
Source: Banco de México with data from SAT, SE, Banco de México, INEGI. Merchandise Trade Balance. SNIEG. Information of National Interest.

Domestic Private Consumption
Index 2013=100, s. a.



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

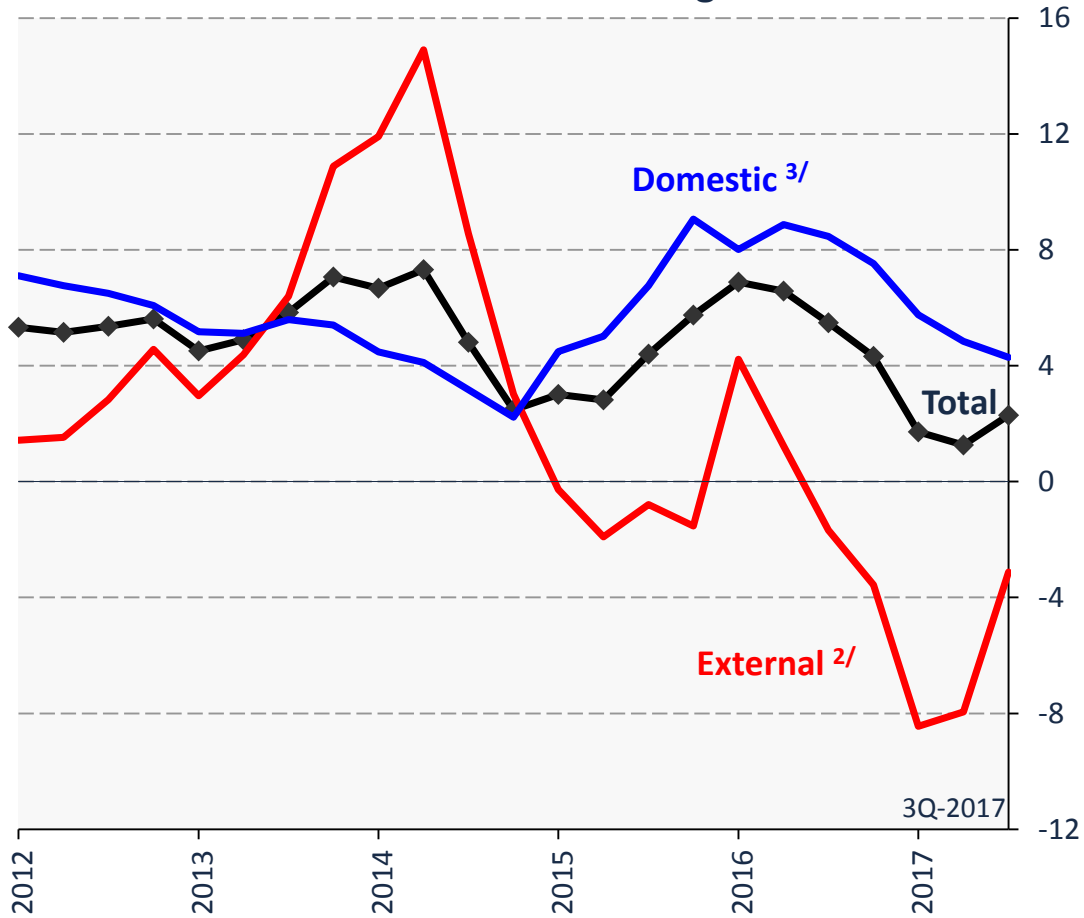
Investment and its Components
Index 2013=100, s. a.



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

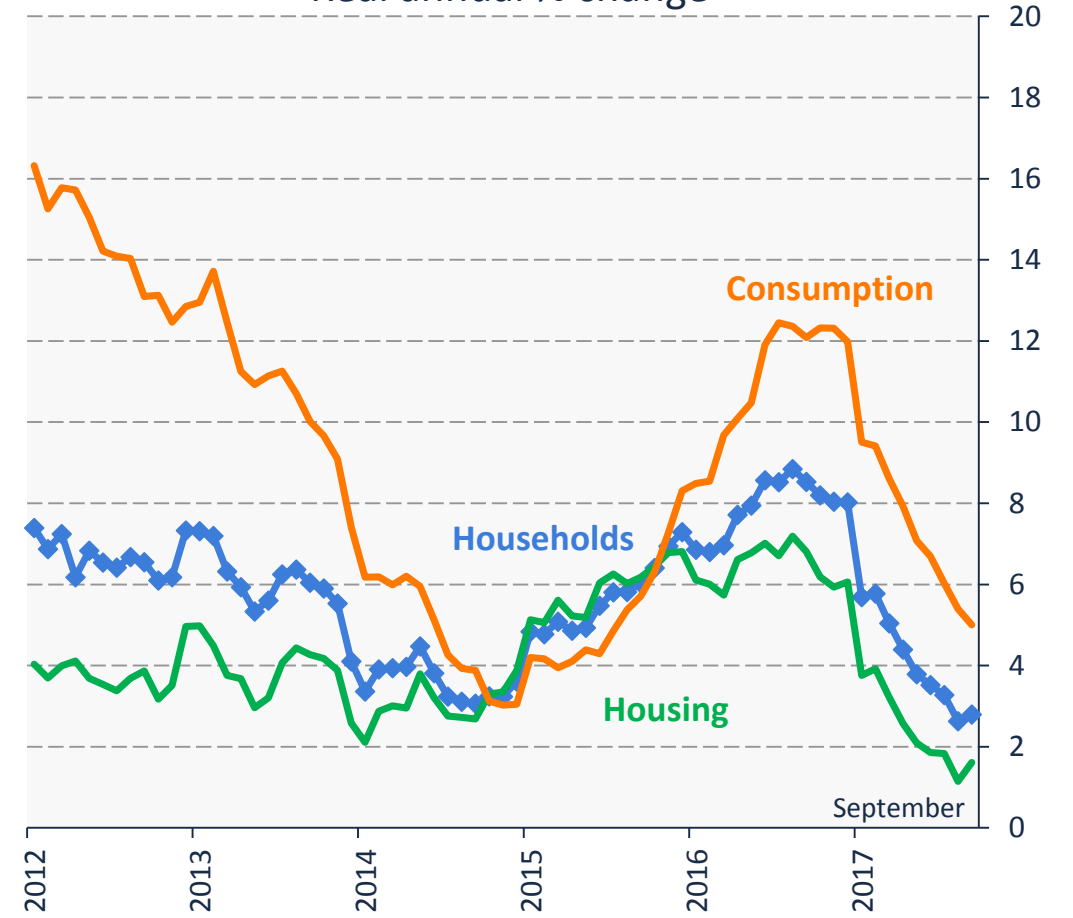
Growth of credit to the private sector has moderated.

Total Financing to the Non-financial Private Sector ^{1/}
Real annual % change



1/ Real annual changes are calculated based on balances adjusted due to exchange rate variations.
 2/ Data of foreign financing for the third 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.
 Source: Banco de México

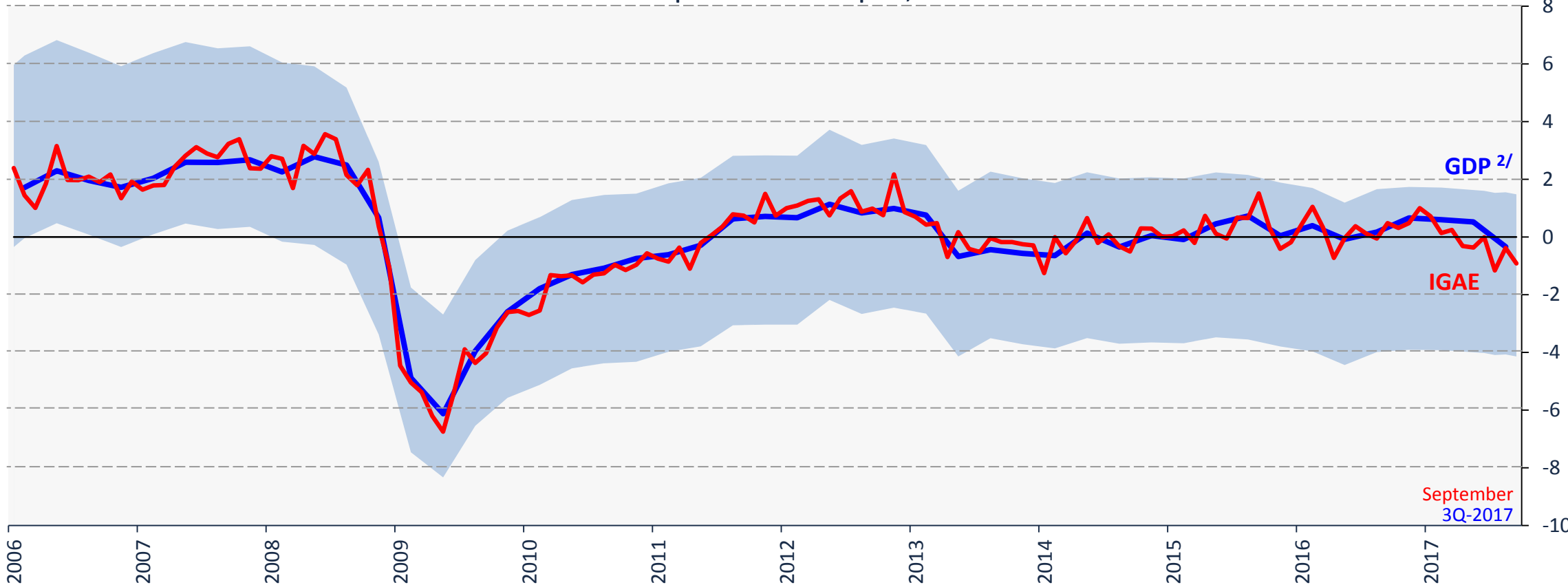
Household Total Credit ^{4/}
Real annual % change



4/ These data are adjusted due to the withdrawal from and the incorporation of some financial intermediaries to the credit statistics.
 Source: Banco de México.

The estimate of the output gap, derived from the change of the base year to measure GDP, suggests that it has been slightly positive during some quarters, although not statistically different from zero. The contraction in the activity in Q3 2017 implied that the output gap estimate decreased and reached negative levels close to zero again.

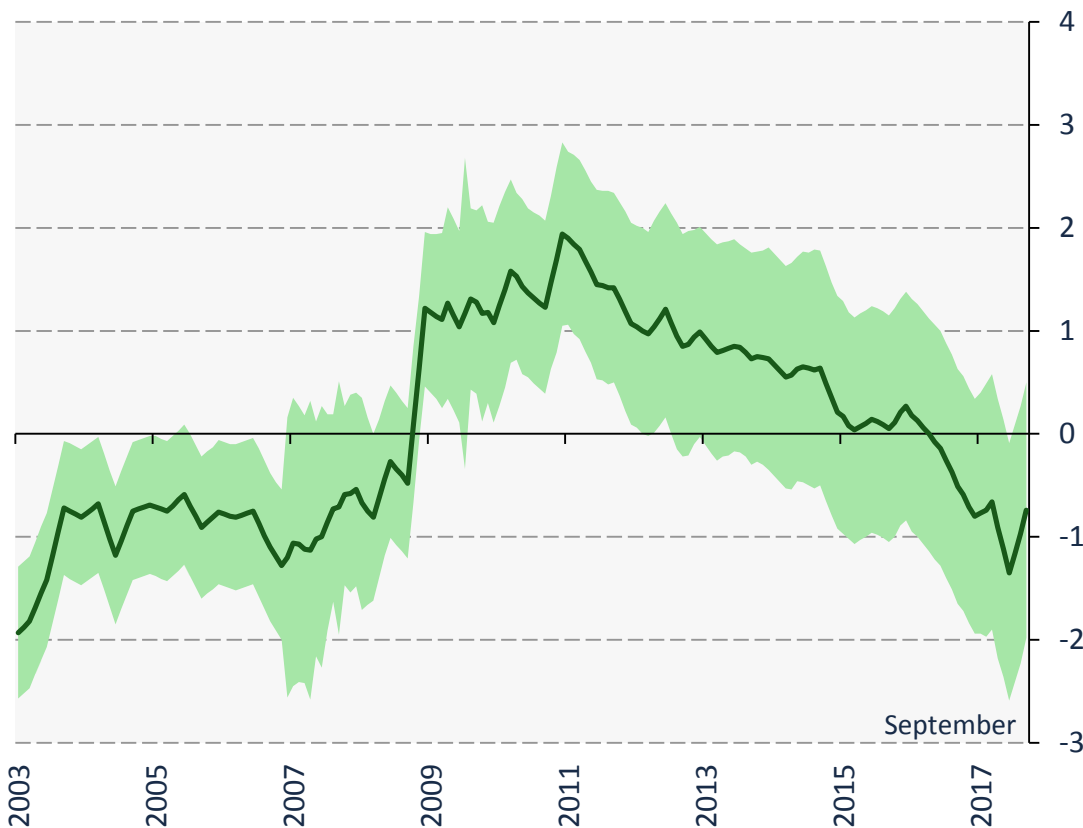
Output Gap ^{1/}
 % of potential output, s. a.



Note: Confidence interval of the output gap calculated with an unobserved components method.
 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 third quarter of 2017 correspond to the timely estimate released by INEGI. IGAE figure as of September of 2017 corresponds to the implicit data for that month congruent with the timely GDP estimate.
 Source: Estimated by Banco de México with data from INEGI.

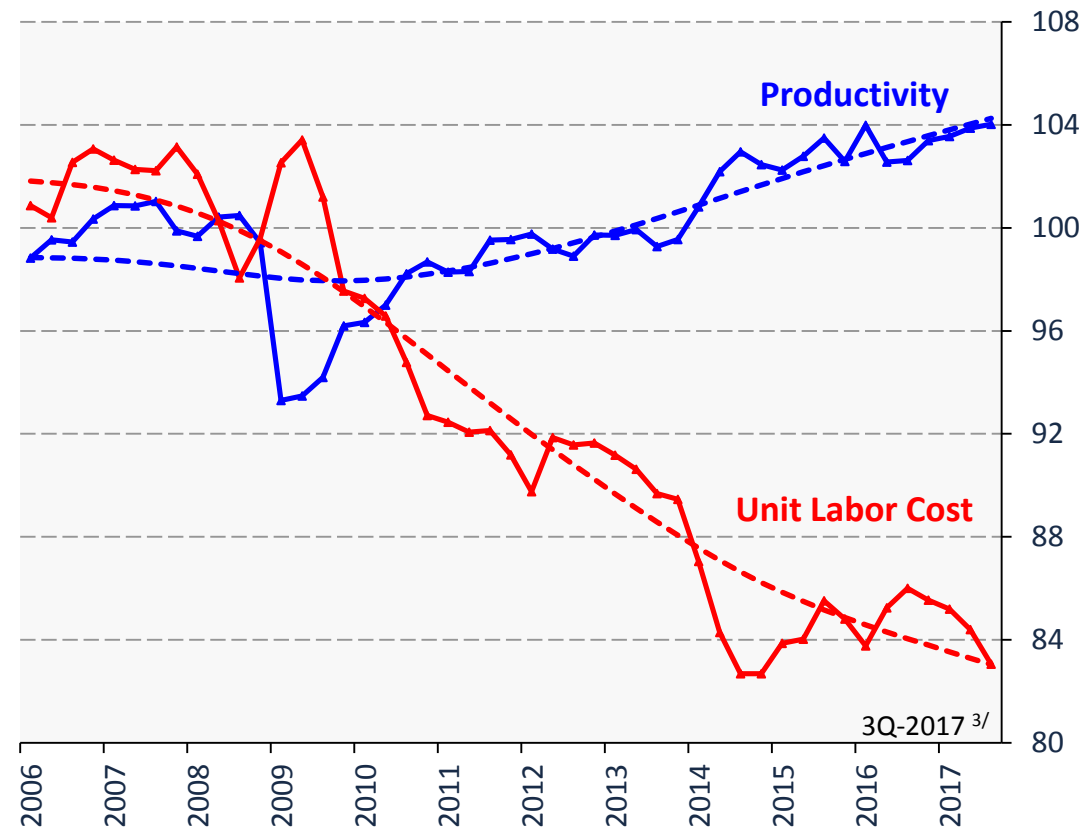
Labor market conditions have been tightening, so it seems that this market has no slack. However, no significant wage pressures that could affect inflation are perceived so far.

Employment Gap and Informal Salaried Workers ^{1/}
 %, s. a.



s. a. / Calculated with seasonally adjusted data.
 1/ The shaded area represents the confidence interval, which corresponds to two average standard deviations among all estimates.
 Source: Banco de México.

Productivity and Unit Labor Cost ^{2/}
 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.
 2/ Productivity based on worked hours. Series base year 2013 of Mexico's System of National Accounts.
 3/ Data for 3Q-2017 estimated by Banco de México from the timely GDP estimate released by INEGI.
 Source: Estimated by Banco de México with data from INEGI.

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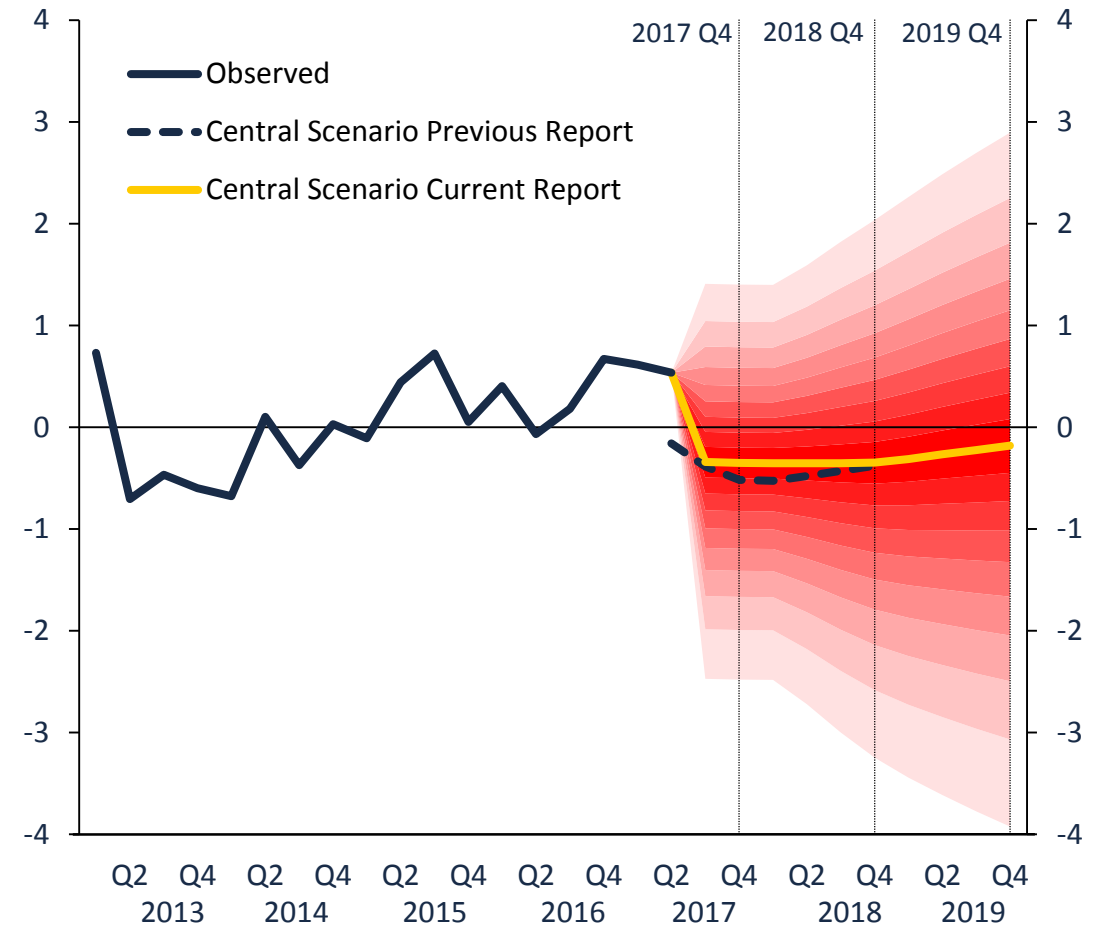
Economic Activity Outlook

GDP Growth (%)		
Report	Previous	Current
2017	2.0 – 2.5	1.8 – 2.3
2018	2.0 – 3.0	2.0 – 3.0
2019	-	2.2 – 3.2

Increase in the Number of IMSS-insured Jobs (Thousands)		
Report	Previous	Current
2017	660 – 760	720 – 790
2018	670 – 770	680 – 780
2019	-	690 – 790

Current Account Deficit (% of GDP)		
Report	Previous	Current
2017	2.2	1.7
2018	2.2	2.1
2019	-	2.3

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



s. a. / Seasonally adjusted data.
Source: Banco de México.

Risks to Growth Outlook

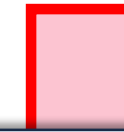
The balance has a downward bias.

Upward



- ✓ The renegotiation of NAFTA could trigger investment both in new areas of opportunity and in those previously considered by the Agreement.
- ✓ The implementation of structural reforms could render better-than-expected results.
- ✓ The reconstruction effort associated to natural disasters in Mexico could generate a more positive effect on economic activity than estimated.

Downward



- ✓ That the NAFTA renegotiation is not favorable.
- ✓ Due to uncertainty related to NAFTA, different businesses could decide to postpone their investment plans in Mexico even more.
- ✓ Higher volatility in international financial markets and/or the upcoming electoral process in Mexico could reduce the sources of financing and affect private spending.
- ✓ Public insecurity could become a more relevant factor as a determinant of productive activity.

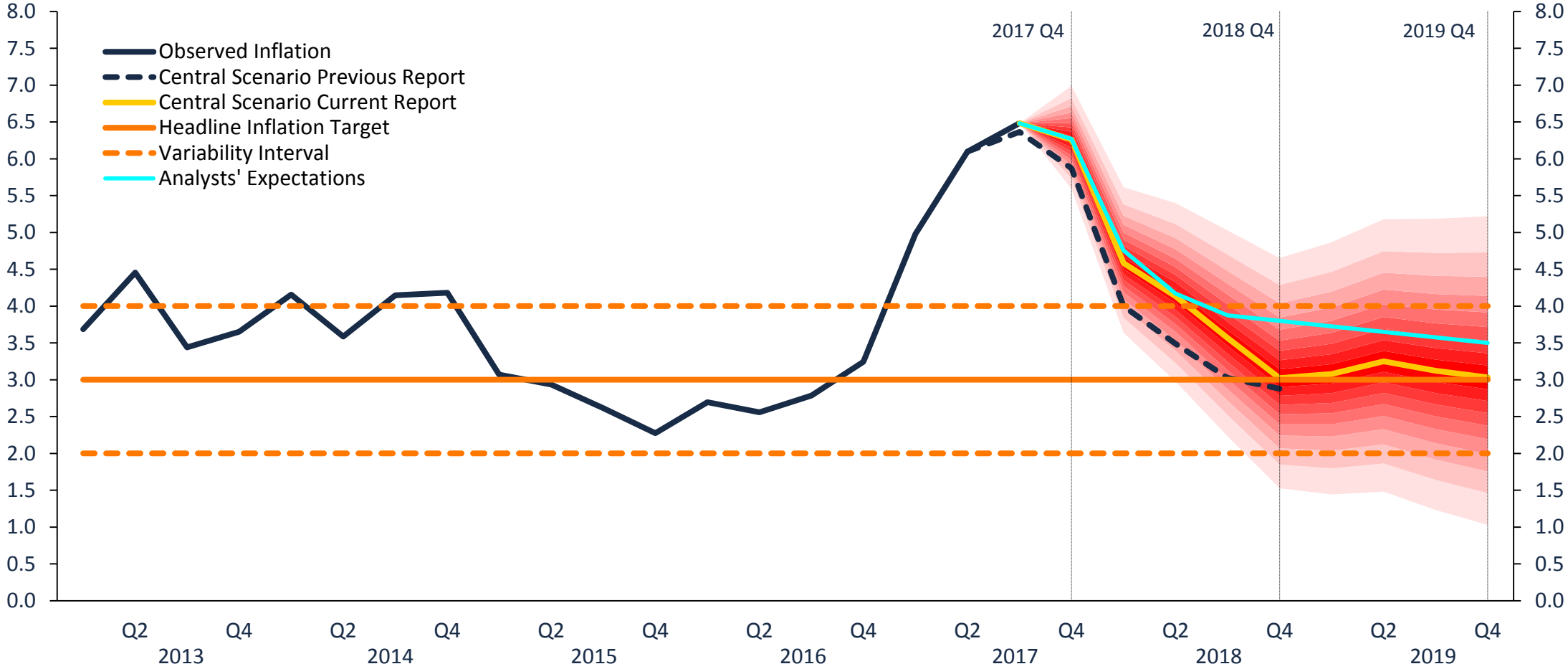
Central Scenario for Inflation

	Headline Inflation	Core Inflation
2017	<ul style="list-style-type: none">It is expected to present moderate downward changes.	<ul style="list-style-type: none">It is anticipated to remain above 4.0 percent, although quite below the headline inflation trajectory.
2018	<ul style="list-style-type: none">The downward trend is expected to accentuate, leading to the convergence to its 3.0 percent target by the end of 2018.	<ul style="list-style-type: none">It is estimated to reach levels moderately above 3.0 percent at the end of 2018.
2019	<ul style="list-style-type: none">It is estimated to fluctuate around the target.	

→ These previsions consider the expectation of an **orderly performance of the exchange rate**, as well as a **considerable reduction of non-core inflation** over the following months and during 2018.

The current scenario considers that the non-core component will reduce less than anticipated in the remainder of 2017 and over most of 2018. As a result, in 2018 annual headline inflation is estimated to reach its 3.0 percent target in Q4 2018, rather than in Q3 2018, as previously considered.

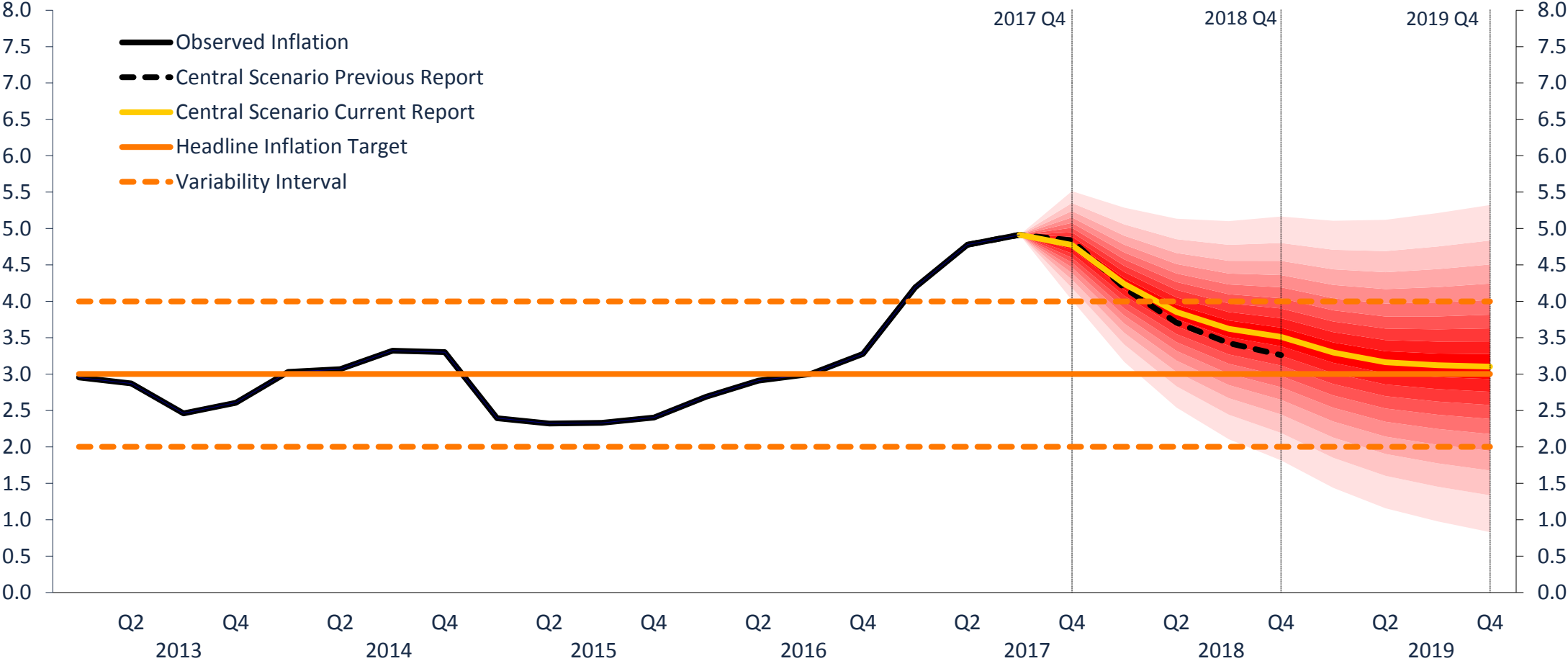
Fan Chart: Annual Headline Inflation ^{1/}
Annual % change



^{1/} Quarterly average of annual headline inflation.
Source: Banco de México and INEGI.

Forecasts for core inflation in 2018 are slightly higher than previously considered, reflecting the impact of the recent reversal of the exchange rate on merchandise prices.

Fan Chart: Annual Core Inflation ^{1/}
Annual % change



^{1/} Quarterly average of annual core inflation.
Source: Banco de México and INEGI.

Risks to the Inflation Outlook

The balance with respect to the expected inflation trajectory has deteriorated and is biased upwards.

Downward

- ✓ A favorable outcome of NAFTA negotiations could lead to an appreciation of the national currency.
- ✓ The structural reforms could lead to further reductions in different prices of the economy.
- ✓ The economic activity could show a lower dynamism than the one anticipated.

Upward

- ✓ The national currency could further depreciate, in view of the unfavorable outcome of the NAFTA or a negative reaction to monetary or fiscal policy actions in the U.S.
- ✓ Some agricultural goods' prices could increase more than estimated.
- ✓ Significant upward pressures on some energy prices could persist.
- ✓ Potential increments in unit labor costs could affect inflation.

Monetary Policy Stance

- In this context, and considering the described balance of risks, going forward, the Board of Governors will closely follow the evolution of all inflation determinants and its medium- and long-term expectations, especially:

- ✓ Future changes in the monetary policy position of Mexico relative to the U.S.

- ✓ The potential pass-through of exchange rate adjustments onto prices.

- ✓ The evolution of the output gap.

- ✓ The performance of potential wage pressures.

→ In any event, in light of different persisting risks, the Board of Governors will be vigilant to ensure that a **prudent monetary stance** prevails, in order to strengthen the anchoring of medium- and long-term inflation expectations, and to achieve the **inflation convergence to its target**.

Strengthening Confidence in the Mexican Economy

- Higher growth of productivity is ultimately the only way to obtain a greater and sustainable expansion of the economy, and, therefore, **to increase salaries and to enhance the welfare of the population.**
 - ✓ *This is essential for the wages of all employed population, not only those who receive the minimum wage, to achieve a sustainable increase without generating inflation pressures, unemployment or greater informality levels.*
- The current environment of public insecurity and the lack of the full observance of the rule of law undermine the necessary, but not sufficient conditions for economic growth, such as the **macroeconomic stability** or **a better functioning of certain markets**, from translating into higher investment and, above all, higher productivity.
- Thus, the country should seek to implement more extensive reforms to **provide legal certainty, to enhance the rule of law, to strengthen the institutions of the country and modify the incentives' system** that is faced by economic agents, so that it favors the creation of value rather than rent-seeking.



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